cogent medicine

EiP
EXCELLENCE IN PEDIATRICS
VIENNA
7-9 DECEMBER

Reviewers

PEDIATRICS | CONFERENCE ABSTRACTS

9th Excellence in Pediatrics Conference - 2017 Book of Abstracts

Cogent Medicine (2017), 4: 1408251

cogent oa

Pediatrics, *Cogent Medicine* (2017), 4: 1408251
https://doi.org/10.1080/2331205X.2017.1408251

cogent medicine

PEDIATRICS | CONFERENCE ABSTRACTS

9th Excellence in Pediatrics Conference - 2017 Book of Abstracts

ID: 154 / OP1: 1
Oral Presentation Topics: General Pediatrics, Nutrition & Diets
Inappropriate Infant Feeding Practice and Low Birth Weight Associated with Nutritional Status Children Under Five Years Old in Gorontalo Rural Area 2016

Fatimah Sania, Yun Istatik, Ikhwanuliman Putera, Dwi Mulia, Vania Tryanni, Daeng Fachrianzy, Syandriagus Rizky, Ruslyaraz Ruslyaraz
Paguyaman Primary Health Care; saniafatima.cherid@gmail.com

Introduction: Malnutrition is a significant factor associated with more than half children mortality in the world. Food agricultural organization claims over 5 million death per year is caused by hunger and malnutrition. It is a world agenda to achieve sustainable development goals (SDGs) to end hunger, achieve food security, and improved nutrition and promote sustainable agriculture which one of the target is by 2030 end all form of malnutrition including achieving by 2025 the internationally agreed targets on stunting and wasting children under five years of age and address the nutritional needs of adolescent girls, pregnant, and lactating woman, and older persons. It is not an easy task to complete based on Millennium development goals evaluation, especially, in developing country like Indonesia. Gorontalo is one of the cities in Indonesia that has high wasted prevalence. Therefore, analysing infant feeding practice and other factors associated with nutritional status is needed to be evaluated.
Purpose: The objectives of the study is to investigate characteristic of mothers and children, and the implementation of infant feeding practice such as early initiation and exclusive breastfeeding, and nutritious complement feeding to children under five years and investigate association with child nutritional status.
Methods: An observational analytic cross sectional design was used to mothers of 6 – 59 month children. It is 92 extracted data questionnaires previously validated, including sociodemographic data, characteristic of mother and children, infant feeding practice data. Nutritional status has been plotted using WHO 2006 and PRIMA devices. Analysis was done by univariate analysis for descriptive and bivariate analysis using the Chi-Square or Fischer exact test to determine the significance and continue with multivariate analysis.
Results: There is a statistically significant relationship between low birth weight and wasted p 0.03 (OR 5.33, CI 95% 1.08—26.11) and in multivariate analysis p 0.00 (OR 15.58 CI95% 2.00 – 121.32). it is also statistically significant relationship between complementary feeding practice and nutritional status p 0.00 (OR 6.52, CI95% 1.76--24,14) and in multivariate analysis p 0.02 (OR 4.76, CI95% 1.24-18,23).

Conclusions: Inappropriate infant feeding practices, in this case an introduction to complementary feeding after 6 month in Gorontalo Rural area and low birth weight, associated with wasted children.

ID: 178 / OP1: 2
Oral Presentation Topics: Nutrition & Diets, Neonatal Nutrition
Screening of 30 Antibiotic Residues in Human Milk with Multi-Residue Method Based on Chip Technology

Meltem Dinleyici[1], Gonca Kilic Yildirim[2], Ozge Aydemir[3], Tugba Barsan Kaya[2], Yasar Bildirici[2], Kursat Bora Carman[4]
[1]Eskisehir Osmangazi University Faculty of Medicine, Department of Social Pediatrics, Turkey; [2]Eskisehir Maternity and Children Hospital, Turkey; [3]Eskisehir Osmangazi University Faculty of Medicine, Division of Neonatology, Turkey; [4]Eskisehir Osmangazi University Faculty of Medicine, Department of Pediatric Neurology, Turkey; meltemayata@hotmail.com

Introduction: It is important to identify as well as other undesirable toxins and metabolites that may be present in the human milk and pass to the baby. To the best of our literature knowledge, there is no information about the human milk antibiotic residue levels in human milk.
Purpose: In this study, we planned to study the levels of antibiotic residues in human milk samples taken from mothers who have 7-90 days old babies, in Turkey.
Methods: Pregnant women who have been received antibiotic treatment during pregnancy were excluded. The presence of antibiotic prophylaxis with cefazoline sodium during labor has been noted. Human milk antibiotic residues have been evaluated with the Evidence Investigator™ system (Randox, UK), which is a multi-array biochip, semi- automated system, designed for research for evaluation of antibiotic residues and some toxins. The Eskisehir Osmangazi University Research Grant has supported this study.
Results: 83 mothers aged between 17 to 41 years (mean age 29.7 ± 6.2 years), have been enrolled. 56.6% of pregnant women have been C-section, 31 mothers have been received one dose antibiotic prophylaxis (first generation cephalosporin) and 18 mothers have received antibiotic treatment, maximum 7 days after delivery. 71 out of 83 human milk samples (85.5%) were positive for beta-lactams and 12 positive samples for quinolones (14.5%). Two positive samples for amphenicol, 2 positive for basitrasin, 5 positive samples for cefuroxime, 4 positive samples for polymyxine, one sample for sulfonamide, two positive samples for tobramycine have been noted. There are no differences between the positive antibiotic residues (for beta-lactams and quinolones) between mother received or not received antibiotics during labor and after. The presence of beta lactams or quinolones in human milk was not associated with the maternal dietary habits.
Conclusion: We found that majority of human milk samples includes beta-lactams or quinolones, while mothers did not receive these antibiotics during pregnancy and lactation. Previous studies showed that risks related to the presence of antimicrobials in food are multiple allergies in humans and possible development of antibiotic-resistant bacterial strains. Antibiotic residues in human milk might have an effect on early maintenance of intestinal microbiota composition. We plan to perform intestinal microbiota composition of newborn infants whom received human milk with or without antibiotic residues. Further strategies including the food safety and appropriate antibiotic use policy during pregnancy and lactation are needed.

ID: 290 / OP1: 3
Oral Presentation Topics: Nutrition & Diets, Allergy, Immunology & Pulmonology
Wheat and Immune System: Is Always Celiac Disease?

Luca Pecoraro, Angelo Pietrobelli, Giulia Paiola, Giorgio Piacentini, Laura Tenero
University of Verona, Pediatrics, Italy; lucapecoraro88@gmail.com

Introduction: 3 specific components of wheat have importance in wheat allergy: gliadin (α, β, γ, ώ isoforms), a gliadin subunit (Tri a 19), a Lipid Transfer Protein (Tri a 14). There is an association between these recombinants and clinical symptoms: specifically, the specific components of the gliadin wheat and Tri a 19 are associated with severe allergic reactions and risk of anaphylaxis; Tri a 14 is implicated in mild allergic reactions, not at risk of anaphylaxis. In the suspect of wheat allergy, skin prick tests and prick-by-prick represent first-level tests; however, both tests have little specificity. It is necessary to use the determination of sIgE against wheat allergen (RAST) and its components (ImmunoCAP), which have low specificity but a high diagnostic sensitivity. Positivity of a single molecular component is required to diagnose wheat allergy.
Case Report: S. is a 6-month-old infant without noteworthy anamnestic elements. 2 hours after the introduction of the semolina, onset of urticaria, edema of the ear pads, repeated vomiting, with spontaneous resolution. Subsequently, food prick tests were performed with positive response only for wheat. Prick by prick with semolina was negative. After a month of weaning with diet excluding the food, a new dose of semolina was given: after 4 hours after intake, pallor, asthenia, in association, repeated vomiting, resolved about 1 hour after the onset of the symptoms. Afterwards, he continued weaning and diet without grain and derivatives, without clinical symptoms. At the age of 1 year, RAST for wheat and ImmunoCap for wheat components: sIgE: 2,33 kUA/L; Tri a 14: 3.69 kUa/L; gliadin: 0.36 kUa /L; Tri a 19 0.10 kUA/L.
Conclusion: Wheat allergy belongs to the group of gluten-related immune disorders, which also includes celiac disease and gluten sensitivity. There is no correlation between these pathologies because IgA of celiac disease and sIgE of wheat allergy share different epitopes. Starting from the described symptomatology, skin and laboratory tests and resolution of symptoms after wheat-free diet, the pathogenesis can be referred to wheat allergy; specifically Tri a 14 (3, 69 kAa / l) and gliadin (0.36 kUa / l). Differential diagnosis should be made with FPIES (Food protein-induced enterocolitis syndrome) for 2 reasons: the onset of symptoms 4 hours after the second introduction of the semolina (clinical symptoms attributable to mediated IgE reactions are seen about 1-2 hours after the introduction of the food) and the early age of onset of symptoms (the patient is an infant). Given the different pathogenesis, in the context of wheat allergy and the risk of anaphylaxis, it is important to have a proper diagnostic framework, which leads to appropriate therapy, represented by the use of a wheat protein-free diet and adrenaline (when needed) with a plan of action. The purpose of the treatment should be represented by an adequate growth of the infant affected by allergy to wheat proteins; specifically, oats, corn, rice, millet, sage, quinoa, buckwheat are excellent substitutes of wheat proteins and have a very high degree of tolerability.

ID: 218 / OP1: 4
Oral Presentation Topics: General Pediatrics, Gastroenterology & Metabolism
A Partly Fermented Infant Formula Combined with Scgos/Lcfos Resulted in a Lower Incidence of Investigator-Reported Infantile Colic in Healthy Term-Born Infants

Alfonso Rodriguez-Herrera[1], Thomas Ludwig[2], Hetty Bouritius[2], Kelly A Mulder[2], Rocio Porcel[3], Antonio Muñoz[4], Massimo Agosti[5], Gianluca Lista[6], Luigi Tommaso Corvaglia[7], Juan L. P. Navero[8]
[1]Instituto Hispalense d Pediatria (IHP), Seville, Spain; [2]Danone Nutricia Research, Utrecht, The Netherlands; [3]Servicio de Pediatria- Hospital Quiron, Barcelona, Spain; [4]Hospital Clinico Universitario San Cecilio, Granada, Spain; [5]Azienda Ospedaliera - Polo Universitario F. Del Ponte, Varese, Italy; [6]SC

Neonatologia – Terapia Intensiva Neonatale, Istituti Clinici di Perfezionamento, Milan, Italy; [7]U.O. Neonatal Intensive Care Unit, University Hospital, Bologna, Italy; [8]Jefe de Servicio de Pediatría, Hospital Universitario Reina Sofia, Córdoba, Spain; Hetty.bouritius@nutricia.com

Introduction: A partly fermented (LactofidusTM process) infant formula (IF) combined with short-chain galacto-oligosaccharides (scGOS) and long-chain fructo-oligosaccharides (lcFOS) has previously been reported to reduce infantile colic (derived from parent-reported crying duration) at 4 weeks of age and soften stools in healthy IF-fed infants.

Purpose: In this new randomised controlled trial, we further investigated in detail the effect of an IF combining a partly fermented IF with scGOS/lcFOS on gastrointestinal (GI) related parameters collected daily throughout the intervention period.

Materials and Methods: Healthy IF fed infants aged ≤ 28 days (n=200) were randomised to receive an IF combining 30% of a fermented formula (derived from an unique fermentation process, LactofidusTM) with scGOS/lcFOS (0.8g/100ml, 9:1) (active) or a non-fermented IF without scGOS/lcFOS (control) until 17 weeks of age. An exclusively breastfed reference group (n=100) was also included. The incidence of adverse events (AE) (including infantile colic) was reported by study investigators. Crying duration and frequency data were collected daily with a modified Baby Day Diary for the entire intervention period.

Results: investigators reported infantile colic less frequently in the active group (1.1%) compared to the control group (8.7%) (P=0.020, Fisher's exact test), and was reported for 1.0% of infants in the breastfed reference group. Daily total crying duration was highly variable with no statistically significant difference between study product groups (P>0.05, Mann-Whitney U test), with the highest median (Q1-Q3) of 1.3 (0.5-2.3), 1.3 (0.5-2.2), and 0.9 (0.4-1.8) h/d at 5 weeks of age for the active, control, and breastfed groups, respectively. Preliminary post hoc analyses revealed that crying behaviour was impacted by the age of study product introduction. In the group of infants that received the study product for the first time after one week of age, there was a lower incidence of excessive crying (>3h/d) for infants who received the active IF when compared to the control IF. The intervention effect was not significantly different in the group of infants that started on study product before one week of age.

Conclusion: In this study, investigators reported fewer cases of infantile colic (as AEs) in infants receiving a partly fermented IF combined with scGOS/lcFOS. Additional analyses of daily crying duration also demonstrated a lower incidence of excessive crying in infants that were introduced to the formula after one week of age.

ID: 160 / OP1: 5

Oral Presentation Topics: Gastroenterology & Metabolism

Hepatocerebral Involvement in an Arab Infant with Mitochondrial DNA Depletion Syndrome in King Abdullaziz University Hospital: A Case Report

Shatha Mohammed Albokhari
King AbdullAziz University Hospital, Saudi Arabia; halbokhari@kau.edu.sa

Introduction: Mitochondrial DNA depletion Syndrome (MDS) with hepatocerebral involvement is a Autosomal Recessive disorder that is frequently hereditary, which is uncommon in the Middle East and Arab region. We report an Arab infant with hepatocerebral form of (MDS) as a result of DGOUK gene mutation compared to similar cases reported from other regions. Our aim is to share our experience and challenges in managing this case and to compare the clinical, laboratory and radiographic findings of similar reported cases from other regions (Table 1).

Table 1. Patient baseline characteristic

Case Report: We report this 3-month-old female Arab infant who presented to us with jaundice that began in the second day of life, fever and vomiting. She was the second offspring of a first-degree cousin couple who had history of a baby who died at the age of 3 days due to unknown cause. She was found to have on examination horizontal nystagmus, jaundice and hepatomegaly that was progressive with time. Given the history of consanguinity and neonatal death of a previous sibling, the possibility of Genetic/Metabolic disorders was in consideration. The infant had markedly disturbed liver function including coagulation, which was getting worse with time (table 1) In spite of conservative management and NG feeding due to failure to thrive. Her virology screen was normal as well as her metabolic screen (amino acids), abdominal ultrasound showed hepatomegaly with normal kidneys. MRI brain was normal, Liver biopsy showed non specific change with evidence of giant cell hepatitis. Genetic analysis for DGOUK gene mutation with homozygous variant of uncertain significance c.427T>C (p.Ser143Pro). She passed away at the age of 7 month due to uncontrolled bleeding in spite of conservative therapy.		**Normal level**
Laboratory findings:		
Direct bilirubin	72 mmol/L	0-5 mmol/L
Lactic acid	9.8 mmol/L	0.4-2.0 mmol/L
Alphafetoprotein	28319 ng/mL	<150 ng/mL
Prothrombin time (PT)	25.7 sec	11–14 sec
Partial thromboplastin time (PTT)	79.5 sec	29- 40 sec
Aspartate aminotransferase (AST)	596 IU/L	15-37 U/L
Alanine aminotransferase (ALT)	369 IU/L	12-78 U/L
Gamma-glutamyl transferase (GGT)	228 IU/L	5- 85 U/L
Radiographic findings:		
Abdominal ultrasonography	Bilateral echogenic kidneys with mild fullness	
Brain MRI	Normal	
Liver biopsy	Giant cell neonatal hepatitis	

Conclusion: This report describes the clinical, laboratory and radiographic findings of our 3-month-old infant with mitochondrial DNA depletion syndrome with hepatocerebral involvement; DGOUK gene mutation a condition that is reported in few countries but uncommon in the middle east and Arab region. This Syndrome needs more attention in order to provide suitable management and precisely parental counselling in future pregnancies.

ID: 220 / OP1: 6
Oral Presentation Topics: Endocrinology & Growth
Can Real-World Data from the easypod™ Connect Ehealth Platform be Used to Provide Insights Into Growth Hormone Treatment Adherence?

Jorge Cancela[1], Sandra Guedes[2], Ekaterina Koledova[3]
[1]Medical Devices & Services, Merck KgaA, Route de la Verrerie 6, 1267 Coinsins, Switzerland; [2]R&D Global Biostatistics, Epidemiology & Medical Writing, Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany; [3]Endocrinology Global Medical, Safety & CMO, Merck KGaA, Frankfurter Str. 250, 64293 Darmstadt, Germany; jorge.cancela@merckgroup.com

Introduction: The easypod™ electromechanical injection device is unique in electronically transmitting accurate, objective records of the date, time and dose injected for patients receiving recombinant human growth hormone (r-hGH; Saizen®) to treat growth disorders. The device works with the eHealth platform easypod™ Connect, to allow healthcare professionals to access adherence data.
Purpose: The aim of this analysis was to evaluate real-world adherence to r-hGH therapy, administered via easypod™ over 1, 3, 6, 12 and 24, 36 and 48 months and categorised as high (≥85%), intermediate (>56%–84%) or low adherence (≤56%).
Materials and Methods: The records of 9022 patients prescribed r-hGH using the easypod™ autoinjector and transmitting their data to the eHealth platform easypod™ Connect in 33 countries were analysed. Only data after the 10th injection registered on easypod™ was analysed, to exclude test/

training injections. The recorded data period varied, according to the duration of each individual's treatment within the study period. For each individual, patient adherence was calculated as mg of Saizenâ injected vs mg of Saizenâ prescribed, (dosage and frequency as per easypod™ settings defined by the care team [HCPs]). The number of data transmissions to easypod™ Connect and the ratio of r-hGH actually injected (as recorded by easypod™) to the target total amount prescribed ('non-usage ratio') were also collected.
Results: Overall, 8813 patients recorded >10 injections: 6410 (72.7%) in the high-adherence category, 1827 (21%) in the intermediate and 576 (6.5%) in the low-adherence category. The patients with the highest adherence had the highest mean number of data transmissions (10.80 [SD 22.8]) compared with the lower adherence groups (intermediate 5.78 [8.35] and low adherence 3.10 [SD 4.30], respectively) and also had the lowest non-usage ratio (0.048 [high adherence] vs. 0.259 [intermediate] and 0.601 [low]). A similar trend was reported at each of the study time points.
Conclusion: This is the first analysis of adherence in a real-world clinical setting using easypod™ Connect. We showed an association between high adherence and high easypod™ data transmission rates. Despite a decreased number of patients in the high-adherence group over time, after 2 years of follow-up the proportion of high-adherence patients was still high. As high adherence is associated with the lowest non-usage ratio, quantifying this ratio could help to track drug lost or discarded over time. Further analysis of these data will provide additional insights into patient behaviours.

ID: 142 / OP1: 7
Oral Presentation Topics: Endocrinology & Growth
Treatment of Hypercalcaemia: A Case Series

Kene Ebuka Maduemem[1], Comfort Adedokun[2]
[1]Department of Paediatrics, Cork University Hospital, Cork, Ireland; [2]Department of Emergency Medicine, Cork University Hospital, Cork, Ireland; ebukakene@rocketmail.com

Introduction: Hypercalcemia is an uncommon metabolic disorder in children. Clinical features of hypercalcemia may be nonspecific in neonates and infants, and is often discovered when a chemistry panel is obtained to evaluate failure-to-thrive. The differential diagnosis is complex and varies with age at presentation. Treatment includes hyperhydration, loop diuretic, steroids, bisphosphonates and treatment of underlying disease.
Case Report: We describe the diagnosis, treatment and outcome of 8 children (2 males, 6 females) with hypercalcaemia seen in a regional paediatric centre. This cohort has a median age of 0.99 (0.07 – 14.70) years. Presenting features were failure to thrive in 4/8 (50%) cases, incidental renal ultrasound finding post urinary tract infection in 3/8 (37%), abdominal symptoms in 1 case and incidental severe hypercalcaemia on routine work up of an unstable neonate in 1 case. They presented with a median corrected serum calcium level of 3.4 (2.96 - 4.3) mmol/L. The aetiology comprised Williams-Beuren syndrome (WBS) 3/8 (37%), primary hyperparathyroidism 1/8 (12%), idiopathic infantile hypercalcaemia (IIH) 4/8 (50%). Hypercalciuria was evident in 1 case. All cases received intravenous fluids and loop diuretic (furosemide). 4/8 (50%) received oral prednisolone for a median duration of 40 (7 - 120) days. Intravenous pamidronate was used in 4/8. The case of primary hyperparathyroidism underwent parathyroidectomy for solitary adenoma. All cases were managed on low calcium diet. Bilateral medullary nephrocalcinosis was the most common complication in 7/8 (87%). Long-term follow up showed normalised serum calcium with persistent nephrocalcinosis.
Conclusion: Traditionally, treatment of hypercalcaemia involves hyperhydration, loop diuretics, glucocorticoids and low calcium diet. Bisphonates use is gaining more recognition in Paediatrics. It restored normocalcaemia in half of the cases with recalcitrant hypercalcaemia.

ID: 162 / OP1: 8
Oral Presentation Topics: Endocrinology & Growth
Seasonal Vitamin D Levels and Parathyroid Hormone Variations of 90046 Children Living in a Subtropical Climate

Ozlem Naciye Sahin[1], Muhittin Serdar[2], Mustafa Serteser[2], Aysel Ozpinar[2], Ibrahim Unsal[2]
[1]Acıbadem University School Of Medicine, Department of Pediatrics, Turkey; [2]Acıbadem University School of Medicine Department of Medical Biochemistry; ozlemnaciyeatansahin@yahoo.com

Introduction: Humans obtain >80% of their vitamin D via exposure to the UV-B component of sunlight. Vitamin levels show significant variation in the circulating levels of 25-hydroxyvitamin D3 in nonequatorial regions. The normal vitamin D levels are considered to vary for different biological needs but >50nmol L-(>30 ng.mL -1) is currently considered optimal whilst 25-(OH)D between 20 and 30 ng/mL (37.5-50 nmol/L) L may be insufficient and <20 ng/mL (37.5 nmol/L)deficient(4). Determination of 25 (OH)D levels in children and accurate diagnosis of deficiency may involve methodological and clinical challenges due to variations in season, body mass index(BMI) and gender(5,6,7,8,9). In addition to these variances different populations may show a different threshold for PTH activation at different vitamin D cut off levels.
Purpose: This study was performed to evaluate the seasonal 25(OH) vitamin D levels and its associations with parathyroid hormone (PTH) of Turkish children at all pediatric ages and to assess the critical diagnostic threshold level for 25(OH)D deficiency in our pediatric population.
Materials and Methods: Our study population included 90046 children, 47928 female and 42118 male subjects. Serum 25(OH)D and PTH levels were measured by mass spectrometry method and by electrochemiluminescence immunoassay, respectively. As part of routine tests serum concentrations of predefined tests at Acýbadem LABMED Clinical Laboratories (Turkey) had been performed, between 2005 and 2015. Serum 25(OH)D concentrations were measured by Agilent Rapid Res 1200 LC system and Agilent 6460 triple quadruple mass spectrometer (Agilent Technologies, Santa Clara, CA). PTH concentrations were determined by an electrochemiluminescence immunoassay with Elecsys analyzer (Roche Diagnostics, Mannheim, Germany). For PTH, values greater than 200 pg/mL were excluded for it corresponds to three-fold higher than the upper limit of normal. Extreme values were excluded by Studentized procedure leaving 47928 female and 42118 male test results eligible for vitamin D, and 1798 female and 1727 male test results eligible for PTH data analysis. 3525 pediatric data sets were evaluated for PTH and vitamin D with correlation analysis.
Results: The correlation analysis of 90046 serum 25(OH) D levels (Mean:±SD, 25.31±15.52) and parathyroid hormone levels (Mean:±SD, 31.83±16.06) that belong to 3525 of the study population revealed a sinusoidal pattern. Considering vitamin D levels in preschool and school children, preschool children had significantly higher vitamin D levels than that of school children 25(OH)D (mean 25.31±15.52), PTH (mean 31.83±16.06) (p<0,0001). Analysis of 25(OH)D and PTH hormone levels demonstrated a seasonal sinusoidal pattern, with a significant increase in June, a peak in August, and a decrease to lower levels in December. Comparison of PTH levels between march and July, April and July, and July and November revealed an significant difference as their p values were as p<0.023, p<0,032, p<0.033 respectively. Vitamin D levels were significantly lower in female subjects (mean ± SD, 22.3 ng/L, ±14.02) while females had significantly increased PTH levels (mean ± SD, 32.7± 16.8) accordingly when compared to male subjects for vitamin D (mean ± SD, ng/L, 25.25±13.4) and PTH levels (mean ± SD, 31.04± 16.3) (p<0.0001). Age dependence of 25(OH)D and PTH levels were examined in 90046 pediatric subjects and highest levels of 25 (OH)D was observed in first year (33 ng/mL, IQR:13.4) and the lowest level was observed at age18 (15ng/mL, IQR:16).PTH levels were statistically increased, concomitantly with the gradual decrease of 25(OH)D from age one through age 18.
Conclusion: Taking into account the global health burden of vitamin D deficiency and its complications, even in sunny countries, threshold for PTH activation at different vitamin D cut off levels should be documented and public policies regarding sun exposure rights of children with their caregivers should be set.

ID: 232 / OP1: 9
Oral Presentation Topics: Allergy, Immunology & Pulmonology
Atopic Dermatitis: Cause or Consequence of Allergen Sensitization?

Cátia Pereira[1], Montserrat Álvaro[2], Carmen Riggioni[2], Yadira Gordon[2], Jaime Lozano[2], Adrianna Machinena[2], Maria del Mar Folqué[2], María Teresa Giner[2], Mònica Piquer[2], Ana María Plaza Martín[2]
[1]Department of Pediatrics, Hospital Santa Maria (CHLN), Lisbon, Portugal; [2]Pediatric Allergy and Clinical Immunology Department, Hospital Sant Joan de Déu, Universitat de Barcelona, Barcelona, Spain; catiamrpereira@gmail.com

Introduction: Atopic dermatitis (AD) is a chronic inflammatory disease, affecting 10% of children. Onset occurs during the first year of life in 85% of cases, before allergic disease develops. Etiology remains unknown and the role of food and aeroallergens is controversial. The "atopic march" theory suggests that early onset and moderate to severe AD may lead to subsequent allergic diseases, probably related to a skin barrier dysfunction.
Purpose: To characterize a cohort of children with moderate to severe AD and to assess the development of food and respiratory allergy in these patients.
Material and Methods: Retrospective review of medical records of children admitted for moderate to severe AD from birth to 12 months, in a Pediatric Allergy Department, between January 2011 and December 2015. Demographic data, risk factors for allergic disease, age of onset of AD, sensitization to food and aeroallergens and development of food allergy, asthma and allergic rhinitis were analyzed.
Results: Twenty-five patients with diagnosis of moderate to severe AD were included. Fourteen patients were male (56%). Median age at first consultation was 8 months (range: 4-12). Median time of follow-up was 4,6 years (range: 2,2-6,4). Twenty patients (80%) had first-degree family history of atopy. Median age of onset of AD was 2 months (range:1-5). Fifteen patients (60%) were breastfed until the median age of 5 months (range: 1-7). Eighteen patients (72%) had documented food allergen sensitization at a median age of 7 months (range:3-14), which included egg (16/18), cow´s milk proteins (13/18), nuts (4/18), fish (2/18), seafood (1/18), fresh fruits (1/18), vegetables (1/18) and soya (1/18). Diagnosis of food allergy was made in 12 patients (48%) at a median age of 16 months (range:6-36): egg (10/12), cow´s milk proteins (4/12), nuts (3/12), fresh fruits (2/12), vegetables (2/12), seafood (2/12) and fish (1/12). Five of these allergic patients (5/12:42%) presented multiple food allergies. Six patients (6/25:24%) were diagnosed with respiratory allergy at a median age of 5 years (range:3-6): asthma (5/6) and allergic rhinitis (5/6); all of them sensitized to dust mites.
Conclusions: Our results revealed that food allergy, namely egg allergy, is very frequent in patients with early onset and moderate to severe AD, as postulated by the "atopic march" theory. Regarding to respiratory allergy, we consider the follow-up period of our study too short to take conclusions. More studies are needed to assess the impact of treatment of AD in the prevention of sensitization and development of subsequent allergic diseases.

ID: 176 / OP1: 10
Oral Presentation Topics: General Pediatrics
Paediatric Practical Study Day for Newly Qualified Doctors, an Experience from a District General Hospital in the Uk

Erin Butterworth, Pratik Solanki, Andrew Foster, Nickolaos Cholidis
Princess Alexandra Hospital NHS Trust, United Kingdom; erin.r.butterworth@gmail.com

Introduction and Purpose: Becoming a qualified doctor remains a daunting task for the majority of final year medical students (1) particularly for those starting on paediatrics. Indeed, a number of specialities at Princess Alexandra Hospital, a district general hospital in the UK, are reliant on first year doctors, known as Foundation Year 1 (Fy1) doctors, to cannulate, perform phlebotomy and

assess children with no previous training. Thus, we created a Paediatric Fy1 training day with the emphasis on hands-on teaching and practical skills.

Method: We hosted a pilot course in July 2016 and 25 new Fy1s attended. Our initial format involved lectures, large group practical procedures and high fidelity simulation. Although the feedback was positive there was a request for smaller groups and more practical experience. Thus, we adapted the course for July 2017 to address these issues for which 24 new doctors attended. After 2 interactive lectures, participants were divided into groups of 4 and rotated around 6 workshops, each 30 minutes long. Feedback and pre- and post-course questionnaires exploring confidence were collected. A paired T-test was performed to explore statistical significance.

Results and Feedback: The feedback from the course was very positive.

Feedback scale: 5= Very good; 4= Good; 3= Average; 2= Poor; 1=Very Poor.

	Mean	Mode
Overall Quality	4.7	5
Overall Delivery	4.7	5

Results for individual stations:		Mean	Mode
Sick Child Lecture	Content	4.85	5
	Delivery	4.85	5
Safeguarding Lecture	Content	4.65	5
	Delivery	4.65	5
Prescribing workshop	Content	4.9	5
	Delivery	4.9	5
Breaking Bad News workshop	Content	4	4
	Delivery	4.25	5
ENT Examination workshop	Content	4.5	5
	Delivery	4.65	5
Safeguarding workshop	Content	4.8	5
	Delivery	4.8	5
Sepsis high-fidelity Simulation	Content	4.75	5
	Delivery	4.8	5
Practical Skills	Content	4.35	5
	Delivery	4.5	5

In regards to the pre- and post-course questionnaires: Confidence in	Pre-course score	Post-course score	Increase in confidence	P-value
Managing unwell children	2.24	3.56	1.32 (26%)	P<0.0001
Taking blood from a child	1.82	3.44	1.62 (32%)	P<0.0001
Talking to children and their parents	3.29	4.00	0.71 (14%)	P=0.012
Prescribing for children	2.24	3.61	1.38 (28%)	P<0.0001

Scale from 1 (not confident) to 5 (very confident)

Conclusion: We believe that such courses are highly valued by newly qualified doctors and will help in their adjustment to working life, especially in unfamiliar specialities like paediatrics. This project has been discussed with the East of England Deanery for Paediatrics who stated funding will be made available for future events.

ID: 286 / OP1: 11
Oral Presentation Topics: General Pediatrics
Effect of Kinesio® Taping Application on Chest Expansion in a Child with Joint Hypermobility Syndrome

Deniz Tuncer, Hülya Nilgün Gürses, Kamer Unal Eren, Busra Kepenek Varol
Bezmialem Vakif University, Turkey; tuncerdeniz82@gmail.com

Introduction: Joint Hypermobility Syndrome (JHS) refers to the increased passive or active movement of a joint beyond its normal range. Kinesio Taping (KT) is a relatively new therapeutic approach applied for improving muscle function and circulation, decreasing pain, and increasing balance and functional capacity by supporting joint stability. The aim of this case report is to examine the acute effects of KT on chest expansion in a child with JHS.
Case Report: A 7-year-old girl with joint hypermobility syndrome with a Beighton score of 8, who was referred to the Department of Pediatric Physiotherapy and Rehabilitation was evaluated. A clinical and physical history was obtained, pulmonary function test (PFT) and chest-circumference measurements were performed. The patient had moderate-severe restrictive type respiratory limitation, which restricts the expansion of the thorax according to the previous PFT. KT were applied to M. Diaphragmaticus, M. Sternocleidomasteideus, M. Scalenus, M. Rectus Abdominus, M. Obliqus Internus / Externus and M. Transversus Abdominis with muscle facilitation technique. Thoracic expansion was evaluated form axillar, epigastric and subcostal region with a tape measure before and after taping. The measurements were performed while making deep inspiration and forced expiration. The results of the chest circumferential measurements taken from axillary, epigastric, and the subcostal regions, as well as deep inspiration and forced expiration, are shown in Table 1.
Conclusion: However there was no difference between axillary and epigastric regions measurements following the application of KT, the measurements from subcostal region increased in deep inspiration and forced expiration. As a result of the findings obtained from the case; the acute effect of KT applied to the respiratory muscles of our case with JHS showed an increasing in the rib cage expansion. KT applications with physiotherapy suggest that it may be beneficial for the development of chest wall flexibility. In the light of this finding larger sample studies, which display the effects of KT on chest expansion in children with JHS are needed. There is no conflict of interest.

Table 1. Chest circumferential measurements

	Before Kinesio® taping (cm)		After Kinesio® taping (cm)	
	Deep inspiration	***Forced ekspiration***	***Deep inspiration***	***Forced ekspiration***
Axillary	59	56	59	56
Epigastric	55	52	55	52
Subcostal	52	49,5	54	51

ID: 133 / OP1: 12
Oral Presentation Topics: Emergency Pediatrics, Epidemiology
Pediatric Critical Cases Admitted to Intensive Care Units from the Pediatric Emergency Department

Yu-Jun Chang, Wen-Chieh Yang, Chun-Yu Chen, Han-Ping Wu
Changhua Christian Hospital, Taiwan; june@cch.org.tw

Introduction: Admission of pediatric patients from the emergency department (ED) to the intensive care unit (ICU) may indicate an urgent clinical condition requiring critical care. The outcome of ICU treatment is also related to the adequacy of the initial ED management. Understanding of the epidemiologic data of critically ill children presenting at the ED may help expedite accurate clinical assessments and decision-making on intensive care unit (ICU) admission.
Purpose: This study aimed to investigate the epidemiologic patterns of pediatric critically ill patients presenting to the ED and the etiologies of ICU admission.
Materials and Methods: This retrospective study of all children aged less than 18 years presenting with critical illnesses to the ED was conducted in a tertiary medical center during the 5-year study period. All patients transferred to the ICU from the ED were included without distinction. Etiologies of the ICU admissions were analyzed by various age groups. Children were divided into 3 groups according to age: young age (<=5 years), school age (>5 years to up to 12 years), and adolescent (>12 years to 18 years).
Results: Of the 2978 critically ill children transferred to the ICU from the ED, emergency surgeries were performed in 1027 cases (34.5 %). The mean duration of hospitalization was 12.5 days and the mean length of ICU stay was 5.6 days. Infectious/parasitic diseases, congenital abnormalities, and certain complications originating in the perinatal period were more common in young-aged children than adolescents ($p < 0.001$). However, injury and poisoning, mental disorders, endocrine, nutritional, diseases of the circulatory system, and metabolic diseases, and immunity disorders were more common in adolescents than school-aged children and young aged children ($p < 0.001$). Diseases of the nervous system and sense organs, mental disorders, diseases of the digestive system, diseases of the respiratory system, and diseases of the musculoskeletal system and connective tissue were more predominant in the school-aged children ($p < 0.05$). Moreover, the most common of diseases was respiratory distress syndrome in neonates (13.6%) followed by bacterial pneumonia (9.6%) and status epilepticus (6.9%). There were 289 pediatric critically ill patients with mortality. Male was more predominant than female ($p < 0.001$).
Conclusions: Epidemiologic analysis may provide primary clinicians to identify significant differences in admission rates based on different etiologies of various age groups.

ID: 166 / OP2: 1
Oral Presentation Topics: Endocrinology & Growth, Adolescent Health Choices
Quality of Life and Health Needs about Transitional Cares from Paediatric to Adult Age in Mccune-Albright Syndrome

Daniele Tessaris[1], Patrizia Matarazzo[1], Valter Dal Pos[2], Luisa de Sanctis[1]
[1]Pediatric Endocrinology, Regina Margherita Children Hospital, University of Turin, Torino, Italy; [2]European Association Friends of McCune-Albright Syndrome, Torino, Italy; daniele.tessaris@unito.it

Introduction: McCune-Albright Syndrome (MAS) is a rare congenital sporadic disorder with an estimated prevalence ranging from 1 in 1,00,000 to 1 in 100,000. MAS is caused by a post-zygotic somatic activating mutation of GNAS gene resulting in an increased GSα protein signaling leading to a scattered hyperfunction of bone cells and endocrine tissues with a wide phenotypic spectrum.

Purpose: The study analyzes quality of life and health needs about transitional care from paediatric to adult age.
Materials and Methods: We distribute anonymous semi-structured questionnaires from EAMAS (European Association of McCune-Albright Syndrome) mailing list to MAS patients over 18 years old. We analyze data about clinical manifestations, comorbidities, professional occupation, emotional and sexual bonds, clinical assistance, social and psychological support.
Results: We collect data from 15 questionnaires filled out by 2 male patients and 13 female patients, average age at evaluation 31.3 years old (range from 18 to 58). All patients have poliostotic fibrous dysplasia, 10 patients previous peripheral precocious puberty, 3 hyperthyroidism, 1 GH hypersecretion and 3 patients hypophosphatemic ricket. 13 of 15 patients (86%) continued to receive health cares during adult age: 8 from paediatric endocrinologist, 2 from paediatric orthopaedics, 3 from paediatric neurosurgeons; only in 3 case from adult endocrinologists. 13 patients have walking impairment, 3 visual defects, 1 hearing deficit, 4 aesthetic problems due to craniofacial fibrous dysplasia. Pain affected 13 on 15 patients with average 6.9 score (0-10 scale): 10 patients used pharmacological therapy, 4 pharmacological and non-pharmacological therapies, 1 patient no therapy: average subjective response was 5.0 (0-10 scale). Job activities (9/15 patients) and emotional/sexual bonds (13/15 patients) are most compromise areas. Quality of life is defined very good from 1, good from 5, acceptable from 7, poor from 2 patients. Only 8 (53%) declare to have relevant clinical and psychological support at evaluation-time.
Conclusion: Transitional cares from paediatric to adult age represent a difficult moment, especially for rare diseases as MAS: it is desirable to strengthen management in this age, expanding clinical and patient networks.

ID: 202 / OP2: 2
Oral Presentation Topics: Adolescent Health Choices, Adolescent Wellbeing
Systematic Literature Review in Adolescents with Chronic Diseases: (Health-Related) Quality of Life and Psychosocial Factors

Teresa Cristina Santos[1,2,3], Margarida Gaspar Matos[1,2,3], Celeste Simões[2,3], Isabel Leal[1], Maria Céu Machado[4]
[1]William James Center for Research, ISPA - Instituto Universitário, Lisboa, Portugal; [2]FMH, Faculdade de Motricidade Humana (Projecto Aventura Social-Social Adventure Team)/Universidade de Lisboa, Portugal; [3]ISAMB, Instituto de Saúde Ambiental, Faculdade de Medicina, Universidade de Lisboa, Portugal; [4]FM, Faculdade de Medicina/Universidade de Lisboa; Departamento de Pediatria do Hospital de Santa Maria, CAML, Centro Académico de Medicina de Lisboa, Portugal; gaudi_t@hotmail.com

Introduction: Living with a chronic disease in adolescence can represent a major challenge for adolescents and it may place them at higher risk for vulnerable health outcomes. Nevertheless, the impact of chronic disease on Health-related Quality of Life (HRQoL) and psychosocial factors in adolescence is a complex phenomenon, frequently with controversial results. Despite the increasing research in this area, studies on the relevance of psychosocial factors are still needed.
Purpose: Inspired by the vast literature on chronic diseases and also on previous studies that explored and characterized Quality of Life (QoL) and psychosocial factors in chronically ill Portuguese adolescents at a national-representative level (using the cross-sectional and international survey Health Behaviour in School-aged Children - HBSC 2010), the goal of the present review is to examine recent literature on the impact of living with a CD in adolescence on quality of life (QoL), health-related quality of life (HRQoL) and psychosocial factors.
Materials and Methods: The literature review of articles was conducted and identified through PubMed, PsycINFO and PsycARTICLES. Original research papers, published between 2010 and 2015, peer-reviewed; with no restrictions regarding the format/source of interventions and including adolescents from 13 to 18 years old were included. The following sets of keywords were used for reference tracing combined with the Boolean Operator 'AND': 1) "chronic illness" OR "chronic

disease"; 2) "quality of life" OR "health-related quality of life"; 3) "psychosocial, factors"; 4) "adolescent".
Results: Contradictory results were found in the final included eighteen papers, and most indicated a significantly higher risk of impairment on QoL/HRQoL and psychosocial factors, whereas others reported a significantly lower risk of impairment (emphasizing possible protective factors), or no significant differences. It was also observed heterogeneity in the assessment procedures and substantial difficulties in considering adolescence as a single and independent age group.
Conclusion: The heterogeneity and the higher risk of impairment observed reinforce the need to work towards consensual procedures, which allow for more accurate comparisons between studies. In addition, it is underlined the challenge to find more effective interventions. Moreover, it is highly suggested the need to routinely assess HRQoL/psychosocial factors within an individualized framework emphasizing potential protective factors, to considered adolescents as a single/independent group, and, to increase youth's participation in their own adaptation process and, generally, in health promotion. These are possible future directions that could provide multidisciplinary responses towards the improvement of HRQoL and psychosocial care in chronically ill adolescents.

ID: 195 / OP2: 3
Oral Presentation Topics: Adolescent Mental Health, Adolescent Wellbeing
Wellbeing Inequalities in Adolescents before and after the Recession: Parental Unemployment as a Shaping Factor

Diana Frasquilho, Margarida Gaspar de Matos
Aventura Social/HBSC Portugal, Portugal; diana.frasquilho@hbsc.org

Introduction: The economic recession that started in 2008-2009, provides an opportunity to study variations in the wellbeing of adolescents and the associations with their day-to-day living conditions.
Purpose: This study aims to compare the levels of adolescents' wellbeing in 2006, 2010 and 2014 according to parental employment status, to analyze the extent of vulnerability to lower wellbeing that adolescents face during economic recession periods.
Materials and Methods: A repeated cross-sectional study was undertaken. Data from the Portuguese Health Behaviour in School-aged children Survey was used to compare levels of wellbeing among adolescents with employed and non-employed parents, for the years 2006-2010 and 2014, corresponding to periods prior to, during, and after the economic recession. We calculated the proportion of adolescents reporting poor wellbeing according to parental employment status and adjusted for sociodemographic factors.
Results: Lower rates of reported wellbeing were found among the adolescents with unemployed parents, and such association increased during the period of the economic recession.
Conclusion: Parental unemployment may be a driver for further adolescents' inequalities during economic recessions; thus, further research is needed and, prevention and interventions are warranted to help protect the well-being of the most vulnerable adolescents.

ID: 205 / OP2: 4
Oral Presentation Topics: Adolescent Health Communication
Health Literacy Assessment in 13- to 17-Year Old Austrians: Results and Measurement Problems

Rosemarie Felder-Puig
Institute for Health Promotion and Disease Prevention, Austria; rosemarie.felder-puig@ifgp.at

Introduction: Health literacy (HL) has received growing attention in the literature over the past 15 years for its critical role in health education and promotion. In Austria, the concept attracted the attention of political stakeholders after the results of the European Health Literacy Survey (HLS-EU)

had been presented. From then on, a lot of efforts and ressources were put in HL assessment and improvement.
Purpose: We were asked to assess the HL of Austrian adolescents using the HLS-EU concept within the Health Behaviour in School-aged Children (HBSC) study, which takes place every four years.
Materials and Methods: The HLS-EU measurement model can be conceived of as a 12-cell matrix combining the key processes of accessing, understanding, appraising and applying health-related information with the three domains healthcare, disease prevention, and health promotion. We used the 16-item questionnaire which had been developed by HLS-EU researchers from the original 47-item questionnaire, pilot-tested it in a sample of 72 older children and adolescents and changed some wordings to be easier understood by our target group. The 16 items were statements about health-relevant tasks, and respondents were asked to judge whether those tasks were "easy" or "difficult" for them. We extended this 2-category response scale by a third category, which was "I don't know". Data were collected in the HBSC survey of 2014.
Results: We obtained data from 3,950 adolescents aged 13, 15 and 17 years and attending different types of school all over the country. The tasks most subjects found difficult to understand or handle refer to mental health problems, and the tasks the least subjects found difficult to understand or handle refer to unhealthy lifestyles and taking medication. On the average, one fifth of adolescents chose the response category "I don't know", but this varied largely across items, ranging from 7% ("following the instructions on medication") to 42% ("finding information on treatments of illnessess that concern you"). Therefore, it was questionnable whether it was right to use the HL global score algorithm suggested by HLS-EU researchers, and to equate the "I don't know" with the "difficult" responses. Doing so, only 37% of Austrian adolescents would have an adequate HL.
Conclusion: Further work should be invested in validating HL instruments for use in children and adolescents. To promote HL in this target group, its incorporation into school curricula would be a good and practical approach.

ID: 277 / OP2: 5
Oral Presentation Topics: Obesity & Physical Activity
Eating and Physical Activity Habits in Children and Adolescents and Their Correlation with Overweight and Obesity

Sara Rocha[1], João Soares Ferreira[2], Pedro Mantas[1], Ana Luísa Martins[2], Nuno Magalhães[2], Clarisse Aguiar[2], Rafaela Coelho[2], Maria Ema Duarte[2], Liza Aguiar[1]
[1]Hospital de Santarém, Portugal; [2]Unidade de Saúde Familiar São Domingos, Santarém, Portugal; sararocha.smr@gmail.com

Introduction: Alongside the increasing incidence of childhood obesity, are changes in eating habits and physical exercise. Greater consumption of processed food products, sedentary lifestyles and reduced physical activity are habits that tend to extend into adulthood, highlighting the importance of raising awareness and adopting preventive measures.
Purpose: This study aims to evaluate the eating and physical activity habits of children and adolescents (3-17 years) observed in Child Health Surveillance Consultations in a local Family Health Unit and their correlation with overweight and obesity.
Methods: Questionnaire about eating habits, physical activity and socio-economic status completed by parents or self if older than 14 years, after informed consent, for a period of 3 months. Anthropometric measurements, for BMI calculation, were carried out. Statistical analysis was performed on Statistical Package for the Social Sciences®, comparing the two groups (normal body mass index (BMI) versus overweight/obesity).
Results: We had a sample of 117 individuals, 55.6% females, with a mean age of 9 (±4.4) years, 69.2% with a normal BMI. Regarding physical activity and sedentary behaviours, we found a statistically significant difference in the regular practice of structured exercise (p=0.007), free physical activity for at least one hour a day (p=0.003) and screen time for at least two hours a day (p=0.03), all of them favoring the normal BMI group. Among eating habits, only the daily consumption of cookies stood out (p=0.008) with prejudice to the overweight/obesity group. Also, hours of sleep seem to be

related with BMI, with the normal BMI group sleeping 35 more minutes than the overweight/obesity group (p=0.01). The parents' educational level may have a relationship with BMI as well, with the highest level in the normal BMI group (p=0.02).
Conclusion: Physical activity seems to have a greater impact on BMI than eating habits, emphasizing the importance of developing and promoting measures to stimulate regular physical exercise and discourage sedentary behaviours, at home and educational institutions, in order to reduce the incidence of overweight and obesity, without neglecting the importance of a healthy diet on overall health.

ID: 223 / OP2: 6
Oral Presentation Topics: Obesity & Physical Activity
Effects of Vitamin D Supplementation on Obesity: A Randomized Clinical Trial

Vithanage Pujitha Wickramasinghe[1], Shamini GS Adikaram[2], Dulani BDL Samaranayake[3], Navoda Atapattu[4], Lakshika Kendaragama[4], Tharika N Senevirathne[1], Amali N Herath[1], Hasika Dilhani Jayasekera[1]
[1]Department of Paediatrics, Univeristy of Colombo, Sri Lanka; [2]Colombo South Teaching Hospital, Sri Lanka; [3]Department of Community Medicine, Univeristy of Colombo, Sri Lanka; [4]Lady Ridgeway Hospital, Colombo, Sri Lanka; pujithaw@yahoo.com

Introduction: Vitamin D, apart from being crucial in bone metabolism, plays an important role in insulin secretion and maintaining glucose homeostasis. Although thought to be adequately nourished, micronutrient deficiencies have been identified among the obese and vitamin D deficiency is common.
Purpose: To identify the effects of administering vitamin D, in vitamin D deficient obese children.
Material and Methods: Vitamin D deficient obese children were recruited for a supplementation study. A triple blind RCT was conducted where subjects were randomly allocated to treatment, supplement or control groups. After a 12-hour overnight fast, blood was taken for assessment of fasting blood glucose, insulin, lipid profile, ALT, AST, vitamin D, parathyroid hormone and OGTT with 2-hour random blood glucose and insulin. The children in the treatment arm received 50,000 IU of Vitamin D2 weekly for 24 weeks. The supplementation group were given 2500 IU weekly. The participants were followed up monthly at the Clinical Research Laboratory of the Professorial paediatric Unit at Lady Ridgeway Hospital for Children, Colombo, Sri Lanka. The protocol was approved by the Ethics Review Committee of Faculty of Medicine, University of Colombo and Clinical Trials of the Ministry of Health, Sri Lanka. The study was registered at Sri Lanka Clinical Trials Registry. Vitamin D deficiency was taken at serum level of <20ng/ml.
Results: 95 children were recruited and randomized to the three arms of the study, supplement (33), treatment (31) and placebo (31). BMI-Z score, WC, percentage body fat and alkaline phosphatase showed statistically significant decreases across all three groups with marked improvement in Vitamin D treatment group. Although statistically not significant, other anthropometric and metabolic parameters improved in all three groups, with marked improvement in treatment group. Vitamin D levels improved in all 3 groups with a significant rise in treatment group. Improvement in the supplement and placebo group were similar. Improvement in the placebo group could be due to improvement in the feeding habits with the dietary advice that was provided and reduction in the fat mass. 33% of the treatment group sufficient levels of vitamin D while in the other two groups the it was about 10%.
Conclusion: A strict dietary and physical activity regimen could improve vitamin D status in obese children and some of the anthropometric and metabolic profiles, but high dose vitamin D, enhances those improvements. Therefore high dose vitamin D would potentiate management outcomes of childhood obesity. Further large scale studies are needed.

ID: 297 / OP2: 7
Oral Presentation Topics: General Pediatrics, Nutrition & Diets
Children's Eating Behavior; A Comparison of the Attitude and Perception of Families and Physicians in Pediatric Ambulatory Setting - Qatar

Ahmed hassan Alhammadi[1,2,3], Manasik kamil Hassan[1,3], Mohamed sobhy Khalifa[1], Hatim mohamed Abdulrahman[1,2,3]
[1]Hamad Medical Corporation, Qatar; [2]Weill Cornell Medicine - Qatar; [3]Sidra Medical and Research Centre-Qatar; MHassan17@hamad.qa

Introduction & Purpose: Eating behavior in children is considered part of their growth and development; one those behaviors is picky eater. There is no single widely accepted definition of picky eating. Our aim from this study is to explore and compare parents and physicians perception of child picky eater and to identify factors that might lead to modifying such behavior and feeding practice.
Materials and Methods: A cross sectional single institution retrospective study was done at Hamad Medical Corporation in general pediatrics clinics. The survey includes details of demographic, several questions to explore the perception of picky eater among parents and physicians, compare the relation between truly parents concern and the physicians evaluation for the kids regarding feeding habits and how it is affecting the children growth.
Results: A total of (136) questionnaire analyzed; among the children a mean age of 5 years old. 75% of mothers were responsible for feeding and scheduling meals. Almost 58% of parents stated that they are considering their children as picky eater and have concerns about their growth, poor appetite and not getting optimal vitamins from meals compere to physician's concern (43%) p value (0.005). Family concern was matching low body mass index for their kids where the BMI was <15 (72%) p value (0.016) physician's point of view was less compering to BMI of the children (50%) p value (0.17) . The most common behaviors of a picky eater among the group responding included; taking less variety of food (62%) of parents vs (53%) physicians,refusal to eat at meal time (44%) of parents and (21%) of physician's p value (0.001), avoiding new food and prefer liquid over solid (50%) and (44%) respectively.
Conclusion: Our study showed that parents are more likely to identify their children as being picky eaters than physicians, in addition, there was a good correlation between parent's perception and their child's actual BMI. Both groups shared same concerns regarding picky eater behavior. Better understanding family dynamics and mealtime interactions will help in improving parenting feeding styles and decrease negative parent–child interactions.

ID: 263 / OP2: 8
Oral Presentation Topics: Nutrition & Diets, Adolescent Wellbeing
Nutritional Habits Profile Among Sudanese Adolescents

Elmuntasir Taha Mohamed Salah[1], Fatma Sharhabeel Margani Mohammed[2], Manal Mohamed Khalid Elhussien[3], Nada Malik[1]
[1]The National Ribat University, Sudan; [2]Ministry of Health Khartoum State; [3]Mogtrbeen University; almuntasirtaha@yahoo.com

Introduction: Adolescents are at a great risk of nutritional problems, because of the hormonal and physiological changes that affect their life style and food habits and affect nutrient intake.
Purpose: The aim of this study was to determine the food pattern of Sudanese adolescent school children.
Materials & Methods: A learning facility based cross section study, conducted in basic schools in Khartoum, Sudan. Carried out in 25 primary school children for boys and girls distributed as 12 boys schools and 13 girls schools. Schools chosen for this study comprised all groups of society namely low, medium and high-income group. The sample size was 380. Informed consent was obtained from the participants and their teachers and they were informed that their participation is totally voluntary.

Results: Age of the studied population range between 10 – 15 years, the majority were between 12-13 (47.2 %). Female children comprised 47.0% and male children were 53%. Fifty five percent of the students took 3 meals per day. 69% of prefer to eat beans in breakfast meal while only 3% prefer fast foods. 55.2% of students drink milk daily. 70% of students eat green salad daily and 42% of students prefer to eat meat while only a very small percentage prefer to eat fruits. Soft drink was consumed by 37.4% of students
Conclusion: Sudanese adolescent children consume a balanced diet except for less preference of fruits.

ID: 235 / OP2: 9
Oral Presentation Topics: Neurology
Temporal Lobe Epilepsy: Electroclinical Features, Management and Neurodevelopmental Impact

Gabriela Tavchioska[1], Teuta Useini Avdi[2]
[1]General Hospital Prilep, Macedonia, Former Yugoslav Republic of; [2]Clinical Hospital Bitola, Macedonia, Former Yugoslav Republic of; gtavcioska@gmail.com

Introduction: The wide range of symptoms and signs of temporal lobe epilepsy consists of motor manifestations, abdominal pain and oral, hand or verbal automatisms. They originate from medial or neocortical region of temporal lobe. Electroclincal features depend on the age of the child. Neurodevelopmental impact such as cognitive decline mostly depends on duration of epilepsy.
Purpose: to present our experience in diagnosis, treatment and follow-up of children with temporal lobe epilepsy.
Materials and Methods: Retrospective observational study conducted in two medical centers. Data were collected from medical histories of children from 6 moths to 14 years with temporal lobe epilepsy.
Results: Out of 32 children, 4 (12,5%) children younger than one year have temporal lobe epilepsy, 11 (34,3%) children in the age group from 1 to 5 years and 17 (53,1%) in the age group from 6 to 14 years. Analysis of electroclinical features showed that 24 children experienced partial seizures, 4 children had verbal attacks, 3 children had general tonic-clonic seizures and one child had severe abdominal pain. Spike-slow wave complexes in temporal leads were found in interictal electroencephalography. Magnet resonance changes were found in 7 (21,8%) children. Currently 24 (75%) children are treating with one antiepileptic drug, 7 (21,8%) are on double antiepileptic therapy and 1 (3%) child is receiving three antiepileptic drugs. Neurodevelopmental delay due to uncontrolled seizures or brain structural changes was estimated in 9 (28,1%) children.
Conclusion: Management of temporal lobe epilepsy is complex with need of comprehensive diagnostic tools, access to modern therapies, and regular follow-up and close collaboration between health institutions with different level of health care.

ID: 187 / OP2: 10
Oral Presentation Topics: Rare Diseases, Child Mental Health
Inspiratory Muscle Training in Children After Fontan Operation Increases Oxygen Saturation

Rhoia Clara Neidenbach[1], Renate Oberhoffer[1,2], Nicole Nagdyman[1], Ulrich Seitz[3], Peter Ewert[1], Harald Kaemmerer[1], Alfred Hager[1]
[1]Department of Pediatric Cardiology and Congenital Heart Disease, Deutsches Herzzentrum München; [2]Department of Preventive Paediatrics, Technische Universität München, Munich, Germany; [3]Verein Kinderherz - Associazione per i bambini con malattie cardiache, Bolzano, Südtirol; rhoia.n@gmail.com

Introduction: The Fontan procedure is a palliative surgical procedure in patients with a functional or anatomic single ventricle. After a Fontan operation, the systemic venous blood flows passively through the lungs, without being pumped by a right ventricle. Due to improvements of surgical procedures, long-term outcomes are expected to be promising. However, patients face a high mortality

and morbidity risk and may suffer of residua or sequela such as arrhythmias, heart failure, thromboembolic events, liver dysfunction or protein-losing enteropathy. Nowadays surviving into adulthood, Patients experience higher individual demands on exercise performance and health development.
Purpose: In Fontan patients, the ventilatory pump may augment the blood flow by increasing venous return within inspiration. The aim of this study was to evaluate the effects of inspiratory muscle training on exercise capacity and hemodynamic values in Fontan patients.
Materials and Methods: Forty consecutive, clinically stable children after Fontan operation (mean age 12.3 ± 2.2 years, range 8 to 17 years, 25% female) were recruited. Instable patients or those undergone recent interventions, or changes in medication were excluded. All patients performed a cardiopulmonary exercise-training test (CPET) and were then randomized into a training group or a control group. The training group received instructions to an inspiratory ventilatory muscle training with a POWERbreathe® device, which was weekly adapted to the patients' individual level. Patients were asked to train daily for 10-15 minutes. The control group did not receive any intervention. After 6 months all patients were restudied again.
Results: In the training group, work rate increased on average by 14% compared to 6.5% in the control group (p=0.425). There was a 10% increase in the forced vital capacity (FVC) in both groups, and an increase of VO2peak by 3.0%. Oxygen saturation at rest was significantly higher after the training compared to the control group (p <.014). None of the patients in the training group became cyanotic (<90%) during exercise anymore.
Conclusion: After a Fontan palliation, a lifelong follow-up by an experienced specialist in complex congenital heart disease (CHD) is essential. Patients' needs concerning activities in daily life and the desire to perform sports should be regarded and considered individually. To enhance health development, preventive inspiratory muscle training should be included in the rehabilitative program of children and adults after Fontan operation. Inspiratory muscle training increases exercise capacity in terms of work rate and improves oxygenation at rest and during exercise.

ID: 256 / OP2: 11
Oral Presentation Topics: General Pediatrics
Cutaneous Mastocytosis: Bullous Form – A Case Report

Tiago Augusto Paiva de Magalhaes, Sara Fonseca, Ana Maia, Ana Paula Fernandes
Department of Pediatrics, Integrated Pediatric Hospital, Centro Hospitalar S.João, Porto - Portugal; tiagoaugmagalhaes@hotmail.com

Introduction: Mastocytosis is a disorder characterized by an abnormal proliferation and accumulation of mast cells within tissues or organs. Its clinical presentation results from mast cell-mediator release and increased mast cell infiltration in tissues.
Case report: We describe a 21 months old female infant with familial history of anetoderma (mother). The patient had no medical history until the age of 6 months when her parents noticed bullous lesions located on the scalp and seating position pressure points. From the age of 12 months, skin thickening with rough-textured and yellowish maculae started to appear mainly on the scalp and trunk with sporadic episodes of acute worsening of the skin lesions along with vomiting and diarrhea. Due to the suspected diagnosis of mastocytosis, a skin biopsy was performed which showed severe mast cells infiltration on the dermis. Laboratory tests revealed increased serum tryptase levels (49,8 mcg/L). Both bone biopsy and myelogram showed no sign of medullary infiltration by mast cells. Abdominal ultrasound also did not show any alteration. Parents were instructed in order to avoid possible mast cells degranulation precipitating factors and started treatment with antihistamine and cromoglycate. In the 2 months previous to this case report, the patient had 3 visits to the emergency department for severe episodes of flushing associated with urticaria that quickly evolved into bullous lesions and systemic hypotension that needed adrenergic support. Following these episodes, corticosteroids and ketotifen were added to her treatment, so far with good response.
Conclusion: We describe a case of cutaneous mastocytosis in its bullous form illustrating the complexity of this disorder; particularly how clinical manifestations can either be limited to the skin but also have systemic involvement or be potentially fatal.

ID: 190 / OP2: 12
Oral Presentation Topics: General Pediatrics
Febrile Diarrhea Among Under-5 Children: A Facility Based Observation in Rural Bangladesh

Shahnawaz Ahmed, Abu Syed Golam Faruque
icddr,b, Bangladesh, People's Republic of; shahnawz@icddrb.org

Introduction: Fever is common and mostly caused by benign self-limiting infections and which is an easily recognizable primary sign, for many serious childhood infections. But when fever accompanies with infectious disease such as diarrhea become worried some and made parents anxious and drove care seeking.
Purpose: Due to the scarcity of information regarding the febrile diarrhea, we anticipated to explore socio-demographic, clinical, and host characteristics of diarrhea with fever among under- 5 children who presented in rural Mirzapur, Bangladesh.
Materials and Methods: From January 2010 to December 2012, a total of 3,570 children of under-5 years with diarrhea were visited to a tertiary level hospital in rural Bangladesh. A total of 2979 (83%) of these children were reported diarrhea without fever and 591 (16%) were enrolled as diarrhea with fever. Sixteen percent (n=591, 16%) of the enrolled children were suffering from diarrhea with fever, considered to be cases and the remaining children (n=2,979, 83%) were not reported with fever and formed the comparison group.
Results: Diarrhea with febrile children were more likely to be wasted (<–2 weight-for-height z-score) [(20% vs. 14%; p<0.001)] and underweight (<–2 weight-for-age z-score) [(26% vs. 21%; p<0.007)] compared to diarrhea without fever. Older age group (24-59 months) [(32% vs.16%; <0.001)] children were more complaints of diarrhea. Seasonal peaks of diarrhea with fever were observed in during the months of March, and June [(50% vs. 39%; <0.001)], but October to February were the peck of diarrhea without fever [(32% vs. 46%; <0.001)]. In multivariate analysis, significant associations diarrhea with fever were observed with age stratum [OR: 1.65 (95% CI-1.29-2.12)], seasonality [1.37 (1.12-1.68)], number of stool [1.30 (1.07-1.59)], vomiting [1.57 (1.27-1.94)], dehydration (moderate- severe) [1.73 (1.73-1.28)], convulsion [6.90 (3.75-12.71)], Shigella [2.17 (1.67-2.82)] after controlling for other covariates.
Conclusion: Diarrhea with fever were more likely to be associated with older age stratum, seasonality, non sanitary toilet, stool frequency, vomiting, convulsion, dehydration (moderate- severe) and Shigella with diarrhea without fever. Further extensive study will be needed to better understanding about the disease to develop the treatment strategy to reduce disease burden.

ID: 188 / OP2: 13
Oral Presentation Topics: Preterm Infant, NICU
The Effect of Pre-pregnancy Body Mass Index and Weight Gained During Pregnancy on Pregnancy Outcome. A Study on Cypriot Population

Paraskevi Stylianou-Riga[1], Petros Galanis[2], Angelos Rigas[3], Thalia Papadouri[1], Mamas Theodorou[2]
[1]Neonatal Intensive Care Unit, "Archibishop Makarios III Hospital"; [2]Open University of Cyprus; [3]Apollonion Hospital,Cyprus; angerigas@yahoo.gr

Introduction: Several maternal factors such as the Body Mass Index (BMI) prior to pregnancy and weight gain during the pregnancy affect markers of pregnancy outcome, such as the gestational age and the newborn's birth weight.
Purpose: To investigate the effect of the pre-pregnancy Body Mass Index (BMI) of the expectant mother and the weight gained during the pregnancy (number of additional kilos) on the newborn's birth weight, the incidence of preterm birth and the degree of prematurity observed.
Material and Method: This is a prospective research carried out in Cyprus from March 2015 to April 2016. The participants were women with single pregnancy, giving birth in a private or state hospital. Questionnaires were administered to 348 women who gave birth prematurely (<37 weeks) (cohort group) and 349 women who carried their pregnancy to term (>37 weeks) (control group). The aim

was to collect data relating the women's weight gain in kilos (kg) during pregnancy, their height in centimeters and their weight just prior to pregnancy, in order to calculate their BMI. Following the calculation of the BMI, women were categorised into 5 groups. We also recorded the gestational age and birth weight of newborns. The statistical analysis was performed using the IBM SPSS 21.0 statistical package.

Results: Our results indicate a statistically significant increased incidence of preterm delivery (p<0.001), statistically significant lower gestational age (p<0.001), and an increased frequency of low birth weight newborns (LBWN) (<2,500 grams) (p=0.001) in women with low Body Mass Index (BMI<19.9 kg/m2). The reduced number of kilos gained during pregnancy indicates a statistically significant increased frequency of LBWN (p<0.001) and a lower gestational age of the newborn (p<0.001).

Conclusion: Women with low Body Mass Index before pregnancy or low weight gain during pregnancy, are at increased risk for premature birth and babies with low birth weight, when compared to women with normal BMI and normal weight gain during pregnancy. The implementation of preventive measures within the context of health policy, aimed at maintaining normal BMI for women and correct nutrition during pregnancy is necessary, since they have a significant impact on the pregnancy outcome.

ID: 181 / OP3: 1

Oral Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines

Likely Bacterial Acute Cervical Lymphadenitis in Children: Factors Predictive of Favorable Outcome

Karina Deshaies Poliquin[1], Laurence Arsenault-Blanchard[1], Alexandre Marceau[2], Richard Belanger[3], Simon Berthelot[4], Daniel Philippon[5], Josée-Anne Gagnon[1]

[1]Department of Pediatrics, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; [2]Faculty of Medecine, Université Laval; [3]Population Health and Optimal Health Practices Research Unit, Centre de recherche du CHU de Québec Université Laval, Québec, QC, Canada; [4]Department of Emergency Medecine, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; [5]Department of Surgery, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; karina.deshaies-poliquin.1@ulaval.ca, laurence.arsenault-blanchard.1@ulaval.ca

Introduction: Cervical lymphadenitis is frequent in the pediatric population and usually the result of infectious agents. Management of likely bacterial acute cervical lymphadenitis (LBACL) mainly relies on expert advice and may vary widely from antibiotherapy to surgery as no official guidelines have been published over the last decade.

Purpose: To identify clinical factors associated with favorable outcome in the management of LBACL in children in order to create a decision algorithm and its further evaluation.

Materials and Methods: This retrospective observational study was based on the review of medical records of patient from 1 month to 18 years old that have consulted for LBACL between July 1st 2010 and July 31st 2015 at a tertiary care pediatric center. LBACL were identified using 2 electronic record databases (hospitalization, emergency). Patients were included if they had acute (≤10 days) episode of unilateral cervical mass of which the final diagnosis was LBACL. Exclusion criteria were: mycobacterial adenitis, Kawasaki disease, Cat-scratch disease, bilateral cervical lymph node involvement, congenital malformation, immunodeficiency or underlying neoplasia. Favorable evolution was defined as outpatient treatment or hospital stay of 48 hours or less without surgical drainage. To identify factors at initial consultation predictive of a favorable outcome, we performed univariate logistic regression models with several potential independent covariates, including, among others, age (years), size of lymph node (mm), fever (38,5°C) and antibiotic use prior to consultation, fluctuation, absolute white blood cell count (x10^9/L), and purulent material at ultrasonography (yes/no).

Results: Our final study cohort was composed of 166 patients with a mean age of 4,5 years (3,5SD) and 62% male. Ultrasound was obtained in 139(83,7%) patients and cervical tomodensitometry in 31(18,7%). Surgical drainage was performed in 35(21,1%). Overall, 68(41,0%) patients presented a favorable evolution from which 27(16,9%) were treated as outpatient (diagram1). Factors associated with favorable outcome were (OR; 95%CI): age (1.17; 1.06-1.29; p=0.002), absolute white blood cell count (0.91; 0.87-0.96; p=0.001), no antibiotic use prior to consultation (0.26; 0.07-0.92; p=0.037) and absence of purulent material on ultrasound (0.07; 0.02-0.29; p<0.001). Size of lymph node (0.98; 0.96-1.00; p=0,057) or fluctuation (0.71; 0.21-2.39; p=0.57) did not achieved statistical significance.
Conclusion: Older patients without prior antibiotic use, those with lower absolute white blood cell count and no purulent material on ultrasound seem to better evolve than other children with likely bacterial acute cervical lymphadenitis. A decision algorithm to identify patients eligible for conservative management should include those predictive factors.

ID: 216 / OP3: 2
Oral Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines
Periapical Abscesses: A 10-Year Analysis in a Paediatric Inpatient Care Unit

Cátia Leitão, Andreia Ribeiro, Isabel Ayres Pereira, Joana Tenente, Marta Vila Real, Sónia Viegas
Centro Hospitalar Vila Nova de Gaia/Espinho, Portugal; catiavbl@gmail.com

Introduction: Oral diseases are an increasingly health problem in the paediatric population with important morbidity and health care costs, although sometimes neglected by Paediatricians.
Purpose: Analyze clinical-epidemiological features and identify severity risk factors of periapical abscesses in a paediatric population.
Materials and Methods: Retrospective observational and analytical study of paediatric inpatients in a Portuguese hospital with the diagnosis of periapical abscess, during a 10-year period (2007-2016).
Results: This study included 94 patients (median age of 11.0 years, 52.1% female), with a median hospitalization time of 6 days (maximum 27 days). In the last six years, the number value of admissions to Paediatric Emergency Department doubled, with an average hospitalization rate of 11.8%. Oral disease existed previously to admission in 94.1%, with dental cavity being the most frequent (75.0%). Fifty-eight percent sought medical care before the admission, 46.8% had initiated antibiotic therapy and 2.1% underwent exodontia. The most common reported symptoms were odontalgia (77.7%) and cellulitis (64.9%). The mean time to presentation was five days. On physical examination, facial cellulitis (93.3%), dental cavities (55.4%), dental abscess (54.4%) and trismus (18.1%) were the most common findings. In 75,7% of cases permanent dentition was affected. Leukocytosis was present in 32.9% and C-reactive protein was positive in 89.2%. Evaluation by Stomatology/Dentist was requested in 85.1%, and 80.4% were submitted to dental procedure (68.3% exodontia). All hospitalized patients started intravenous antibiotics, 30.9% in association ad-initium. Amoxicillin+clavulanic acid was used in 81.9%, clindamycin in 25.6% and cephalosporin in 12.8%. The evolution was unfavorable in 12.8%. The mean duration of treatment was 11.9 days. Eighty-nine percent were directed to hospital consultation but only 2.4% of them had records of oral health in the follow up. Prior antibiotic therapy was associated with initiation of more than one drug on admission (p=0.015). The presence of trismus on admission was associated with longer hospitalization time (p=0.003). An association was found between the presence of leucocytosis and unfavourable evolution (p = 0.036).
Conclusion: To the author's knowledge, this is the first study of periapical abscesses in paediatric inpatients. The scarcity of medical records for some variables made difficult the identification of significant association, reinforcing the importance of research on this area. This public health problem should be emphasized among Paediatricians to promote oral health and prevent oral diseases.

ID: 114 / OP3: 3
Oral Presentation Topics: Infectious Diseases & Vaccines
Possible Impact of Yearly Childhood Vaccination with Trivalent Inactivated Influenza Vaccine (Tiv) On the Immune Response to the Pandemic Strain H1n1

Ahdi Amer[1], Howard Fischer[1], Xiaoming Li[2], Basim Asmar[1]
[1]Wayne State University School of Medicine, Children's Hospital of Michigan, Detroit, MI, USA; [2]University of South Carolina Arnold School of Public Health; aamer@med.wayne.edu

Introduction: Annual vaccination of children against seasonal influenza with trivalent inactivated influenza vaccine (TIV) has shown to be beneficial and it has been recommended in many developed countries, primarily the United States and some European countries. However, this yearly practice may have an unintended effect. Several animal studies, mostly in mice and ferrets, have demonstrated that infection with either wild-type influenza A viruses or vaccination with live attenuated vaccine strains produced a more effective, broader heterotypic (cross-protective) immunity, which closely resembled natural immunity than did the use of inactivated virus vaccines. Similarly, live attenuated intranasal vaccine (LAIV) in animals as well as in young children has shown a superior relative efficacy when compared with inactivated influenza vaccine.
Purpose: We hypothesized that a possible unintended consequence of the practice of yearly TIV vaccination might be the lack of induction of heterotypic immunity against the recent novel H1N1 pandemic strain. Therefore, children and other immunologically naive individuals would be at higher risk of becoming infected with the H1N1 novel pandemic strain than those who have developed heterotypic immunity through previous influenza infection.
Methods: This was a retrospective case-control study. We reviewed the hospital's electronic medical records of all polymerase chain reaction–confirmed cases of novel 2009 H1N1 influenza in children 6 months to 18 years old who were seen at the Children's Hospital of Michigan during the period from October 2009, to January 2010. The immunization records of the H1N1 infected group and an age-, gender-, and race-matched control group were reviewed using the Michigan Care Improvement Registry to verify their respective seasonal influenza vaccination status.
Results: We identified 353 polymerase chain reaction–confirmed H1N1 cases and 396 matching control subjects. Among the H1N1 group, 202/353 (57%) cases received a total of 477 doses of seasonal TIV compared with 218/396 (55%) in the control group who received a total of 435 doses. Seasonal TIV uptake was significantly higher in the H1N1 group 477/548 (87%) than in the control group, 435/532 (81%) (P = .017). When stratified into 4 different age groups, the only statistically a significant increase of seasonal TIV uptake was in the H1N1 age group 18 to 48 months: 91 (95%) compared with 81 (85%) in the same control age group (P = .02). Also, the number of vaccinees who had an overall up-to-date immunization status was significantly higher in the H1N1 group 204/353 (58%) than in the control group 190/396 (48%; P= .008)
Conclusion: Seasonal TIV uptake was significantly higher in the H1N1-infected group. The finding suggests that the practice of yearly vaccination with TIV might have negatively affected the immune response to the novel pandemic H1N1 strain. Given the rarity of pandemic novel influenza viruses and the high predictability of seasonal influenza occurrence, the practice of yearly influenza vaccination should be continued. However, the use of the live attenuated intranasal vaccine, as opposed to TIV, may allow for the desirable development of a vigorous heterotypic immune response and possible protection against future pandemic strains.

ID: 276 / OP3: 4
Oral Presentation Topics: Allergy, Immunology & Pulmonology
Comparison of Global Initiative for Asthma Guideline Criteria and Childhood Asthma Control Test for Detecting Asthma Control

Yezdan Akman Akyurt[1], Ayşen Cetemen[2], Şirin Güven[2], Cüneyt Akyurt[3]

[1]Orhangazi Country Hospital, Turkey; [2]Health Sciences University, Ümraniye Training & Research Hospital, Turkey; [3]Health Sciences University, Yüksek İhtisas Training & Research Hospital, Turkey; dryezdanakman@gmail.com

Introduction: There are so many developed tools for detecting asthma control in children. Childhood asthma control test (C-ACT) that is developed for detecting asthma control in children aged 4-11 years is one of these tools.
Purpose: The aim of this study is, to evaluate reliability and validity of C-ACT in detecting asthma control in children by comparing C-ACT scores and GINA criteria.
Material and Methods: 164 patients aged 4 -11 years were enrolled in the study. All the patients and their caregivers' fulfilled C-ACT 10-15 minutes before the clinical visit. In clinical visit patients asthma control status was determined, blinded to C-ACT scores, by using GINA guideline criteria and pulmonary function test was performed. Total C-ACT scores calculated at the end of the study. Asthma control status compared between total C-ACT scores and GINA guideline criteria.
Results: For the reliability test of C-ACT cronbach's alpha value was found 0,883. Mean C-ACT score of the patients whose asthma control status is well controlled according to GINA guideline criteria are significantly higher from uncontrolled (p:0.001) and partly controlled (p:0.001); mean C-ACT score of the patients whose asthma control status is partly controlled are significantly higher from uncontrolled (p:0.001; p< 0.01). It is seen that when the C-ACT total score equal and above 22 the test sensitivity was 86%, 11 spesifity was 73,44% and the accuracy was 76,22% (the highest rate) in detecting controlled asthma.
Conclusion: Although C-ACT is a reliable and validated tool in detecting asthma control, there are some discrepancies when the patients evaluated individually for asthma control. It is not true to detect asthma control by only using this test. But it must be accepted as a tool, which help physicians for evaluating the disease status and therapy choices.

ID: 221 / OP3: 5
Oral Presentation Topics: General Pediatrics, Allergy, Immunology & Pulmonology
Effect of Respiratory Functions On Quality of Life in Children with Duchenne Muscular Dystrophy

Ertugrul Safran[1], Kamer Unal Eren[1], Aysel Yıldız[2], Hulya Nilgun Gurses[1]
[1]Bezmialem Vakıf University, Turkey; [2]Marmara University, Turkey; kamerunals@yahoo.com

Introduction: Duchenne Muscular Dystrophy (DMD) is a hereditary disease with recessive inheritance due to the X-chromosome, with a prevalence of approximately 1 in 3,600 to 6,000 live births. Dystrophin deficiency in patients with DMD causes progressive degeneration of skeletal muscles,

Table 1. Respiratory Function Test Results of DMD Patients

Respiratory Parameters	Liter (m±sd)	Percaetage (%) (m±sd)
FEV1	1,28±0,42	71,3±12,7
FVC	1,46±0,54	74,5±13,2
FEV1/FVC	-	90,8±8,74
PEF	2,56±1,20	62,53±21,48

m: mean, sd: standart deviation, DMD: Duchenne Muscular Dystrophy, FEV1: forced expiratory volume in 1 second, FVC:Forced Vital Capacity, PEF: Peak Expiratory Flow.

Table 2. Pediatric Quality of Life Inventory Scores

Categories	Parent Report (m±sd)	Patient's Report (ort±ss)
About my/my child's neuromuscular disease	75,48±10,6	77,2±8,35
Communication	62,25±18,27	65,42±18,55
Family resources	67,68±20,42	73,82±13,4
Total Score	69,32±15,28	71,68±16,82

M: mean, sd: standard deviation.

respiratory and cardiac muscles and functional skills with continuous degeneration of muscle fibrils and these affect quality of life and duration.
Purpose: The aim of our study is to evaluate respiratory functions in patients with DMD and to examine their impact on quality of life.
Materials and Methods: The study conducted with children, DMD diagnosis, ages between 8-12 years, have sufficient cognitive level. Demographics were recorded. Respiratory functions were assessed by measuring the parameters of forced expiratory volume in 1 second (FEV1), forced vital capacity (FVC), FEV1/FVC and peak expiratory flow (PEF). The quality of life was assessed using the Pediatric Quality of Life Inventory Neuromuscular Module (PedsQL-3.0).
Results: A total of 20 children were evaluated who meet the inclusion criteria. The mean age of the patients was 9,5 years and the body mass index were calculated as 26,2 kg/m2. The respiratory function values of the children evaluated within the scope of our study are shown in Table 1.
The quality of life inventory results are shown in Table 2 in both parent and children reports. In our study, in three categories of quality of life inventory, children report scores were higher than parent report scores (Table 2). A significant correlation was found between the PEF score and the total score of both report and my / my child's neuromuscular disease score of both report ($p<0.05$). FEV1 and FVC values were correlated only with the parental report total score ($p <0.05$). No significant association was found between the FEV1/FVC value and any of the quality of life parameters ($p> 0.05$).
Conclusion: DMD patients could experience ambulatory problems in early period and have severe respiratory problems with accompanying postural problems. Respiratory parameters should be taken into account earlier, as this group of patients may have worse progressions than other muscle groups. As we have seen in our work, respiratory functions could affect quality of life. Assessment of the quality of life, together with respiratory evaluation from an early period, and the importance of seeing progress in this evaluation result. More detailed and follow-up studies are needed to evaluate respiratory muscle strengths and examine the effects of muscle training.

ID: 156 / OP3: 6
Oral Presentation Topics: Allergy, Immunology & Pulmonology, Emergency Pediatrics
Pneumothorax in Pediatrics: The Experience of a Portuguese Hospital

Francisco Ribeiro-Mourão[1], Ariana Teles[1], Vera Gonçalves[1], Francisca Martins[1], Ana Luísa Vaz[1], Rui Nêveda[2], Helena Ramalho[1], Ana Rita Araújo[1]
[1]Pediatrics Department, Unidade Local de Saúde do Alto Minho, Hospital de Santa Luzia, Portugal; [2]Pulmonology Department, Unidade Local de Saúde do Alto Minho, Hospital de Santa Luzia, Portugal; franciscoribeiromourao@gmail.com

Introduction: Pneumothorax represents the existence of air in the pleural space and can, in extreme cases, lead to pulmonary failure. It is a rare entity on pediatrics. Due to its broad clinical presentation and prognosis pediatricians must be aware of it and prepared to manage it.
Purpose: To characterize the patients, disease, treatment and outcome of Pneumothorax cases diagnosed in a Pediatrics department of a Portuguese hospital.
Materials and Methods: We present a retrospective observational study including all patients with more than 28 days and less than 18 years old of age admitted in our department between 01/01/2012 and 30/06/2017, with any ICD-9 diagnosis of Pneumothorax at time of discharge. Data regarding the patient, clinical presentation, treatment and follow-up were collected and analyzed.
Results: 15 cases of pneumothorax in 11 different patients were identified. 80% of them were male with an average age of 16.7 years. Average patient's weight was 57.4 kg and average BMI -percentile of 25.5%. (-1.1 SD). 40% had personal history of tobacco/tobacco and cannabinoids consumption.27% had Asthma and 13% Allergic rhinitis. 20% had personal history of pneumothorax. Pneumothorax development was not associated with physical activity in 80% of the cases. Main presentation symptoms were chest pain (100%), aggravated by respiratory movements (53%), cough (47%) and dyspnea (40%). On admission average O2 was of 98,4%. 80% had diminished

respiratory sounds on pulmonary auscultation and 27% had pale skin. 14% presented either polypnea or respiratory distress signs. 13% of the cases had a normal physical examination .100% of the cases were unilateral, 67% of them in the left lung. 73% of the cases were spontaneous primary pneumothorax. Pneumothorax size classification varied with the method used to calculate it. CT scan was performed on 80% of the patients with air bubbles found on more than 40%. 7% of the cases resolved spontaneously, 20% with supplementary oxygen and 33% with thoracic drainage. 33% of the patients needed thoracic surgery for definitive treatment. Patients were discharged on average 6 days after admission. Recurrence occurred on 27%.
Conclusion: Despite rare on pediatric age, Pneumothorax is a respiratory emergency and physicians should be aware of it. Clinical presentation is broad and the typical symptoms and signs of respiratory distress may not be present. Different treatment options can be assumed, based on each individual case. A high recurrence rate is found and a close follow-up is needed.

ID: 117 / OP3: 7
Oral Presentation Topics: Child Mental Health
Cue-Centered Therapy for Youth with Posttraumatic Stress Disorder (Ptsd) Symptoms

Victor Gerard Carrion
Stanford University, United States of America; vcarrion@stanford.edu

Introduction: The experience of traumatic stress during development can lead to a broad spectrum of long-term cognitive and emotional consequences. These may result in academic underachievement, depression, anxiety, and post-traumatic stress disorder (PTSD), as well as acceleration or increased severity of other medical conditions, such as asthma, heart disease and substance abuse. Research in our laboratory has demonstrated alterations on key brain regions of youth with PTSD. The prefrontal cortex, hippocampus and amygdala have been identified as playing a role in the executive function, memory and emotion regulation of youth with PTSD. Cortisol secreted during periods of chronic stress may play a significant role.
Purpose: There is a growing need for a manualized treatment aiming to increase youth insight into how an individual's history of exposure to trauma may relate to current emotional experiences and how these in turn may be linked to maladaptive behaviors. In view of this need, Cue Centered Therapy (CCT) was developed.
Methods: CCT is a structured, multi-modal intervention designed to reduce posttraumatic stress, depression, and anxiety in children chronically exposed to interpersonal violence. By incorporating diverse psychoeducational approaches with evidence-based treatments for childhood trauma, CCT is designed to empower children to become their own agents of change. By addressing the impact of allostatic load, educating youth and caregivers on the conditioning process that occurs through repeated exposure to trauma, employing insight-oriented strategies and visual icons, and utilizing a physiological approach, CCT is a unique protocol that builds upon the greatest strengths of its predecessors.
Results: Dr. Carrion will detail the development of CCT, including presenting results from a randomized controlled trial and introducing a new treatment outcome project that utilizes functional near infra-red spectroscopy (fNIRS) to assess improvement in cortical function. Instructions will be provided on how to use this manual, including an outline of the complete course of CCT, individual session outlines, summaries, forms and take home assignments.
Conclusion: The limited work-force available to treat the vast numbers of youth exposed to trauma require that therapists work in collaboration with primary physicians and others through dissemination of effective interventions.

ID: 295 / OP3: 8
Oral Presentation Topics: Child Mental Health, Preterm Infant
Long Term Characteristics of Autistic Spectrum Disorder in Preterm Compared to Term

Effrossine Tsekoura
Asklepieion General Hospital Athens Greece, Greece; efitsek@gmail.com

Introduction: Autistic Spectrum Disorder (ASD) affects patient through out his life interfering with his ability to interact and communicate. ASD prevalence has been increased over the years and in the preterm population it is referred as 2 fold higher than term. With early intervention some patients will be able to follow an independent life, although in many others severity of the disease will have a lifelong negative impact. With detailed behavioral evaluation suspicion of diagnosis and early intervention can be made before 18 months of age.
Purpose: To study a group of children with ASD in view of their initial clinical signs and their development after early intervention, to compare preterm and term subgroups and to spot co-morbidities that my affect the initial diagnosis or outcome itself.
Methods and Materials: Retrospective analysis of medical follow-up records of children with ASD regarding clinical parameters such as gazing, verbal and non verbal communication, imaginary play, repetitive behaviors, social interaction, self care, ability to school entry and presence of CNS abnormalities.
Results: A total of 38 ASD cases were analyzed up to 11 years of age. Prematurity history (27≤GA≤35 wks) had 11/38 (28.9%). Boys 31/38 (81.57%) and girls 7/38 (18.42%). CNS disorders recorded in 7/11 (63.63%) preterm children (3/7 VP-SHUNT for post-hemorrhagic hydrocephalus, 2/7 punctuate white matter lesions, 1/7 hypoxia, 1/7 microcephaly). ADHD co-morbidity had 13/38 children (34.2%). In term population mean age at first evaluation and diagnosis was 30.5 months (r=17-60 months). In the preterm subgroup, diagnosis and early intervention was made before 12 months of age. Mean intervention interval and follow-up time was 5.6 years (max 11 years). Mean maternal and paternal age at conception was 35.22 yrs (r 19-45 yrs) and 38.58 yrs (r 22-61 yrs) respectively. Higher education degree had 36.36% of mothers and 27.27% of fathers. After early intervention improved eye contact had 20/38 (52.63%) children although only 10.52% had gained good social interaction skills. Interaction with family members had improved in all cases. Term population had better outcome compared to preterm in gazing (57,14% vs. 36.36%), self care (51.85% vs. 18.18%), communicative speech (37.03% vs. 18.18%), independent school entry (33.33% vs. 18.18%), and parental interaction (77.77% vs. 36.36%). Worst outcome in total had 54.54% in preterm vs. 3.7 % in term subgroup.
Conclusions: Preterm children with ASD have worst outcome compared to term possibly due to co-existed CNS lesions. In term population there is an initial improvement in gazing but in the long run there remain problems with social interaction and a lifelong need for supervision. In one third of cases the presence of coexisted ADHD might affect outcome in either way.

ID: 164 / OP3: 9
Oral Presentation Topics: Child Mental Health, Neurology
Cognitive Function in Children with Thalassemia Major

Cynthia Centauri, Irawan Mangunatmadja, Pustika Amalia, Eka Laksmi, Bambang Tridjaja, Bernie Endyarni Medise
Faculty of Medicine University of Indonesia, Ciptomangunkusumo Hospital, Indonesia; dr.cynthia-centauri@gmail.com

Introduction: Thalassemia is the most common hereditary disorders worldwide, including Indonesia. It is proven to be a burdening disease. Chronic anaemia and iron overload in thalassemia major lead to several risk factors including cognitive problems, but there are only few studies reported about cognitive function in children with thalassemia major. There has been no research about cognitive functions in children with thalassemia major in Thalassemia Center of Indonesia.
Purpose: (1) To investigate cognitive function in children with thalassemia major (2) to identify factors related to cognitive function in children with thalassemia major (age at diagnosis, duration of transfusion, patients education, pre-transfusion haemoglobin level, ferritin, transferrin saturation, compliance to chelation, and electroencephalography test).
Materials and Methods: A cross-sectional descriptive analytic study conducted from April 2016 to April 2017 on Thalassemia Center Cipto Mangunkusumo Hospital. Intelligence quotient assessed using Wechsler intelligence scale for children test-III (WISC-III). Electroencephalogram (EEG)

results were analyzed by a pediatric neurology consultant. Subjects were excluded if they had epilepsy, central nervous system (CNS) disorders, or serious comorbidities.
Results: A total 70 subjects with thalassemia major aged 9 to 15.5 years old performed IQ test. The prevalence of abnormal IQ score (<85) was 37.1%. Six per 70 subjects were mild mentally retarded and 2/70 subjects were moderate mentally retarded. Mean (±SD) of total IQ score was 88.8 (±16.91). Subjects in this study had abnormal IQ score prevalence 2.7 times greater and experienced an average IQ score decrease by 11.2 points than the normal population. Sixty percent of EEG results were abnormal generalized background slowing activity. A correlation existed between the thalassemia patients IQ and pre-transfusion Hb level ($p<0.05$).
Conclusion: Our study found high prevalence of abnormal IQ test in children with thalassemia major. Pre-transfusion Hb level needs to be maintained between 9 and 10 g/dL to prevent cognitive dysfunction. Further study is suggested to explore the factors related to cognitive function in children with thalassemia major.

ID: 194 / OP3: 10
Oral Presentation Topics: General Pediatrics, Management
Validity of Prenatal Diagnosis of Major Congenital Heart Disease is Increasing

Rebekka Lytzen[1], Niels Vejlstrup[1], Jesper Bjerre[2], Olav Bjørn Petersen[3], Stine Leenskjold[4], James Keith Dodd[5], Finn Stener Jørgensen[6], Lars Søndergaard[1]
[1]Department of Cardiology, Rigshospitalet, Copenhagen University Hospital, Denmark; [2]Department of Paediatrics, Aarhus University Hospital, Denmark; [3]Fetal Medicine Unit, Department of Obstetrics and Gynecology, Aarhus University Hospital, Denmark; [4]Department of Obstetrics and Gynaecology, Aalborg University Hospital, Denmark; [5]Department of Pediatrics, Copenhagen University Hospital Hvidovre, Denmark; [6]Fetal Medicine Unit, Department of Obstetrics and Gynecology, Copenhagen University Hospital Hvidovre, Denmark; rebekka@tondering.dk

Introduction: Congenital heart disease (CHD) comprises a spectrum of malformations from minor lesions to major CHD that can be fatal shortly after birth. Major CHD accounts for 30% of infant deaths due to congenital malformations (Rosamond et al. e69-171) motivating vigilant prenatal screening to detect the vast majority of major CHD. It is crucial that regular audits on screening results are carried out so that the prenatal diagnosis may be reliable.
Purpose: We aimed to illustrate the development of the management of fetuses with prenatally diagnosed major CHD and evaluate the validity of the prenatal diagnosis.
Materials and Methods: We conducted a nationwide retrospective study from January 1st 1996 – December 31st 2013 including all live-born children and terminated fetuses diagnosed prenatally with a major CHD. We defined major CHD as lesions that usually necessitate intervention within the first year of life. Postnatal findings and autopsy reports were compared with diagnoses made in utero.
Results: 815 fetuses and live born children were included in this study. 57.8% were terminated, remaining stable throughout the study ($p=0.7213$). Autopsy reports were obtained on 60.3% of the terminated fetuses. The proportion of correct diagnosis increased throughout the study ($p<0.0001$) and reached 88.5% in 2013. The presence of an anomaly decreased the chances of a correct diagnosis (65.9% vs 83.8%, $p<0.0001$). The lowest rates were found in CoA (60.0%) and AVSD (60.0%). If these CHDs were disregarded the proportion of correct diagnosis reached 95% in 2013. 14 terminated fetuses had a normal cardiac evaluation at autopsy; however, all had associated anomalies. In 18 terminated fetuses autopsy showed a minor CHD. Most were terminated due to other anomalies, but 7 fetuses had no anomalies aside from the minor CHD. One foetus from 1998 was suspected of AVSD, which turned out to be ASD and VSD. 3 had Shone's complex in which prenatal ultrasound had shown signs of poor prognosis that was not evident at autopsy. 2 had developed hydrops

foetalis suggesting a more serious condition than expected from the relatively mild lesion found at autopsy, and one had situs inversus.
Conclusion: The validity of a prenatal major CHD is increasing, but is still low for CoA and AVSD. Special focus should be placed in the cardiac examination when TOP, as misinterpretation may have severe consequences.

ID: 150 / OP3: 11
Oral Presentation Topics: General Pediatrics
Combined Treatment with Kinesiotape and Soft Tissue Mobilization On Child with Idiopathic Tiptoe-Walking: A Case Report

Suheda Gozaydinoglu[1], Berna Urkmez[2]
[1]Bezmialem Vakif University, Faculty of Health Sciences, Department of Occupational Therapy, Istanbul, Turkey; [2]Bezmialem Vakif University, Department of Physical Medicine and Rehabilitation, Istanbul, Turkey; sgozaydinoglu@bezmialem.edu.tr

Introduction: The tiptoe walking is diagnosed as idiopathic (habitual) if no signs of neurological, orthopaedic, or psychiatric disease are detected (for instance, cerebral palsy (CP), Duchenne's muscular dystrophy, congenitally short Achilles' tendon, or autism). While it's not abnormal for children to walk on their toes for a short period when they first begin to ambulate, prolonged toe walking is not a component of normal development. The aim of this study was to investigate the effect of combined treatment for a child with Idiopathic tiptoe walking (ITW).
Case Report: A 20 month old boy with ITW who had a positive family history of ITW was admitted to our hospital. Pathology was not detected in his cranial MR. His family reported that he began to walk when he was 12 months old. He had no fixed plantar flexion contracture but we examined tightness his left calf muscles. Facilitation techniques of Kinesio Tape (KT) were applied to left tibialis anterior muscle three times a week. Soft tissue mobilization (STM) is the application of specific and progressive manual forces with the intent of promoting changes in the myofascia, allowing for elongation of shortened structures. STM was performed left gastrosoleus muscle group twice a day. In addition to KT and STM, gentle stretching exercises were taught to his family as a home exercise program to support the treatment process. Total treatment program lasted 8 weeks. His assessments were done weekly, by photographs and video recordings, while he is walking bare-foot.
Conclusion: According to the literature it is considered normal for children to walk on their toes until the age of 2-3. On the other hand early intervention programs are significant in rehabilitation. In our case we noticed that he could continue tiptoe walking and remain this type of walking as behaviourally. Our results showed that combined treatment with KT and STM had positive results. When video recordings were compared it was clear that he accomplished walking with a heel strike. Tightness in his left calf muscles was decreased and muscle tone was normal. According to our results KT and STM can be used as conservative method for children with ITW. Further studies should be planned with higher participation rates.

ID: 171 / OP3: 12
Oral Presentation Topics: Orthopaedics
Single Event Multilevel Surgery in Treatment of Children with Cerebral Palsy (Early Results)

Mikhail Mikhovich, Leonid Glazkin
Mogilev regional children's hospital, Belarus; glazkinl@gmail.com

Introduction: Cerebral palsy - a group of permanent disorders that are attributed to non-progressive disturbances that occurred in the developing fetal or infant brain. Movement disorders are often accompanied by secondary progressive musculoskeletal problems. Despite the some effectiveness of

conservative methods, surgical correction of limb deformities is used in most cases. In recent decades most surgeons began to use the so-called "Single Event Multilevel Surgery".
Purpose: The purpose of our study was to evaluate the early results of SEMLS, performed in orthopaedic department of the Mogilev Regional Children's hospital.
Materials and Methods: The early results of SEMLS were studied on 31 children underwent surgery in 2014-2017, which amounted to 35% of the total number of children who underwent surgery for treating spastic deformities of the lower extremities during this period. The determining factor of this procedure was simultaneously performing at least 2 procedures at different levels of the lower limbs. 20 children had spastic diplegia, 11 – spastic tetraparesis. The mean age in time of surgery was 8, the youngest child – 3, the oldest – 18. 31 children – 212 procedures. Different procedures were performed: adductor release, elongation of m.iliopsoas, hamstring elongation, rectus femoris transfer to sartorius, Strayer procedure, Achilles tendon elongation, Evans procedure, split anterior tibialis transfer, proximal varus derotational osteotomy of the hip, proximal valgus hip osteotomy. The aims of surgery were different: GMFCS II-III – improvement of gait and self-service, GMFCS IV – walking training, even with assistive devices, GMFCS V – improving of a child care and creation of the possibility to transfer him in the wheelchair.
Results: The follow up was from 6 months to 3 years. GMFCS II-III group (7 patients): average improvement by Gate Observation Scale – 6,8 points (the worst improvement – 2, the best – 10). Two patients improved GMFCS II to III. GMFCS IV group (17 patients) – average improvement – 5,7 points, (the worst improvement – 2, the best – 11 in two children). 4 patients improved GMFCS IV to III, one patient IV to II. One patient despite perfomed in age of 3 years adductor contracture release with resection of anterior branches of n.obturatorius had strong adduction contracture after procedures. This can be seen as an indication to selective dorsal rhyzotomy or baclofen pump insertion. Parents of 7 patients GMFCS V reported an improvement in care after surgery. During follow up deterioration was not observed.
Conclusion: Brain disorders in cerebral palsy are permanent and as S.Terver said – children with CP became adult with CP. The main goals of surgical treatment = improving the child's motor activity and elimination of severe limb deformities. SEMLS changes the whole pathological stereotype of musculoskeletal balance of extremities. It can improve the child's motor activity, eliminate the severe contractures of joints and provide adequate care for him in a relatively short period of time. This method, especially when combined with osteotomies, is technically difficult and requires two teams of orthopedic surgeons and anesthesiologist who owns the technique of combined anesthesia.

ID: 242 / OP4: 1
Oral Presentation Topics: Rare Diseases, Neurology
Solving the Complexity in Diagnosis of Autosomal Recessive Primary Microcephaly (Mcph) Through a Comprehensive Next Generation Sequencing (Ngs) Disease-Customized Genes Panel. Clinical Report and Genotype-Phenotype Correlation of an Homogeneous Patients' Cohort.

Davide Vecchio[1,2], Alice Moncada[1], Antonino Giambona[3], Emanuela Salzano[1], Maria Piccione[1,4]
[1]Regional Referral Centre for Rare Genetic and Chromosomal Diseases, Villa Sofia-Cervello Hospital, Palermo, Italy.; [2]Department of Experimental Medicine, Sapienza University of Rome, Rome, Italy.; [3]Laboratory for Molecular Diagnosis of Rare Diseases, Department of Hematology for Rare Diseases of Blood and Blood-Forming Organs, Villa Sofia-Cervello Hospital, Palermo, Italy.; [4]Department of Sciences for Health Promotion and Mother and Child Care, University of Palermo, Palermo, Italy.; davidevecchio@ymail.com

Introduction: MCPH is defined as clinical homogeneous, but genetically heterogeneous, group of autosomal recessive neurogenic mitotic disorders mainly characterized by congenital reduction in head circumference (HC) with variable degree of non-progressive developmental delay/intellectual

disability. The MCPH prevalence ranges from 1:30.000 to 1:250.000 new-borns. Due to lacking of other major dysmorphisms and/or congenital anomalies associated, HC constitutes the most common diagnostic tool that may range from 2 to 11 SD below the mean. Hence, since 12 genes have been proposed causative so far, their right monogenic assessments challenge clinicians into diagnostic arena.

Purpose: To achieve a comprehensive clinical and molecular MCPH approach realizing a step-by-step guidance algorithm useful in clinical practice for faster diagnosis; to contribute to the advancement in knowledge of MCPH neurobiological basis; to clarify MCPH genotype-phenotype correlation.

Materials and Methods: In the last 2 years 200 children were referred to our Unit for microcephaly. Each patient completed an extensive diagnostic work-up, which included clinical, genomic, inborn errors of metabolism testing and instrumental evaluations to exclude any progressive to secondary and/or iatrogenic causes of congenital microcephaly. Then, a comprehensive sequence of coding regions and splice junctions of all MPCH recognized disease causing genes (MCPH1, WDR62, CDK5RAP2, CASC5, ASPM, CENPJ, STIL, CEP135, CEP152, ZNF335, PHC1, CDK6) clustered in panel was performed using Ion Torrent PGMTM Platform technology whose design target coverage was 99,80%. Pathogenic status of variants identified, subsequently confirmed by Sanger sequencing, was classified according to the ACMG criteria. Missense variants were assessed using PolyPhen-2, SIFT and Mutation Taster software tools.

Results: A selected cohort of 38/200 patients (19%), matching the MCPH features was tested by NGS. We identified 32 variants in 23/38 (60.5%) patients involving 8/12 investigated genes (66.6%). All reported mutations have been classified as variants of uncertain clinical significance (VUS). However, in silico pathogenicity prediction revealed that 30/32 (93.7%) novel variants had a damaging/deleterious effect. MCPH genes' VUS were found as heterozygous variants in 25/32 events (78.1%), while multiple and compounded heterozygosities accounted respectively for 4/32 (12.5%) and 3/32 (9.4%) cases. Furthermore, we identified 6 novel missense mutations.

Conclusion: The use of NGS has proven to be effective and, it allowed us to assess a faster molecularly MCPH diagnosis in 3 unrelated patients respectively due to ASPM, CASC5 and MCPH1 compounded heterozygosity. Despite different genetic involvements, all these patients shared a common clinical picture confirming once again how our algorithm could be considered a powerful tool for clinicians. By using MLPA and/or further functional studies as second-tiered tests, we will gain a higher diagnostic detection rate in this cohort, widening the scope of MCPH neurobiological basis.

ID: 239 / OP4: 2

Oral Presentation Topics: Rare Diseases, Allergy, Immunology & Pulmonology

Pulmonary Disease as a Form of Presentation of Langerhans Cell Histiocytosis

Rita Vieira Carvalho[1], Carlos Escobar[1], Pedro Nunes[1], Clara Abadesso[1], Marta Moniz[1], Rosário Ruivo[1], Sérgio Ferreira[2], Rita Manso[3], Ximo Duarte[4], Ivan Bravio[5], António Figueiredo[1]

[1]Pediatrics Department - Hospital Prof Doutor Fernando Fonseca, EPE, Portugal; [2]Radiology Unit - Hospital Prof Doutor Fernando Fonseca, EPE, Portugal; [3]Pathologic Anatomy Unit - Hospital Prof Doutor Fernando Fonseca, EPE, Portugal; [4]Pediatrics Unit - Instituto Português de Oncologia de Lisboa, Francisco Gentil, EPE; [5]Cardiothoracic Surgery Unit - Hospital de Santa Marta, Centro Hospitalar de Lisboa Central, EPE; ritamvcarvalho@gmail.com

Introduction: In Langerhans cell histiocytosis (LCH), pulmonary involvement is uncommon in children, and the prognosis is unfavorable. The diagnosis is difficult, with possible need for biopsy, but the high-resolution CT scan may show characteristic cysts and nodules.

Case report: A 6-year-old female, born in Angola, was healthy until November 2014, when she presented recurrent spontaneous pneumothorax on the right. Faced with an inconclusive diagnosis of "severe cystic lung disease", after investigation that included pulmonary biopsy, she resorted to our national health services (May 2015). She had mild dyspnea without the need for oxygen. The chest CT showed "extensive parenchymal changes with multiple blisters that replaced almost all of the

lung parenchyma bilaterally". In the absence of definitive diagnosis, pulmonary transplantation was proposed. There was aggravation of respiratory function, with hypoxemia and recurrent pneumothorax. The biopsy review, positive for Cd1a and S100, confirmed HCL. However, she developed diabetes insipidus without involvement of other organs or systems. In the absence of conditions for transplantation with live donor, due to multisystemic involvement with uncertain prognosis, the patient waited for a cadaveric donor. She initiated induction with vinblastine and prednisolone, complicated by severe neutropenic enterocolitis and reversible posterior encephalopathy syndrome. Was then medicated with cladribine, without success. Due to progressive aggravation, with global respiratory insufficiency, the patient evolved to a fatal outcome.
Conclusion: The rare form of presentation at pediatric age delayed the diagnosis. Pulmonary HCL should be considered in the differential diagnosis of pulmonary cystic disease, even in the absence of systemic manifestations.

ID: 149 / OP4: 3
Oral Presentation Topics: Rare Diseases, Infant Development
Assessment of Functional Capacity and Respiratory Functions in Silver Russel Syndrome: A Case Report

Hikmet Ucgun, Busra Kepenek-Varol, H.Nilgun Gurses
Bezmialem Vakif University, Faculty of Health Sciences, Department of Physiotherapy and Rehabilitation, Istanbul, Turkey; hikmetucgun92@gmail.com

Introduction: Russell-Silver syndrome is a growth disorder characterized by slow growth before and after birth. Signs and symptoms of RSS include birth weight < 2800 grams, feeding problems, hypoglycaemia, asymmetrical body growth, late-closing fontanels, gastroesophageal reflux disease, lack of subcutaneous fat, constipation, increased sweating, and decreased muscle bulk. It can also be associated with impaired cognitive abilities and complex cardiac abnormalities. The aim of this study was to investigate the functional capacity and respiratory functions in patients with RSS.
Case Report: A 11-year-old boy admitted to our hospital with complaints which gait disorder, low functional capacity, shortness of breath and rapid fatigue which were evident in long-term walking or running activities. When the patient's anamnesis was taken, the following was learned; he was born prematurely with a birth weight of 2180 grams and a height of 40 cm with normal delivery. The diagnosis is as follows; the boy was referred to the medical genetic polyclinic when he was 10 years old and received RSS due to short stature, growth retardation, dysmorphic facial findings, and height difference between the extremities and first-cousin marriage between parents. Also, orthopaedic examination showed that the bone age was 8 years of age and that the right extremity was 5 mm shorter than the left extremity. From age 10 to 11, the patient has not received any treatment other than growth hormone supplementation. In evaluating the patient, The 6 Minute Walking Test (6MWT) was used to assess the functional exercise capacity and Pulmonary Function Testing (PFT) was used to assess respiratory functions. The expected 6MWT distance was 666.55 meters, taking into consideration the age, height, weight and gender of the case, while our case recorded a walking distance of 515 meters in the test result. The mean values of respiratory function were 84% for forced expiratory volume in 1 second (FEV1), 93% for forced vital capacity (FVC) and 92% for FEV1/FVC.
Conclusion: According to our knowledge there is no study in the literature about functional capacity and respiratory functions in patients with RSS. As a result of the assessments in the present case, we found that the functional capacity decreased and the respiratory functions were at the predicted values. In order to obtain more significant results, further studies with long term follow-up and higher participation rates are needed.

ID: 193 / OP4: 5
Oral Presentation Topics: Emergency Pediatrics, NICU
Prenatal Diagnosis of Major Congenital Heart Disease is Associated with Increased Mortality.

Rebekka Lytzen[1], Niels Vejlstrup[1], Jesper Bjerre[2], Olav Bjørn Petersen[3], Stine Leenskjold[4], James Keith Dodd[5], Finn Stener Jørgensen[6], Lars Søndergaard[1]
[1]Department of Cardiology, Rigshospitalet, Copenhagen University Hospital, Denmark; [2]Department of Pediatrics, Aarhus University Hospital, Denmark; [3]Fetal Medicine Unit, Department of Obstetrics and Gynecology, Aarhus University Hospital, Denmark; [4]Department of Obstetrics and Gynecology, Aalborg University Hospital, Denmark; [5]Department of Pediatrics, Copenhagen University Hospital Hvidovre, Denmark; [6]Fetal Medicine Unit, Department of Obstetrics and Gynecology, Copenhagen University Hospital Hvidovre, Denmark; rebekka@tondering.dk

Introduction: Major CHDs often demand surgical or catheter-based procedures in the neonatal period making early diagnosis crucial. Prenatal diagnosis enables early intervention; however, there is still controversy concerning the effect of prenatal diagnosis on prognosis.
Purpose: We aimed to evaluate the effect of a prenatal diagnosis on all-cause mortality, cardiac death, as well as morbidity in patients with major CHD.
Materials and Methods: We conducted a nationwide retrospective study from January 1st 1996 – December 31st 2013. Patients were identified from the National Patient Registry and all live-born children and terminated fetuses diagnosed with a CHD were included. We defined major CHD as lesions that usually necessitate intervention within the first year of life, Table 1. Records were reviewed to validate the diagnoses. Complications were defined as the occurrence of necrotizing enterocolitis, intracerebral haemorrhage, cerebral palsy, seizures, mental retardation, liver failure, acute kidney injury or heart failure.
Results: 2,224 live-born children and 471 terminated pregnancies with major CHD were included. 30.2% were diagnosed prenatally, increasing from 4.5 % in 1996 to 71.0% in 2013. 17.5% of fetuses with major CHD were terminated. This increased from 0.6% in 1996 to 39.1% in 2013 (p<0.0001). There was increased mortality in live-born children whose CHD had been diagnosed prenatally with a Hazard Ratio (HR) of 2.23 (p<0.0001). HR for the individual diagnoses is shown in Table 1. Length of stay in the first year of life for children with a prenatally diagnosed major CHD was a median of 42 days compared with 37 days in the postnatal group (p=0.0018). Complications occurred in 27.9% of children with a prenatal diagnosis and in 20.6% diagnosed postnatally (p=0.0027).
Conclusion: The anticipated positive effect of prenatal diagnosis of major CHD on outcome was not established in this study. Thus in general, prenatal diagnosis of major CHD was associated with worse prognosis. However, prenatal diagnosis permits fetal examination, parental counselling, termination of pregnancy, genetic testing, and optimal perinatal management and allows parents to adjust to the diagnosis. When assessing benefits these variables should be taken into account.

Table 1. Hazard ratio for prenatal diagnosis on mortality

	HR	p-value
UVH	0.98 (0.68-1.41)	0.9237
ccTGA	1.32 (0.17-10.38)	0.795
Truncus	13.02 (1.27-133.88)	0.0309
TGA	1.38 (0.50-3.81)	0.5385
IAA	2.18 (0.63-7.49)	0.216
AVSD	3.27 (1.64-6.53)	0.0008
DORV	1.25 (0.52-3.00)	0.6142
CoA	1.71 (0.49-5.95)	0.397
Ebstein	2.66 (0.45-15.84)	0.282
PA-VSD	12.82 (2.76-59.57)	0.0011
PA-IVS	3.01 (0.26-35.03)	0.379
TOF	4.83 (1.71-13.66)	0.0030
Total	2.23 (1.76-2.82)	<0.0001

ID: 130 / OP4: 6
Oral Presentation Topics: Emergency Pediatrics
Clinical Spectrum of Acute Myocarditis in Children Admitted to the Pediatric Emergency Department

Chun-Yu Chen[1,2], Wen-Chieh Yang[1,2], Yu-Jun Chang[3], Han-Ping Wu[4,5]
[1]Department of Pediatric Emergency Medicine, Changhua Christian Children's Hospital, Changhua, Taiwan; [2]School of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; [3]Laboratory of Epidemiology and Biostastics, Changhua Christian Hospital, Changhua, Taiwan; [4]Division of Pediatric General Medicine, Department of Pediatrics, Chang Gung Memorial Hospital, Taoyuan, Taiwan; [5]College of Medicine, Chang Gung University, Taoyuan, Taiwan; 116984@cch.org.tw

Introduction: Acute myocarditis, an inflammatory condition of the myocardium as a result of an infection, autoimmune disease or toxins, possibly result in life-threatening events and is relatively uncommon in children. However, the clinical presentations may range from asymptomatic to causing sudden cardiac arrest. The common clinical symptoms and signs of acute myocarditis include fever, nausea and vomiting, abdominal pain, shortness of breathing, tachypnea, lethargy, dysrhythmias, hypoperfusion and shock. However, it is difficult for primary physicians to make an early diagnosis and predict the prognosis correctly in children with acute myocarditis based on the clinical presentations at the time of their emergency department (ED) visits.
Purpose: The aim of this study was to analyze clinical spectrum of acute myocarditis in children and find some helpful factors that could aid primary physicians in earlier detection it and prediction the need for extracorporeal membrane oxygenation may (ECMO) support.
Materials and Methods: From October 2011 to September 2016, we retrospectively analyzed 60 pediatric patients, aged 18 years or younger, with a definite diagnosis of acute myocarditis admitted to the pediatric emergency department. The following clinical information was obtained and further studied: demographics, clinical presentations, laboratory tests, findings of electrocardiogram (ECG) and echocardiography, treatment modalities, complications and long-term outcomes.
Results: During the 5-year study period, 60 patients (32 males and 28 females; mean age, 8.8±6.32 years) were diagnosed as acute myocarditis. The three most common symptoms and signs at presentation were fever, cough and chest pain (68.3%, 56.7% and 53.3%, respectively) (Table 1). . Only 12 patients had positive microbiological diagnoses, including 3 with influenza A; 4 with influenza B: 2 with enterovirus 71; 1 with parainfluenza type 2; 1 with herpes simplex virus type 1 and 1 with respiratory syncytial virus. Vomiting, weakness and seizure were reported more common in EOMO group than non-ECMO group patients and with statistical significance (P=0.003, P=0.001 and P=0.011, respectively) (Table 2). In addition, arrhythmia and left ventricular ejection fraction (LVEF) < 60% were more frequent in the EOMO group. Receiver operating characteristic (ROC) analysis showed that the best cut-off value of initial LVEF for predicting ECMO treatment was 57.5%.
Conclusion: Acute myocarditis is relatively uncommon in children but may lead to prolonged admission even death. Female sex, vomiting, weakness, seizure, arrhythmia and echocardiography showed LVEF < 60% may be the important factors to indicate the patients with acute myocarditis may increase the risk of need for ECMO support. We suggest that primary clinicians should be alert and prescribe aggressive medical management for patients with acute myocarditis presenting with these risk factors. Most importantly, a cut-off value of the initial LVEF detected by echocardiography less than 57.5% may be considered appropriate for predict need for ECMO support in children with acute myocarditis.

Table 1. Demographics and clinical presentations of the patients with acute myocarditis

				Age								
		Total (n=60)		<0 (n=6)		1-6 (n=21)		7-12 (n=10)		13-18 (n=23)		P-value
		N	%	N	%	N	%	N	%	N	%	
Gender	Female	28	46.7	2	33.3	15	71.4	6	60.0	5	21.7	0.005*
	Male	32	53.3	4	66.7	6	28.6	4	40.0	18	78.3	
Fever	Yes	41	68.3	4	66.7	16	76.2	4	40.0	17	73.9	0.211
Cough	Yes	34	56.7	3	50.0	16	76.2	3	30.0	12	52.2	0.086
Rhinorrhea	Yes	26	43.3	3	50.0	14	66.7	2	20.0	7	30.4	0.036*
Vomiting	Yes	22	36.7	3	50.0	7	33.3	5	50.0	7	30.4	0.611
Diarrhea	Yes	7	11.7	0	0.0	1	4.8	2	20.0	4	17.4	0.420
Chest pain	Yes	32	53.3	0	0.0	6	28.6	6	60.0	20	87.0	<0.001*
Tachypnea	Yes	20	33.3	3	50.0	6	28.6	4	40.0	7	30.4	0.750
Palpitation	Yes	10	16.7	0	0.0	2	9.5	6	60.0	2	8.7	0.003*
Weakness	Yes	19	31.7	3	50.0	6	28.6	3	30.0	7	30.4	0.788
Headache	Yes	5	8.3	0	0.0	1	4.8	0	0.0	4	17.4	0.355
Seizure	Yes	7	11.7	2	33.3	2	9.5	1	10.0	2	8.7	0.356
Family history of heart disease	Yes	1	1.7	0	0.0	0	0.0	0	0.0	1	4.3	1.000

*Statistically significant by the χ^2 test or Fisher's exact test when appropriated.
Age, years; ICU = intensive care unit.

ID: 119 / OP4: 7
Oral Presentation Topics: General Pediatrics, Management
Does Clinical Training in Pediatrics Improve Med III Students' Approach to Children? A Cohort Study

Joey El Khoury[1], Mode AlOjaimi[2], Georges Abi Fares[1], Issam Malouf[1], Georges Nicolas[1], Josephine Sakkal[1], Marie Claude J. Fadous Khalife[1]
[1]Holy Spirit university of Kaslik-UH-Notre Dame Des Secours, Lebanon (Lebanese Republic); [2]Balamand University, Koura, Lebanon; mclaude454@hotmail.com

Background & Objective: Physical examination is the cornerstone for correct patient diagnosis. Examination of a pediatric patient requires additional skills related to patient–doctor interaction. Therefore, performing an accurate and complete physical examination of a child may be a challenging if not an impossible mission for inexperienced medical students during their pediatric internship. Having a pediatric-adjusted clinical approach might be the solution.
Methods: A Cohort study was done in our university hospital "Notre Dame Des Secours". All Med III students (27) received a supplementary 3-hours presentation with instructional videos regarding pediatric physical exam (P/E) approach. This was followed by a Q/A session with a pediatric attending and a 1-week rotation on the pediatric floor and pediatric ER. Pediatric residents supervised them during daily rounds and staff meetings. Students were afterwards asked to fill a questionnaire focusing on different pediatric physical exam skills. The same questionnaire was filled in by the same

medical students, upon completion of their pediatric Med III scheduled rotation. The control group filled the same questionnaire: The Med III students (29) -who did not receive the supplementary presentation – after completing their pediatric rotation. We used the "Statistical Package for the Social Sciences" (SPSS) version 22 as a statistics analysis tool.

Results: After comparing the two groups, 19.6 % and 39.3% OF Med III students in the intervention group felt respectively that "if a child cries it is their fault (p=0.023) and that "the child's mother is always right until proven otherwise" (p=0.000) vs 7.1% and 14.3 % in controls. Regarding the child's comfort, the intervention group learned that" if the child is ticklish, their own hands can be used to palpate the abdomen" (p=0.000). However, questions concerning starting with ENT exam and using firm tone or skipping parts of examination were not significant (p=0,063;p=0,150 respectively) Intervention group medical students learned that using gowns and explaining all the PE steps to the child may be a possible solution for better contact (p=0,007). In addition, leaving the child's underwear on or asking parents to leave the room (p=0.025) can optimize intimacy. They can just observe their walk and musculoskeletal status in case of non cooperation (p=0.030), and finally letting a child play with their medical tools can help gaining their trust (p=0.003). The rest of the results was not significant: "child is not a small adult "(p=0.237), Adults and children should not be examined the same way (p= 1.000). "Trying to estimate a child's age" (p=0.073) and "commenting on their choices of clothing" (p=0.055). "Parents should not intimidate their children to answer questions nor answer for them" (p=0.087).

Conclusion: We conclude that our supplemental training program did improve some aspects of student's pediatric PE skills. Students learned to implement new techniques to make children relax and comfortable. The primary results are promising. A larger scale study should be done to better assess the advantage of implementing such a change in the Med III curriculum.

ID: 237 / OP4: 8

Oral Presentation Topics: General Pediatrics, Infant Development

Screening for Developmental Dysplasia of the HIP (DDH): Paediatrics Challenges

Irena Bralić[1], Katija Kragić[2], Ozren Vrdoljak[3], Javor Vrdoljak[4]

[1]University of Split, School of Medicine, Croatia, Croatia; [2]Pediatrics Clinic, University Hospital Centre Split, Croatia; [3]Children's Hospital Zagreb, Croatia; [4]The Polyclinic Orthopedics Vrdoljak, Zagreb, Croatia; irena.bralic@si.t-com.hr

Introduction: Developmental dysplasia of the hip (DDH) is the most common deformation of the loco-motor system, caused by multiple factors, which meets the criteria to be included in screening programme.

Purpose: The aim of this study was to present arguments why paediatricians should be responsible for the DDH screening programme, on the basis of our own twenty-years of experience in conducting non-selective, combined clinical and ultrasound DDH screening, and a critical analysis of the available literature.

Methods: At their first regular check-up by a paediatrician at the age of 4 to 6 weeks, a total of 2720 infants with 5440 hips were examined clinically and by ultrasound. The clinical examination included the Barlow and Ortolani tests and limited hip abduction. The Graf method was used for the ultrasound examination.

Results: 89.4% of the infants had normal findings by ultrasound and 92.3% of the infants examined clinically. None had a positive Ortolani or Barlow test, and 210 had limited hip abduction. 72% of the pathological hips (3 subluxation and 1 dislocation) shown by ultrasound were not recognized clinically. 9% of the population covered by the DDH screening were referred to a paediatric orthopaedist for further observation. 2.8% of the population underwent conservative orthopaedic therapy, and none of the children were treated surgically.

Conclusion: Paediatricians responsible for non-selective combined clinical and ultrasound screening of the hips are able to discover all forms of DDH at the age of 4 to 6 weeks, and provide orthopaedic therapy that is rational, accessible and practical for the parents and their child. Despite the

sensitization of paediatricians to the problem of early diagnosis of DDH, clinical examination as a screening method is subjective and insufficient due to its low sensitivity and the large proportion of false negative findings. Well-structured training, provided by licensed, professionally authorized educators, with the possibility of continual renewal of knowledge, is vital for optimal screening for DDH. The consistent application of diagnostic methods according to Graf, contributes to the objectivity, repeatability, feasibility and economically viability of DDH screening.

ID: 152 / OP4: 9
Oral Presentation Topics: General Pediatrics, Obesity & Physical Activity
Association of Fatty Liver with Serum Gamma Glutamyltransferase and Uric Acid in Obese Children in a Tertiary Care Centre

Dinesha Maduri Vidanapathirana[1], Eresha Jasinge[1], Dulani Samaranayake[2], Pujitha Wickramasinghe[3]
[1]Department of Chemical Pathology, Lady Ridgeway Hospital, Sri Lanka; [2]Department of Community Medicine, Faculty of Medicine, University of Colombo,Sri Lanka; [3]Department of Paediatrics, Faculty of Medicine, University of Colombo, Sri Lanka; maduri129@yahoo.com

Introduction: Obesity among the young is an emerging health problem with many metabolic changes including liver derangement.
Purpose: Our objective was to investigate the association of fatty liver with serum uric acid (UA) and gamma-glutamyltransferase (GGT) in a cohort of obese children in Sri Lanka.
Materials and Methods: A cross-sectional analytical study was conducted among 5-15 year-old obese children whose body mass index for age was >2 standard deviation from the median (WHO standards). After a 12-hour overnight fast, blood was drawn for glucose, lipid profile, alanineaminotransferase (ALT), aspartate aminotransferase (AST), insulin, UA and GGT. Height, weight, waist circumference, blood pressure and fat mass were measured. Ultra sound scan of abdomen was performed to determine fatty liver.
Results: We studied 146 obese children with a mean age (SD) 9.86 (2.1). Chi square test showed statistically significant associations between fatty liver and AST, ALT, AST/ALT ratio, insulin resistance assessed by homeostasis model (HOMA-IR),UA and GGT. With existing cut offs GGT (>30U/L) and UA (>330 µmol/L) the sensitivity and specificity of GGT in predicting fatty liver was 26.9% and 94.1% respectively while for UA is 38.5% and 83.8% respectively. A cut-off value of 18.5 U/L (sensitivity 76.9% and specificity 52.9%) for GGT,277µmol/L (sensitivity 70.5% and specificity 57.4%) for UA, 27.5U/L (sensitivity 70.5%, specificity 51.5%) for AST, 21.5U/L (sensitivity 80.8% and specificity 61.8%) for ALT, a ratio of 0.99 (sensitivity 77.9% and specificity 55.1%) for AST/ALT and 2.02 (sensitivity 73.2, specificity 58.5) for HOMA-IR predicted fatty liver.
Conclusion: GGT and UA are associated with fatty liver and these biomarkers can be used to predict fatty liver disease.

ID: 175 / OP4: 10
Oral Presentation Topics: General Pediatrics
Involving Parents in Road Safety Decision Making: Keeping Our Children Safe

Mohamed Hendaus[1,2,3], Reem Emad El-Deen Wassef[1], Marwa Mansour[1], Tasneem Abdel-Karim[1], Ahmed Alhammadi[1,2,3]
[1]Hamad Medical Corporation, Qatar; [2]Weill Cornell Medicine; [3]Sidra Medical & Research Center; rwassef@hamad.qa

Introduction: Every year more than 630 people are severely injured due to motor vehicle accidents in the State of Qatar. This prevalence is considered high in a small country. Involving parents in road safety decision making can lead in the decline of morbidity and mortality due road danger.

Purpose: Our purpose was to delineate parental concept of road safety in the State of Qatar, integrate parental thoughts and ideas into public safety, and share our data with authorities to assist in implementing campaigns against speeding.
Materials and Methods: A cross-sectional prospective study was conducted at Hamad Medical Corporation, the only tertiary care and academic hospital in the state of Qatar. Parents of children younger than 18 years of age were offered an interview survey.
Results: 300 questionnaires were completed (response rate =100%). Approximately 80% of parents were between 20 and 40 years of age. Almost 40% of participating families reside outside the capital city of Doha. Interestingly only 1 in 2 parents thought their children were safe while riding with them in the car. Moreover, only 47% of parents always used car seats, seatbelts and proper restraints. This is in-spite that nearly 82% of parents felt that these restraints protect children in case of an accident. When asked if it is safe to exceed the speed limit if driving safely, 60% of parents believed that it was not a good idea. The concept of controlling speed limit was investigated, and it showed that 85% of parents agreed and strongly agreed that the car speed limit should be pre-set by local authorities, while 70% believed that it would be wise to use electronic chips in car keys for monitoring speed. It's worth mentioning that female parents, were more open to this idea (p=0.008). Parents were also asked of the best place to receive road safety information. Almost 50% preferred to receive it through social media, while 44.3% opted for local television.
Conclusion: A large proportion of residents in the State of Qatar perceive that children are not safe while commuting in roads. Social media, a space where most of our community inhabits, seems to be the best setting to target our people. We will share our data with the ministries of internal affairs, endowment and guidance to assist to launch campaigns using specific road safety messages.

ID: 265 / OP4: 11
Oral Presentation Topics: General Pediatrics
Extreme Thrombocytosis in an Infant: Much Ado About Nothing?

Joana A. Oliveira[1], Sofia Moeda[2], Marta Contreiras[2], Sofia Costa Lima[2], Anabela Ferrão[3]
[1]Department of Pediatrics, Hospital Santa Maria (CHLN), Lisbon, Portugal; [2]Department of Pediatrics, Hospital Beatriz Ângelo, Loures, Portugal; [3]Unit of Pediatric Hematology, Department of Pediatrics, Hospital Santa Maria (CHLN), Lisbon, Portugal; joana.a.oliveira@hotmail.com

Introduction: Thrombocytosis is common in children and frequently reactive to infections. Extreme thrombocytosis (platelet count>1,000,000/mm3) is rare and its clinical implications in Pediatrics not well understood. We describe a case of extreme reactive thrombocytosis in an infant with presumable bacterial infection, who had no complications.
Case Report: A healthy 7 week-old girl was admitted to the Emergency Department for fever (38.5ºC) and mild nasal congestion. No other symptoms or contact with ill people were reported. Physical examination showed a well-appearing infant, no respiratory distress, no hypoxemia, normal cardiorespiratory auscultation, and no other remarkable physical findings. Lab works showed hemoglobin 9.6 g/dL, white blood cell (WBC) count 45,600/mm3, 66% neutrophils, platelet count 2,580,000/mm3 and C-reactive protein (CRP) 8.38 mg/dL. Urinalysis, cerebrospinal fluid (CSF) analysis and chest X-Ray were normal. Peripheral blood smear showed no blasts. The infant was admitted and started on intravenous ampicillin and cefotaxime (for presumed bacteremia) and oral aspirin 5 mg/kg/day. She remained clinically well and apyretic from day 1. WBC count increased up to 52,100/mm3 and CRP up to 18.54 mg/dL until day 2 of antibiotics (ABs), after which they gradually decreased and normalized by day 10. ABs were maintained for 10 days, with negative blood, urine and CSF cultures. Platelet counts continued to rise until day 14 to a maximum of 6,502,000/mm3, with subsequent decrease. Bone marrow aspirate showed no abnormal findings and JAK2 V617F mutation was absent. The infant remained clinically stable, with no evidence of thrombotic or haemorrhagic events, and was discharged on day 20. Complete remission was achieved 4 months after the diagnosis.
Conclusion: Few cases of extreme thrombocytosis have been reported in infants and to our knowledge none with such high platelet counts. Contrarily to what has been described in adults, extreme thrombocytosis in infants, when reactive to infection, doesn't seem to be associated with increased

risk of complications. The need for treatment is controversial and usually decided on a case-by-case basis. Aspirin seems to be the most consensual prophylactic option. Cytoreductive treatment (drugs or platelet apheresis) may be considered in high-risk cases, but their own possible complications must be taken into account. Although extremely high platelet counts cause great concern in pediatric care, it is reasonable to wait for spontaneous resolution in the asymptomatic infant with reactive thrombocytosis.

ID: 278 / OP4: 12
Oral Presentation Topics: Endocrinology & Growth, Autoimmunes
Type 1 Diabetes and Autoimmune Related Conditions – A Research Study in a Portuguese Hospital

Vanessa Oliveira Gorito[1], Sara Peixoto[2], Inês Torrado[2], Cristina Cândido[2], Vânia Martins[2]
[1]Centro Hospitalar de S.João, Porto - Portugal, Portugal; [2]Centro Hospitalar de Trás-os-Montes e Alto Douro, Portugal; vanessaoliveiragorito@gmail.com

Introduction: Type 1 diabetes (T1D) is an organ-specific autoimmune disease caused by autoimmune response against pancreatic β cells. The T1D-inducing autoimmune process can also affect other organs, resulting in the development of additional autoimmune diseases.
Purpose: Identify the association between autoimmune conditions and T1D diagnosed in children.
Materials and Methods: Retrospective study of the clinical records and analytical examinations of the children and adolescents with T1D followed in our Pediatric Diabetes Consultation between September 1, 2012 and August 31, 2017.
Results: During this period, 102 patients were followed up. Range of ages was between 18 months and 18 years, mean of 9 years and similar gender distribution (53% females and 47% males). In 98% was performed, at least, one tracking of other autoimmune disease with antibody determination. From this tracking we found positive autoantibodies in 31%: thyroid antibodies (n=16), antibodies for celiac disease (n=10) and antinuclear antibodies (n=5). Antibodies positivation occurred, in mean, 3.6 years after T1D diagnosis. However, about 26% of patients had positive antibodies during the first year diagnosis. Other conditions associated were: pulmonary hemosiderosis, vitiligo, IgA deficit, uveitis and positive Anti-Saccharomyces cerevisiae antibodies. Despite the positivity of antibodies, five had thyroid clinical disease (one patient with hyperthyroidism and four with hypothyroidism) through the necessity of pharmacotherapy; four had celiac disease, confirmed by endoscopy and with gluten free diet. From all patients, 62 maintain follow up in our consultation.
Conclusion: We found autoimmune conditions associated in around one third of T1D patients, which overlaps comparing with other studies. Besides, around 26% had positive antibodies at T1D diagnosis, which claim the attention to tracking autoimmune related conditions at diagnosis. Despite the positivity of antibodies, it is important to be aware for the possibility of other less common autoimmune related conditions associated. The screening of comorbidities is fundamental to make an earlier diagnosis and prevent complications.

ID: 230 / OP5: 1
Oral Presentation Topics: General Pediatrics, Dermatology
Childhood Granuloma Annulare. A 16-year Clinical Perspective from a Pediatric Hospital Dermatology Department

Maria Isabel Bento Ayres Pereira Leite[1], Cátia Leitão[1], Andreia Ribeiro[1], Ana Luísa Leite[1], Eduarda Osório[2]
[1]Pediatric Department, Centro Hospitalar Vila Nova de Gaia Espinho, Portugal; [2]Pediatric Dermatology Department, Centro Hospitalar Vila Nova de Gaia Espinho, Portugal; isabbap@gmail.com

Introduction: Childhood granuloma annulare (CGA) is a common inflammatory dermatosis of unknown etiology. Association with other conditions is controversial.
Purpose: To describe the clinical features of CGA diagnosed in a Portuguese Pediatric Hospital Dermatology Department.
Materials and Methods: Retrospective observational study of CGA diagnosed in the last 16 years; SPSS v.20 was used.
Results: 22 cases were identified, with a male:female ratio of 1:2.1 and median age at appearance of 5 years-old. Lesions were asymptomatic in 95.5% and localized to the feet (54.5%), ankles (27.3%), tights (18.2%), legs (18.2%) and hands (18.2%); 68.2% had >1 lesion. Examination revealed typical features of localized GA (LGA) in 81.5%, isolated violaceous subcutaneous nodules in 9.1%, and both lesions in 4.5%. Biopsy was performed only in n=2, yielding a diagnostic result in 1. Final classification was LGA in 86.4%, subcutaneous GA (SGA) in 9.1%, and mixed LGA/SGA in 4.5%. Lesions developed after sun exposure in 22.7% and minor trauma in 4.5%; 13.6% of the children were obese. Familial dermatologic history was unremarkable. Treatment was initiated in 77.3% of the cases. Medium/high-potency topical corticoids (TC) were the first-line agents in all. If recurrence/no resolution (n=7), alternative options were contrast-pulsed-laser (CPL; n=4), other CT (n=2), cryotherapy (n=1), pimecrolimus (n=1) or surveillance (n=2). Regarding CT, 47.1% used mometasone furoate, 11.7% fluticasone propionate, 29.4% diflucortolone valerate (DFV) and 5.8% clobetasol propionate. Ninety-one percent resolved, within a median time of 19.8 months, and no differences between the surveillance/treatment groups. DFV associated with a lower rate of resolution (20% vs 90.9% with other treatments; p=0,013). All other TC and CPL yield satisfactory, though not statistically significant results. Fifteen percent recurred, with no significant differences between treatment/surveillance groups. Type 1diabetes (DM1) and thyroid disease (TD) were investigated in 77.3% and 31.8%, respectively; medical records were reviewed until the present age (median follow-up 7.5 years). No case was diagnosed with DM1, TD, neoplasia, uveitis or dyslipidemia.
Conclusion: To the authors Knowledge, this is the first study of CGA from 1-18 years old. Clinical features were in accordance to literature. Surveillance yielded positive results, emphasizing its benign and often self-limited course and supporting it as a valid option for most cases and acceptance within families. Except for DFV, other CT used may be an option if treatment is initiated; CPL can be considered in treatment failures. None of the reported medical conditions associated with GA developed at follow-up, possible obviating investigations towards a more conservative surveillance approach.

ID: 210 / OP5: 2
Oral Presentation Topics: Preterm Infant, NICU
Quantitative Evaluation of Pda Flows Affecting Cerebral Blood Flow in Newborn Infant

Ko Ichihashi
Jichi Medical University Saitama Medical Center, Japan; koichihashi@jichi.ac.jp

Introduction: It is important to evaluate cerebral blood flow (CBF) by ultrasonography to diagnose asphyxia or to predict developmental prognosis of a newborn with asphyxia. It is known that ductal shunt influences cerebral blood flow, however, the quantitative relation between CBF and ductal shunt is unclear.
Purpose: In this research, we quantitatively estimated the influence of ductal shunt to cerebral blood flows.
Materials and Methods: We examined retrospectively the medical records of 123 newborn infants without asphyxia, major cardiac malformations or severe respiratory distress whose blood flow velocity curves of anterior cerebral artery (ACA) and left pulmonary artery (LPA) were recorded by pulsed Doppler ultrasonography within 6 hours after birth. The instrument used was a Philips Model iE33 Color Flow Imaging System. Recordings were obtained while the infants were asleep or resting quietly with stable heart rates. The flow velocity curve of ACA was recorded in a sagittal view by pulsed Doppler with supported color flow imaging positioning a transducer on the anterior fontanel. The flow velocity curve of LPA was recorded in a parasternal short axis view. The systolic maximal

velocities (ACAS, LPAS) and end-diastolic velocities (CAD, LPAD) were measured in ACA and LPA, respectively, and resistance index (RI), pulsatile index (PI) and LPAD/LPAS were calculated.
Results: Birth weight and gestational age of the newborns are 2470±645 grams and 36.4±2.6 weeks, respectively. RI, PI, and LPAD/S are 0.80±0.12, 1.73±0.41 and 0.28±0.01, respectively. There is a significant correlation between RI and LPAD/S (P<0.001, r=0.58).
Conclusion: In this study, we showed the quantitative relation between CBF and ductal shunt. From these results, we might be able to establish a new method to estimate cerebral circulation without the influence of ductal shunt in newborn infants.

ID: 115 / OP5: 3
Oral Presentation Topics: Preterm Infant
Resilience in Children Born Extremely Preterm

H. Gerry Taylor
Nationwide Children's Hospital Research Institute, United States of America; hgt2@case.edu

Introduction: Research on the outcomes of preterm birth has focused primarily on negative consequences. Little attention has been paid to the prevalence of positive outcomes and factors that may account for the age-appropriate levels of functioning of some preterm children.
Purpose: The aims of this study were to examine the rate of positive outcomes in a sample of extremely preterm (EP) children and compare them to EP children with more negative outcomes on measures of biological and social risk, family characteristics, and child social and cognitive competence.
Materials and Methods: The sample comprised 130 children born from 2001-2003 at a single neonatal center with gestational age <28 weeks and/or birth weight <1000 g. The majority of the sample (72%) was at high biological risk as defined by a major neonatal complications or neurodevelopmental impairment in early childhood. Tests of academic and cognitive skills were administered to the children at mean age 8.0 years (SD=.4). Their teachers completed ratings of social competence; parents provided information on children's daily living skills, sociodemographic risk, parenting, and the home environment. A formal psychiatric interview was also conducted with parents to determine if the child met DSM-IV criteria for a psychiatric disorder. Children without a psychiatric disorder who were free of deficits in achievement, language, and daily living skills were classified as having a positive outcome; children with a psychiatric disorder or deficit in one of these areas were classified as having a negative outcome. The two subgroups were compared on measures of biological and demographic risk, the home environment and parenting, and child social and cognitive abilities.
Results: Only 36 children (28%) had positive outcomes, but rates of these outcomes varied significantly from 13% for children at both biological and demographic risk to 53% for those without either risk factor (p=.002). Each risk factor contributed to outcome independently of the other (p<.05). Other factors associated with positive outcomes included more stimulating home environments, caregiver endorsements of parenting satisfaction and promotion of child autonomy, and higher child social competence and cognitive abilities (all p's<.05).
Conclusion: A substantial minority of school-age EP children demonstrated age-appropriate achievement, behavior, and daily living skills. Although these "resilient" children were at lower biological risk than those with learning or behavior problems, the findings confirm the contribution of environmental advantage to positive outcomes and provide impetus for further research on neural plasticity following preterm birth.

ID: 146 / OP5: 4
Oral Presentation Topics: Preterm Infant, NICU
To Assess the Impact of Quality Initiative Program Using Standardised Management Guidelines On Neonatal Outcomes in Very Low Birth Weight Infants in Tertiary Care Nicu in North India

Sunaina Arora, Pankaj Yadav, Manish Mittal, Rohit Arora

Apollo cradle hospital, India; suns_arora@yahoo.com

Introduction: Quality control, and adherence to written NICU specific guidelines, are known to impact outcomes in preterm neonates. As part of quality initiative, we introduced a standardized written guideline-based approach towards the management of VLBW neonates.
Objective: To study and compare the morbidity and mortality outcomes of VLBW neonates before and after introduction of standardized management guidelines as part of quality initiative program in a tertiary care NICU in North India.
Methods and Materials: Four quality initiatives were introduced and written guidelines and checklists were prepared for each of them. Training was provided to each of the doctors and nursing staff on implementation of these guidelines. The quality initiatives identified and implemented were: a) Adopting Humidified and Heated High Flow Nasal Cannula (HHHFNC) as primary mode of ventilation. b) Using only expressed breast milk / donor milk for feed and absolutely no formula milk feed. c) Maintain strict asepsis with primary focus on hand washing and following "Bundle Care Approach" for Central lines and PICC lines and d) Development and supportive care through a checklist based approach on minimal handling, prone positioning, clustering of care and dim lights/low noise environment. Data was collected prospectively from July 2015 to December 2016 (Intervention Group) and compared with retrospective matched controls from the previous year (July 2014 – June 2015) (Control Group). Chi square test was used for data analysis.
Results: There was significant decrease in culture positive sepsis in the intervention group compared to control group (3, (2.97%) CI:0.006- 0.08 vs 11 (19.64%) CI:0.10 - 0.32 ; p:0.0004). Similarly, the number of days on mechanical ventilation was significantly reduced (mean number of days in intervention vs control group (1.19, CI: 0.27-2.1 vs 3.36 CI:2.27-4.44, p:0.002) while number of days on HHHFNC was increased in the intervention group (mean 4.03 (CI:2.62-5.44) vs 2.2 days (CI:1.01-3.38), p:0.049). There was no significant difference in the survival (94.64% vs 96.03% p: 0.738) or mortality (5.35% vs 3.96% p: 0.74) amongst the two groups. All other morbidities such as bronchopulmonary dysplasia, necrotising enterocolitis, intraventricular hemorrhage, and retinopathy of prematurity were statistically insignificant in both groups. Other variables like maternal age, gestational age, antenatal steroids, maternal complications like pregnancy induced hypertension, antepartum hemorrhage, gestational diabetes mellitus, chorioamnionitis, birth weight and sex were well matched in both the groups.
Conclusion: Implementing quality initiatives in the form of standardized management guidelines for preterm VLBW neonates was associated with significant reduction in culture proven sepsis and mechanical ventilation days without affecting mortality or other co-morbidities.

ID: 227 / OP5: 5
Oral Presentation Topics: Preterm Infant
Outcome of Preterm Infants Who Received Inhaled Nitric Oxide (Ino) to Treat Hypoxic Respiratory Failure

Mona Noureldein, Hoi Shing, Srinivas Nallagonda, Sateesh Somisetty
Luton and Dunstable University Hospital, United Kingdom; monafathe1979@yahoo.com

Introduction: Inhaled nitric oxide (iNO) is a selective pulmonary vasodilator that has been demonstrated its efficacy when used to treat hypoxaemic respiratory failure in term or near term newborns. Premature newborn infants are not included in the approved indication of iNO use, but in some circumstances, when pulmonary hypertension is associated with severe respiratory failure, iNO has been demonstrated as an effective therapy to improve respiratory failure.
Aim: To evaluate mortality, morbidity and Neurodevelopmental outcome at 2 years CGA of all preterm infants < 35 weeks gestation who received rescue iNO for hypoxic respiratory failure.
Materials and Methods: A retrospective review was carried out of all preterm infants < 35 weeks admitted to our tertiary NICU who required iNO for hypoxic respiratory failure between Jan 2012 to

Dec 2016. Data was collected from local, national electronic and other relevant databases as well as developmental assessment reports and clinic letters.
Results: We included 24 babies with gestation of 24+1 to 34+2weeks (mean 27+6w) and birth weight 540- 2980g (mean 1321g). 11/24 had PROM ≥2wks. Mean age at starting iNO was 19 hours (1.7- 240 hrs). There was significant difference in Oxygenation index (OI) before and one hour after administration of iNO (p<0.0001 Wilcoxon test). 16/24 (67%) survived and 8/24 (33%) died, birth weight was significantly higher in survived group (p=0.0152), but there was no significant difference in gestational age (Mann-Whitney p=0.6404) between survivors and non-survivors. 9/11 (82%) with PROM ≥2weeks survived versus 7/13 (54%) with PROM<2weeks (p=0.2108 Fisher's exact test). 3/16 of survivors had grade III-IV IVH versus 2/8 of non-survivors in the first two weeks of life. In Survival group, discharge cranial ultrasound showed normal results 10/16 (63%), hydrocephalus 2/16(13%), PVL 3/6(19%) and hydrocephalus + PVL 1/6(6%). 10/16 (63%) had chronic lung disease, however only 6/16 (37%) discharged on home oxygen. 10/16 (63%) were eligible for 2-year Neurodevelopmental assessment and 5/10 (50%) showed age appropriate development.
Conclusion: Reversal of pulmonary hypertension and hypoxia was rapid and effective in our cohort of preterm infants. Patients with PROM ≥2wks showed dramatic response to iNO and had higher rates of survival. The outcome of this cohort of very sick preterm infants is multifactorial; however survival was 67%, only 37% of them needed home O2 and 50% had normal development at 2 years.

ID: 269 / OP5: 6
Oral Presentation Topics: General Pediatrics, Infant Development
Autism Spectrum Disorder Screening in a Primary Care Facility

Catarina Ferraz de Liz[1], Filipa Martins Guedes[2], Raquel Braga[3]
[1]Centro Hospitalar Tâmega e Sousa, Portugal; [2]Unidade Local de Saúde de Matosinhos- Unidade de Saúde Familiar Caravela; [3]Unidade Local de Saúde de Matosinhos- Unidade de Saúde Familiar Lagoa; catarina.liz@gmail.com

Introduction: Autism spectrum disorder (ASD) is a neurodevelopmental dysfunction that affects 1 in 88 children. Clinical manifestations are usually present by the second year of life with a general developmental delay, however most children are not diagnosed until age four or older. Early detection of this condition is essential to establish effective behavioral intervention allowing a better prognosis. The American Academy of Paediatrics recommends screening of all children between 18 and 24 months old. The modified checklist for autism in toddlers revised with follow-up (M-CHAT-R/F) is a valid screening tool that detects ASD at a higher rate when compared to the M-CHAT previously used.
Purpose: The aim of this study was to characterize the prevalence of autism spectrum disorder in children from 18 to 24 months in a primary care facility using the M-CHAT-R/F.
Material and Methods: This was a cross-sectional study. Demographic characteristics of the sample and results were analysed through descriptive statistic methods using SPSS version 20.0. All 220 children between 18 and 24 months from February to June of 2017 enrolled in the family health Unit with a total of 17000 patients were invited to take part in the study. Nine chose not to participate and 50 couldn't be contacted after three attempts, leading to a final sample of 160 children (response rate: 72%) The M-CHAT-R/F is validated for the Portuguese population. The authors applied the survey by telephone interview to parents/legal guardians. Demographic characteristics of the sample such as sex, parental age, family history of ASD and primary care attendance were also obtained.
Results: Fifty four percent of the sample (n=160) were female with a mean age of 23 months at the time of the contact (standard deviation 3,2). Of all the screenings made 4 scored positive (2,5%). One was already accompanied due to general developmental delay in the context of external hydrocephaly and, therefore, no follow-up interview was done. The three follow-up interviews were negative for autism spectrum disorder.
Discussion: Our work represents an exploratory study, as there are no similar studies published in our country.
When comparing to studies published in other countries our positive screening rate was lower which could be justified by a low number of participants enrolled.

Conclusion: Despite our results the M-CHAT-R/F is a useful test in primary care, easy to apply and enables an early detection of ASD, as described in the literature.

ID: 182 / OP5: 7
Oral Presentation Topics: Infant Development
Clinical Impact of Genomic Microarray in Neurodevelopmental Disorders: 3-Years Experience

Andreia Ribeiro[1], Maria Adriana Rangel[1], Teresa Pena[2], Isabel Pereira[1], Cátia Leitão[1], Armanda Passas[1], Ana Lopes[1], Susana Pereira[1], Helena Santos[1]
[1]Hospital Center of Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal; [2]Hospital Center of Tâmega e Sousa, Penafiel, Portugal; andreia.ribeiru@gmail.com

Introduction: Comparative genomic hybridization (CGH)-microarray is a genetic tool that analyzes the whole genome for detection of sub microscopic gains or losses of genetic material. Clinicians have increasingly used it as a first line evaluation tool of children with multiple anomalies/malformations not attributable to a known genetic syndrome, non-syndromic Intellectual Developmental Disorder (IDD) and Autism Spectrum Disorder (ASD).
Purpose: To describe the experience of a Portuguese paediatric neuroscience unit with CGH-microarray technique for etiological study of neurodevelopmental disorders (ND) and to determine predictors of pathogenic results.
Materials and Methods: Retrospective observational and analytical study of paediatric patients with neurodevelopmental disorders in which CGH-microarray was used, during a three year period (2014-2016).
Results: CGH-microarray was performed in 335 patients, 68.4% males, with a mean age of 8.1±4.0 years. Seventy seven percent had IDD, 28.1% dysmorphic features, 20.6% ASD, 16.1% attention-deficit/hyperactivity disorder (ADHD) and 7.5% had a familial history of IDD. Microarray abnormalities were identified in 18.8% (n=63) of patients (54.0% microduplication; 39.7% microdeletion; 6.3% with both); 44.4% (n=28) of the abnormalities were pathogenic, 15.9% (n=10) possibly pathogenic and 39.7% (n=25) variations of unknown significance (VOUS). Pathogenic microarray abnormalities were found in 25.5% of patients with dysmorphic features, 12.8% with IDD and 7.2% with ASD. Dysmorphic features were similar to phenotypes already described in their pathogenic variants in 59.4%. Sixteen percent (n=10) of parents of children with pathogenic variants performed microarray analyses and 30.0% (n=3) of them had the same genetic abnormality (2 with similar phenotype). As part of an etiological study, 48.1% performed previous karyotype testing, 48.1% cerebral MRI (normal in 73.5%) and 45.3% metabolic study (normal in 85.5%). CGH-microarray allowed etiological diagnosis in 11.9% (19/160) of children with previous normal karyotype. Patients were divided in two groups according to CGH-microarray result (pathogenic vs not-pathogenic), and an association was found between pathogenic microarray and female gender ($p=0.006$) and the presence of dysmorphic features ($p<0.001$).
Conclusion: The results of our study are in agreement to those previously described, namely the prevalence of pathogenic variants and its association with dysmorphic features. The use of this genetic technique allowed a higher etiological diagnostic yield than high-resolution karyotype. Etiological diagnosis of ND brings benefits to clinical practice such as prognostic information and more adequate genetic counselling to the family.

ID: 185 / OP5: 8
Oral Presentation Topics: General Pediatrics, NICU
Neonatal Jaundice and Its Main Risk Factors – A Cross-Sectional Study

Ana Reis e Melo[1], Mayara Nogueira[1], Cláudia Teles Silva[1], Marta Rosário[1], Jorge Santos Silva[1], Gorett Silva[1], Hercilia Guimarães[1,2]
[1]Serviço de Neonatologia, Hospital Pediátrico Integrado, Centro Hospitalar de São João, Portugal; [2]Faculdade de Medicina da Universidade do Porto, Porto, Portugal; anareismelo@gmail.com

Introduction: Neonatal jaundice is frequently diagnosed during the first days of life of newborns in perinatal care. Recent data has implicated neonatal jaundice and its mainstay treatment – phototherapy - with several diseases like asthma, autism and even cancer. Although the standardized use of phototherapy according with the American Academy of Pediatrics guidelines published in 2004 allowed the responsible use of this specific therapy, a permanent monitoring is needed.
Purpose: It seems important to characterize the major clinical risk factors for developing jaundice to be more alert in those cases and to evaluate the threshold to initiate phototherapy making its use more judicious.
Materials and Methods: In this cross-sectional study, all newborns born between November 2016 and February 2017 in Maternity /Perinatal care of a tertiary hospital were evaluated. A formulary was filled up of each newborn with the following items: gestational age, sex, mode of delivery, delivery trauma, ABO/Rh incompatibility and feeding type. If neonatal jaundice was diagnosed, the bilirubin level at that time, use of phototherapy, hour of life beginning phototherapy, serial bilirubin levels and hours of phototherapy were recorded. Newborns with intensive care management were excluded. Statistical analysis was made with SPSS 24, which included descriptive analysis and application of T-student test and chi-square test.
Results: 302 newborns were included, of which 50.7% were male. The mean for gestational age was 38,94 weeks (SD 1,36 weeks), eutocic delivery corresponded to 47.5% of deliveries, followed by C-section (28.2%) and vacuum assisted (24.3%), with none forceps delivery. 67.4% of neonates were exclusively breastfed with only 1% being exclusively non-breastfed. 72.4% didn't have any blood incompatibility but, when present, Rh incompatibility was the most common (10%). 14 had caput succedaneum. Neonatal jaundice was detected in 205 (67.9%) newborns with 78 needing phototherapy. Mean duration of phototherapy was 36.7 hours (SD 20.4). The incidence of newborns needing phototherapy was higher in males (p=0,03), in vacuum-assisted delivery (p=0,03) and in the presence of caput succedaneum (p=0,02).
Conclusion: The identification of the clinical risk factors associated with neonatal jaundice and ultimately to the use of phototherapy help the clinical practice. In our study, the characteristics associated with this therapy were according to the literature. More studies are needed to assure the restricted use and safety of phototherapy, with particular concern about long-term side effects.

ID: 141 / OP5: 9
Oral Presentation Topics: Emergency Pediatrics
The Initial Westley Score in Predicting the Outcome of Croup

Wen Chieh Yang
CCH, Taiwan; v1004@hotmail.com

Background: Westley croup score has been generally used to assess the severity of croup. This study aimed to identify the individual factors associated with Westley score (WS) and other clinical factors in predicting the outcomes in the pediatric emergency department (PED).
Population and Method: We prospectively recruited patients with croup from the PED. The individual factors in WS, fever, age, and the length of hospital stay were analyzed to predict clinical outcomes. We calculated all the areas under the receiver operating characteristic (ROC) curve to determine the cut-off values of initial WS discriminating the need for admission to the wards.
Result: A total of 192 patients with croup were enrolled. Cyanosis and altered consciousness were not clinically significant even in patients with severe croup, whereas retraction and air entry were the major factors in WS for predicting clinical outcomes. The initial WS had a strong correlation with the length of hospital stay($r=0.617$, $p<0.001$). ROC analysis showed that patients with an initial WS <2 (sensitivity, 5%; specificity, 100%, LR+, 1.05; LR−, 0; AUC, 0.87) were discharged home while the patients with an initial WS ≥5 (sensitivity, 99%; specificity, 57%, LR+, 41.0; LR−, 0.43) may require to stay in the PED. Patients with a WS ≥6 may need to admit to the wards (sensitivity, 97%; specificity, 47%; LR+, 416.35; LR−, 0.54; AUC, 0.90).
Conclusion: Patients with an initial WS of 1 to 2 could be safely treated at home and those with initial WS >5 required hospitalization for further treatment.

ID: 274 / OP5: 10
Oral Presentation Topics: General Pediatrics, Neurology
Disappearing Tubers, Disappearing Diagnosis – A Case Report

Pedro Marinho[1], Raquel Oliveira[1], Ana de Carvalho Vaz[1], Ângela Pereira[2], João Paulo Fernandes[2], Mariana Costa[1], Célia Barbosa[2]
[1]Unidade de Saúde Local do Alto Minho, Hospital de Santa Luzia, Portugal; [2]Hospital de Braga, Portugal; a.pedro.marinho@gmail.com

Introduction: In Medicine, decisions are often guided by results of diagnostic techniques, from blood tests to imaging. However, things are no always what they seem - the interpretation of these results can sometimes lead the etiological investigation away from the correct condition, which can be unveiled after following how the patient develops through time. The authors' report describes one of such cases.
Case report: The authors report the case of a previously healthy 5-year-old male patient, admitted to the Emergency Department (ED) after an afebrile seizure, following multiple vomiting episodes over the previous two days. At arrival, the patient presented marked somnolence, without other relevant findings on physical exam. Blood tests revealed increased inflammatory markers (Total Leukocyte Count 22000/ul; C-reactive Protein 2.00 mg/dL). An initial Low-field MRI revealed findings compatible with ADEM, and did not exclude the possibility of some degree of intracranial hypertension, reason why a lumbar puncture was not performed. Treatment protocol of ADEM was initiated, and the patient improved dramatically over the next 12 hours. A later report of the same Low-field MRI results (by a Neuroradiologist) described the presence of multiple areas that appeared to be cortical tubers, as well as lesions in other areas that could point towards other diagnoses, such as ADEM. A High-field MRI was performed 4 days after the first one, which confirmed the presence of cortical tubers, as well as lesions in the thalamus and caudate nucleus. An Electroencephalography (EEG) revealed a very disorganized and altered trace, and anticonvulsive medication was initiated. The patient was discharged and followed in outpatient consult, and no other findings expected in TS were obtained, including skin lesions, renal, cardiac or ophthalmic abnormalities. Genetic testing was negative for mutations in TSC1 and TSC2. An EEG was repeated 6 months later, without any abnormalities identified - the anticonvulsive medication was stopped-, and a High-field MRI was repeated after 2 years, with no pathological findings described. During the investigation period the patient was asymptomatic, with normal psychomotor development.
Conclusion: The disappearance of the previously observed abnormalities in the initial MRI excludes the diagnosis of Tuberous Sclerosis. These lesions were of probable inflammatory etiology, but without definitive conclusion, since the MRI findings offer a wide variety of differential diagnoses. The evolution of the patient's condition was not typical of ADEM.

ID: 296 / PO1: 1
Poster Presentation Topics: Dermatology, Adolescent Wellbeing
Severe Febrile Neutropenia in Isotretinoic Acne Treatment and Upper Airway Infection

Effrossine Tsekoura, Ksenia Loseva
Asklepieion General Hospital Athens Greece, Greece; efitsek@gmail.com

Introduction: Acne is one of the most common diseases in adolescents. In serious cases treatment with isotretinoic has excellent outcome, nevertheless with sometimes serious life threatening complications such as leucopenia, neutropenia and thrombocytopenia,
Purpose: To alert pediatric community in the safe isotretinoic use for acne treatment.

Case Report: A 15 yr. old male adolescent admitted in our casualty with an history of hyperpyrexia 39.9oC, abdominal pain, vomiting and lower back pain over 48hrs. From clinical examination he was in poor general condition with hyperpyrexia despite the use of antipyretics, tachycardia, diffuse abdominal pain, pharyngitis, painful cervical lymphadenopathy, spleen and liver enlargement and anuria. Severe cystic acne lesions noted in chest, back and face. He was on isotretinoic treatment for the last 10 days. He had received same medication 4 months ago, which was discontinued due to side effects. Blood tests showed severe leucopenia with neutropenia, thrombocytopenia, markedly elevated CRP, increased serum urea and creatinine with further clinical and laboratory deterioration over the next 12 hours (table 1).	**0 hrs**	**12 hrs**	**24 hrs**	**36 hrs**	**72 hrs**	**6 hrs**
WBC/μl	3430	2700	5020	8600	14700	12100
Neut %	3.8	3.5	34,9	62,3	70	73,5
N/μl	130	90	1750	5350	10400	8910
Lym %	52.7	43,4	38,9	27,8	15,3	21,6
N/μl	1810	1170	1950	2390	2250	2620
Mono %	41.5	52	24,9	7,2	11,3	3,58
N/μl	1420	1400	1250	620	1670	430
Hb g/dl	11.7	10,9	11,1	11	12,4	13,1
PLT/μl	141.000	133000	137000	256000	441000	437000
CRP mg/dl	113	186	316	172	40,1	
Ur mg/dl	27	45	66	30	23	
Cre mg/dl	0.8	1,5	1,3	0.7	0,7	

Patient was treated with broad-spectrum antibiotics as severe febrile neutropenia and systemic inflammatory reaction syndrome (SIRS) with immediate clinical and laboratory improvement within the next 24 hours. There was concurrent acne lesions improvement.

Conclusion: We concluded that our patient had SIRS, due to isotretinoic bone marrow suppression, possibly during the course of an upper airway infection (pharyngitis). Isotretinoic treatment in acne despite excellent results must be used cautiously and patient must be informed in details for the possible side effects of bone marrow suppression and the need for medical advice in cases of a febrile disease.

ID: 224 / PO1: 2

Poster Presentation Topics: Dermatology

Pityriasis Amiantacea: A Challenging Diagnosis in Paediatrics

Cátia Leitão, Isabel Ayres Pereira, Andreia Ribeiro, Marta Vila Real, Ana Cristina Oliveira, Eduarda Osório Ferreira

Centro Hospitalar Vila Nova de Gaia/Espinho, Portugal; catiavbl@gmail.com

Introduction: Pityriasis Amiantacea (PA) is an uncommon clinical condition of the scalp. It usually occurs in children and is characterized by masses of thick, adherent, silvery or yellowish scales, resembling asbestos fibers, surrounding and binding down tuffs of hair. Its exact etiology remains unclear but it is typically considered an exaggerated inflammatory pattern response that affects the scalp, mainly caused by seborrheic dermatitis, psoriasis and tinea capitis. The diagnosis is clinical but mycological examination and cultures are useful. Treatment should be directed towards the causal dermatosis, and includes keratolitic agents, topical steroid and/or antifungical. The authors present a case report of PA and alert Paediatricians for the clinical features of this condition, for a timely diagnosis and treatment.

Case report: A two-year-old boy was referred to a Hospital Paediatric Dermatology Department with a four-month history of scalp desquamation, without pruritus. His past medical and familial history were unremarkable. Examination of the scalp revealed thick, yellowish and adherent scales, binding down tuffs of hair at frontoparietal regions, without erythema and alopecia. Nails and skin in other parts of the body were normal. The mycological cultural was negative. This findings were suggestive of seborrheic dermatitis. In this case, the PA responded to treatment with antifungical shampoo and salicylic acid cream.
Conclusion: PA is a distinctive inflammatory condition but often under-recognized by Paediatricians. A detailed examination of all the skin may give an indication of the primary skin disorder, which determines treatment modality. The Paediatric Dermatology should be involved in cases of initial treatment resistance or suspicion of other diseases. As Paediatricians, it is important to be informed of this disease and select patients who should be referenced to Dermatology.

ID: 148 / PO1: 3
Poster Presentation Topics: Epidemiology
Surveillance of Chronic Kidney Disease in a Nigerian Rural Setting

Kene Ebuka Maduemem[1,3], Nnaemeka Akubue[2,3], Ekene Umego[3], Ogochukwu Maduekwe[3]
[1]Cork University Hospital, Cork, Ireland; [2]University of Nigeria Teaching Hospital, Enugu, Nigeria; [3]Global Missions Ireland; ebukakene@rocketmail.com

Introduction: Chronic kidney disease (CKD) is a worldwide public health problem. In Nigeria, incidence in children ranges between 2-6 cases per annum. The effectiveness of its early detection and treatment to prevent progression to End Stage Renal Disease (ESRD) has become widely accepted, while the strategy of its screening is still debatable. Hypertension, proteinuria and obesity are the most important modifiable risk factors for renal disease.
Purposes: To evaluate the usefulness of community based screening tools for early identification of CKD in children. To educate the public on the risk factors for CKD in this age group.
Methods: A cross-sectional descriptive study was conducted in a rural community in the South Eastern part of Nigeria. 280 children were enrolled. Morning mid stream urine samples were tested by dipstick. Children with abnormal findings were re-tested on another day. Height, weight and blood pressure measurements were documented for the respective children. Blood pressure measurements were repeated on 3 occasions if greater than or equal to 95th centile for age and height.
Results: Early morning urine was available for urine dipstick test in 265 children: 141 (53.2%) males. The median age was 6.30 (0.43 – 16.48) years. Risk factors for CKD (proteinuria, hypertension, obesity) were detected in 11.7% (31/265). Proteinuria was documented in 3.7% (10/265) after confirmation with a second dipstick test. Hypertension was detected in 5.6% (15/265) after 3 separate measurements. Body mass index of Z-score >3 was documented in 2.2% (6/265). There was no statistically significant correlation between the risk factors and independent variables (age and sex).
Conclusion: Screening for modifiable risk factors for CKD will result in early detection of renal disorders in childhood. This community based study highlights the prevalence of risk factors for CKD in asymptomatic children; up to 11.7% in this study population. Hypertension is the commonest risk factor in this population.

ID: 189 / PO1: 4
Poster Presentation Topics: NICU
Maternal Exposure to Ambient Air Pollutants During Pregnancy and Adverse Birth Outcomes in the Republic of Korea

In Gyu Song[1], Min Sun Kim[2], Yong-Sung Choi[1], Sung-Hoon Chung[3], Chong-Woo Bae[3]
[1]Kyung Hee Universitiy Hospital, Republic of Korea; [2]Seoul National University Hospital, Republic of Korea; [3]Kyung Hee University Hospital at Gangdong, Republic of Korea; pedigms@gmail.com

Introduction: During recent years, air pollutants were important social issues in the Republic of Korea. Air pollution is a major global health concern and effects on many health problems.
Purpose: In this study, we analyzed association of adverse birth outcomes (preterm births, low birth weights) and ambient air pollutants.
Materials and Methods: A total of 1,802,925 records of singleton births were examined using the National Birth Registration Database, from 2010 to 2013. We obtained concentration of sulphur dioxide (SO_2), nitrogen dioxide (NO_2), carbon monoxide (CO), ozone (O_3), and particulate matter less than 10 micrometers in diameter (PM10) from 2009 to 2013. Mean concentration of each air pollutants during pregnancy were calculated and matched to birth data by registered regions. We analyzed proportion of adverse birth outcomes between two groups by dividing air pollutant concentrations with World Health Organization criteria. Add to that, we compared the proportions between the first quartile and the rest of concentrations. A multivariate logistic regression model was used to assess the effect of air pollution in each region on preterm birth (less than 37weeks gestation) and low birth weight (less than 2,500 gram).
Results: The adjusted odds ratio (aOR) of PM10 over 70μg/m³ for preterm birth was 1.530 (C.I. 1.436 – 1.630). The aOR of highest quartile of SO_2 was 1.056 (C.I. 1.046 – 1.067) and CO (aOR: 1.031, C.I. 1.020 – 1.041), O_3 (aOR: 1.139, C.I. 1.127 – 1.152), and PM10 (aOR: 1.022, C.I. 1.012 – 1.033) were associated with preterm births. However, low birth weight was not associated with exposure to air pollutants.
Conclusion: Maternal exposure to ambient air pollutants during pregnancy was associated with preterm birth. Especially, expose to PM10 over 70μg/m³ may increase the risk of preterm birth. Further research for the mechanism and education for pregnant women to avoid exposure are needed.

ID: 245 / PO1: 5
Poster Presentation Topics: General Pediatrics, Obesity & Physical Activity
Association of Visceral Adiposity Index with Serum Uric Acid in Obese Children in a Tertiary Care Centre in Sri Lanka

Dinesha Maduri Vidanapathirana[1], Eresha Jasinge[1], Dulani Samaranayake[2], Pujitha Wickramasinghe[3]
[1]Department of Chemical Pathology, Lady Ridgeway Hospital, Colombo, Sri Lanka; [2]Department of Community Medicine,Faculty of Medicine, University of Colombo, Sri Lanka; [3]Department of Paediatrics, Faculty of Medicine, University of Colombo, Sri Lanka; maduri129@yahoo.com

Introduction: Hyperuriceamia has emerged as an important metabolic marker of non-communicable diseases and have found that uric acid (UA) levels in obese individuals are quite high. More than the total adiposity, certain patterns of distributions are related to metabolic defects, which are not reflected by anthropometry. Visceral adiposity index (VAI) is formulated using anthropometry (Body mass index (BMI) and Waist circumference (WC)) and metabolic effects (Triglyceride (TG) and HDL). Its usefulness is not validated in Sri Lankan children.
Purpose: To investigate the relationship between VAI and hyperuriceamia among metabolically abnormal obese Sri Lankan children and to compare the risk predictive ability for hyperuriceamia between VAI and other obesity indices including BMI, WC, waist-to-height ratio (WHtR).
Materials and Methods: A cross-sectional analytical study was conducted among 5-15 year-old obese children (BMI for age >+2SD of median (WHO standards)). After a 12-hour overnight fast, blood was drawn for glucose, lipid profile, insulin and UA. OGTT was done with anhydrous glucose 1.75g/kg body weight (max 75g). Random plasma glucose (RPG) and insulin was done 2 hours later. Height, weight, WC and blood pressure (BP) were measured. The considered obesity associated metabolic abnormalities were WC-SDS (>+2SD), Systolic and Diastolic BP (>+2SD),fasting plasma glucose (FPG) (>100mg/dL) or 2 hour RBS (>140mg/dL); HDL(<1.03 mmol/L); triglyceride (≥1.7 mmol/L). Metabolically abnormal obese child was defined as someone having abnormality in two or more of the above parameters. Insulin resistance was assessed using HOMA-IR.
Results: Of the 205 obese children (mean age (SD) 9.80 (2.0)), 137 were metabolically abnormal. Compared with metabolically normal group, the abnormal group had higher levels of UA (286±71.5 vs 281±70.1μmol/L) BMI-SDS (2.8±0.6 vs 2.7±0.7) but was not statistically significant. However

metabolically abnormal were compared with normal WC-SDS (3.14±0.6 vs 2.9±0.6), VAI (2.35±1.6 vs 1.1±0.5), HOMA-IR (3.2±1.9 vs 2.5±2.3), TG (1.4±0.7 vs 0.9±0.3 mmol/L), and HDL (0.9±0.2 vs 1.3±0.2 mmol/L) showed statistically significant differences. UA and VAI showed significant correlations with metabolic parameters but not with anthropometric indices. ROC curves were developed for VAI and anthropometric indicators in predicting hyperuricaemia in obese children with two or more metabolic abnormalities. Only VAI showed a significant ROC curve with AUC of 0.715. At a cut-off of 1.98 VAI had sensitivity of 77.1% and specificity of 60.4% in predicting hyperuricaemia.
Conclusion: VAI and UA had a significant association between each other in addition to the association they both showed with obesity related metabolic abnormalities. VAI was a strong predictor of UA levels that were associated with the presence of two or more obesity related abnormal metabolic parameters.

ID: 247 / PO1: 6
Poster Presentation Topics: Rare Diseases, Management
Physician Perspectives On End-of-Life Care and Pediatric Palliative Care for Children in the Republic of Korea

Min Sun Kim[1], Cho Hee Kim[1], Juyoun Yu[1], In Gyu Song[2]
[1]Seoul National University Hospital, Korea, Republic of (South Korea); [2]Kyung Hee Universitiy Hospital, Korea, Republic of (South Korea); singrumi@gmail.com

Introduction: Despite significant advances in disease treatment, resources for the pediatric palliative care (PPC) for children with serious illnesses are limited in South Korea. The obstacles to provide optimal PPC include inadequate funding, shortage of specialized professionals, and healthcare system, but the perception of health professionals is also very important.
Purpose: This study explored pediatric doctors' perception of end-of-life care and needs on PPC in Korea.
Materials and Methods: The study survey was developed based on a review of the palliative care literature and sample physician interview. A questionnaire was sent via online survey and mail to the pediatric doctors with specialized boards working at 43 tertiary hospitals in South Korea.
Results: A total of 118 doctors responded to the survey. The median age was 37 years, 53% were female and 76% answered they have own child. Eighty percent responded that, in the previous 2 years, they cared for more than one pediatric patient who died. When asked about appropriate age for terminal state disclosure, 6%, 30%, 42% and 14% answered that pediatric patients should be informed if they are aged over 4, 7, 12, and 15 years old respectively. As for the life-sustaining treatments (LSTs) decision, 24% answered that discussions should be started when a child is diagnosed with incurable diseases, and 48% said advance care planning is needed in a state of constant deterioration even though actual death is not expected. Although only 7% of pediatric doctors had personal desire for use of LSTs when their own disease is incurable and in the deteriorating state, more respondents (29%) showed preferences to LSTs for children in the same situation. More than half of the respondents answered that they are not confident about advance care planning including LST decisions. Most respondents reported experiencing difficulties in PPC areas such as symptom management, ethical problems, and psychosocial support more than once every six months. Pediatric doctors indicated to the barriers to pediatric palliative care implementation as follows: the attitude of parents who prefer aggressive treatment (19%), shortage of PPC professionals and organizations (18%), negative perception on PPC among health professionals (16%), lack of financial support for PPC (12%), inadequate linkage between curative and palliative care (12%), and difficulties to decide when to refer a patient to PPC (10%).
Conclusion: Our study showed pediatric doctors in Korea have low preferences to LSTs for children in the terminal state and perceive the needs of PPC. The results will guide the health authorities to design PPC program in Korea.

ID: 174 / PO1: 7
Poster Presentation Topics: Allergy, Immunology & Pulmonology, Emergency Pediatrics
Effectiveness of Ramathibodi Pediatric Asthma Guideline On the Hospitalization Rates of Children Presented to Emergency Room with Asthma Exacerbation

Uthen Pandee, Koonkoaw Roekworachai, Wiparat Manuyakorn, Harutai Kamalaporn
Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand; uthenp@hotmail.com

Background: Asthma exacerbation remains common problems in emergency rooms (ER) worldwide. Ramathibodi's Pediatric Acute Asthma Management (R-PAAM) guideline was developed since 2013. Objective: To evaluate the R-PAAM guidelines' effectiveness. Our hypothesis is appropriate management of pediatric asthma in ER may prevent hospitalization.
Method: Retrospective chart review acute asthmatic attack pediatric patients whom visited ER at Ramathibodi hospital since April 2011 to January 2015. The patients were categorized into guidelines used and non-guidelines used group. Matched case-control 1:1 by propensity score matched using 7 covariates. Comparisons were made between 2 groups in terms of admission rate, ICU admission rate, time spent in ER and ER revisited rate within 7 days.
Results: The total of 385 ER visits was recruited. Sixty four percent had mild exacerbations (clinical scores 0-3). One hundred fifty visits were matched and divided into case-control. Admission rate (28% vs. 44%, p=0.041) was lower in guideline-used group, especially in mild exacerbation patients (5.7% vs. 31.6%, p=0.005). Time to first inhaled bronchodilator (10 min vs. 13 min, p=0.037) and systemic steroid (51 min vs. 62 min, p=0.039) were also shorter in guideline-used group. ICU admission rate (4% vs.6.7%, p=0.467), time spent in ER (88 min vs. 95 min, p=0.368), and revisited rate within 7 days (7.4% vs. 4.8%, p=0.595) were not significantly different amongst the two groups.
Conclusion: R-PAAM guideline seems to be the hospitalized-reduction tool for pediatric patients who had exacerbation, especially for mild severity. Early systemic steroid and bronchodilator administration seems to be contributing factors.

ID: 172 / PO1: 8
Poster Presentation Topics: Child Mental Health
Autism as a "Narcissistic" Disorder: Social Implications

Amalia Megremi
University of the Aegean, Greece; asmegremi@yahoo.gr

Introduction: ASDs are increased and etiopathogenesis is unidentifiable.
Purpose: It is essential for new aspects to emerge.
Material and Methods: Literature review.
Results: At mythology, Narcissus was a handsome young man who was indifferent to the love expressed by others and did not respond to the love of the Nymph Echo. One day he saw his reflection in the waters of a spring and was so enchanted – it was the only thing he managed to love – that he wanted to touch it. This was impossible since, as soon as his hand touched the water, it dissolved. In his insistence to succeed, he eventually drowned. Early characteristics of autistic children are reduced eye contact, inability to share not only a game but also interests or emotions, while later they may develop difficulties in understanding the feelings and intentions of others (theory of mind). These autistic characteristics are a deficiency in prosocial behavior (a form of social behavior aimed at the benefit of other people or society as a whole through help, sharing and cooperation) and empathy. The deficiency in prosocial behavior observed in autism reflects the failure of developmental transition from the "self" (egocentric approach) to the "other" (allocentric approach). So, autism is a "narcissistic" disorder where empathy, friendship, affection for others, help, sharing and cooperation are handicapped areas. Research has revealed the anatomical and biological basis of neural circuits involved in empathy and prosocial behavior. The anterior cingulated cortex as an anatomical structure and oxytocin as a neurotransmitter play a predominant role in these functions and both are disturbed in autism.

Conclusions: According to the above and given that the incidence of autism is growing dramatically today, the question arises whether we are heading towards societies where egocentrism, narcissism, callous-unemotional behavior, lack of friendship and affection will be dominant. Does, like Narcissus of Greek Mythology who was deaf to the call of the enamoured with him Echo until he died admiring himself in the river, the modern autistic reflects the indifference of society to the request for affection, reciprocal help and altruism? Thus, it is imperative for parents and health professionals to timely detect the early characteristics of prosocial behavior deficiency in infants (and early intervene), not only because it leads to timely detection of autistic disorder (personal benefit), but also because it contributes to the creation of societies where altruism, cooperation and reciprocal help will be dominant (social benefit).

ID: 222 / PO1: 9
Poster Presentation Topics: General Pediatrics, Rare Diseases
Balance Evaluation in a Child with Congenital Radioulnar Synostosis

Busra Kepenek Varol, Zeynep Hosbay
Bezmialem Vakif University, Turkey; busrakepenek@gmail.com

Introduction: Congenital radioulnar synostosis (CRUS) is a rare malformation that causes restriction of supination and pronation movements of the forearm. Children with CRUS have difficulty in some activities, such as eating, washing the face, drinking from the cupboard, while the child can perform daily activities. Upper extremities movements can affect on standing and balance. The aim of the study is to examine the effects of upper extremity deformities on balance in a child with CRUS.
Case Report: A 7-year-old male patient with CRUS was admitted to the physical therapy unit who have not undergone a surgery. Upper extremity joint range of motion (EHA) measurements were performed with a goniometer and hand functions were assessed using the Jebsen Hand Function Test (JHFT). The balance was assessed with the Biodex Balance System® (BBS) and limits of stability (LoS), and modified clinical test of sensory interaction integration (m-CTSIB) tests were performed. The results times (seconds) of subtest of the JHFT were evaluated as writing 39 and 49.97, page turning 7.6 and 9.08, small objects 9.81 and 6.41, feeding 17.11 and 14, checkers 5.12 and 4.36, light objects 3.78 and 3.4, heavy objects 2.96 and 2.85 for non-dominant and dominant hand respectively. According to "Neutral 0 Method", the right forearm pronation angle was measured as 90º, supination 0º and left forearm pronation angle 80º, supination -80º. The results of LoS with BBS were evaluated as "directional control" transition forward 19, backward 68, left and right 29 (the goal scores for transition forward, left and right were 65 and for transition bacward was 30). BBS m-CTSIB test were evaluated with eyes open-closed firm surface, and eyes open-closed firm surface. The sway index according to composite score of m-CTSIB were found 2.02 (the goal mean score was 0.81).
Conclusion: It was observed that he had difficulty in subtests of JHFT particularly as writing, page turning and feeding. Compared to the JHFT results of healthy children of the same age group, (Baegley SB, 2016), our case was completed the subtest in longer periods, except for the light and heavy object. In the balance tests performed with BBS, our case's scores were considerably lower than the goal scores. The forces and moments brought by upper extremity movements can affect standing and balance. We think that balance assessment in patients with upper extremity dysfunction will affect the treatment positively, and increase the quality of life of the patient.

ID: 225 / PO1: 10
Poster Presentation Topics: Emergency Pediatrics
Characterizing Unintentional Poisoning Cases At the Pediatric Emergency Department At Wolfson Hospital Between 2008 and 2016

Hila Wiener[1], Bat-Hen Annie Daviko Levi[1,2], Ilona Brants[1], Svetlana Buslovich Khayumov[1], Olga Mandelgeim[1], Gila Meirson[1], Gideon Karplus[1], Ilan Dalal[1]
[1]Wolfson Medical Center, Israel; [2]Clalit Health Services, Israel; amram.hila@gmail.com

Introduction: In Israel there are approximately 180,000 Pediatric Emergency Department (PED) visits, 25,000 admissions and 150 deaths annually due to unintentional injuries. PED visits and subsequent hospitalizations of children after unsupervised ingestion of medication are on the rise despite widespread use of child-resistant packaging and the efforts of educational caregivers. According to the National Toxicology Center, there are almost 30,000 consults annually with approximately 50% pediatric cases. Poisoning is considered a major cause of death among these patients.
Purpose: The purpose of this study is to characterize all our PED unintentional poisoning cases. This could help identify prevention priorities and create intervention strategies.
Materials & Methods: In this prospective ongoing study, and as a part of the National Pediatric Injury & Safety Surveillance (NAPIS) program, we, in collaboration with the Beterem organization, have created a computerized system for collecting data for all the PED visits due to unintentional injuries. The minimal data set (MDS) is based on the WHO recommendations. In addition, we have used the Poisoning by Medication and by Household Agent codes. The population includes patients aged 0–18 years, seen in Wolfson Medical Center PED during 2008-2016. Cases of intentional injuries were excluded.
Results: During that period, two hundred and forty four (244) poisoning agents were identified in 199 patients. In 34/199 (17%), more than 1 agent was involved. Drugs were involved in 97.8% of the cases. As expected, the majority (150/199, 75%) were under the age of 5 years. Surprisingly, girls were more common - 118/199 (58%), compared to only 83/199 (42%) boys. The most common poisoning agents were: antipyretic medications (20%). The most common place of intoxication was at home (80%).
Conclusions: Focusing on prevention efforts of unsupervised medication ingestion with the highest hospitalization rates may efficiently impact public health.

ID: 155 / PO1: 11
Poster Presentati.on Topics: Dermatology, Allergy, Immunology & Pulmonology
Chronic Urticaria and Hypothyroidism in a 2-Year-Old Girl

Izabela Roszko-Kirpsza, Elzbieta Maciorkowska
Medical University of Bialystok, Poland; izabela.roszko-kirpsza@umb.edu.pl

Introduction: Chronic spontaneous urticaria (CSU) is a mast cell-driven disease characterized by the development of wheals, angioedema, or both for >6 weeks. The point prevalence for CSU is estimated to be 0.5%-1%. The prevalence of CSU in children is 0.1%-0.3%. The prevalence of hypothyroidism in the general population is 3.05%-4.6%. The prevalence of thyroid dysfunction (hypothyroidism and/or hyperthyroidism) in patients with CSU ranged from 0% to 54.5%. Thyroid dysfunction is more common in adult patients with CSU than in children. Clinical hypothyroidism and subclinical hypothyroidism have been reported in 0% to 42.6% and 0% to 31% in CSU patients, respectively. The prevalence of clinical hypothyroidism in children with CSU was from 0% to 1.1%. In studies published so far, the treatment of hypothyroidism and euthyroid CSU patients has resulted in improvement or remission of CSU.
Case Report: A 2-year-old girl was admitted to the Department of Allergology for a 5-month urticaria. Cutaneous lesions were presented every day. Child was born of pregnancy II, normal, childbirth II, by cesarean section, at 41hbd, 10 points on Apgar scale. Child was born with birth weight 2 570 g. Infant range of normal course. In the treatment of urticaria, the family doctor used an elimination diet (non-dairy, without eggs) and antihistamines (cetirizine) without clinical improvement. The work up for chronic urticaria included the following: blood tests for complete blood count (WBC 8.38x103 / µl), Hb-13.4g/dl, MCV-78.6fl; peripheral blood eosinophilia-1.0% (absolute eosinophilia-0.08x103/ml), levels of serum complement components C3 and C4 – normal. Sensitization (presence of specific IgE) (Polycheck) to apple (f49) -2.5kU/l (class 2) and pork (f26) -0.59IU/ml (class 1) allergens was found. Serum IgA concentration -0.6g/l (0.45-1.35g/l). Anti-transglutaminase (tTGA-IgA) and DGP/Ab-IgG - negative, Helicobacter pylori antigen stool test-negative, Anti-Toxocara IgG-1.4index (negative). The concentration of TSH-63.32µIU/l (0.85-6.5µIU / l), antithyroid peroxidase-14.4IU/ml (negative), antithyroglobulin antibodies <10.0IU/ml (negative). In the thyroid ultrasound

study - struma 1a in the state of euthyreosis. Family history of thyroid disease negative. The patient was started on levothyroxine therapy (25 μg/day). After 4 weeks of treatment with levothyroxine, the control studies showed TSH-1.3 μIU/l; fT4-1.5; fT3-4.0. After six weeks of treatment with levothyroxine, urticarial lesions disappeared without any recurrences noticed over the 5 months follow-up. The child is currently on a general diet.
Conclusion: Clinical analysis of chronic urticaria and dermatitis as a result of levothyroxine treatment in a two-year-old girl is associated with thyroid disease, which is in agreement with the recent literature.

ID: 250 / PO1: 12
Poster Presentation Topics: Preterm Infant, Infant Development
Lead Exposure and Pregnancy: An Intervention to Improve Knowledge, Skills, and Behaviors Related to Safe Water Drinking Among Women of Reproductive Age

Gergana D. Kodjebacheva[1], Jeremy Blankenship[2], Kanday Campbell[2], Suzanne Cupal[3], Laurel Hilliker[2], Marilyn Filter[4]
[1]University of Michigan - Flint, Department of public health and health sciences; University of Michigan - Ann Arbor, International institute; [2]University of Michigan - Flint, Department of public health and health sciences; [3]University of Michigan - Flint, Department of public health and health sciences; Genesee County Health Department; [4]University of Michigan - Flint, School of nursing; gkodjebacheva@gmail.com

Introduction: The Flint, Michigan Water Crisis (2014-present) increased awareness of the dangers of drinking lead-contaminated water. Elevated blood lead levels during pregnancy are associated with spontaneous abortion, lower birth weight, and infant mortality. During the Washington DC Water Crisis (2000-2004), exposure to lead-contaminated drinking water was associated with fetal death and reduced birth rates.
Purpose: A web-based intervention was implemented and tested to increase knowledge and skills related to lead water contamination and improve behaviors related to safe drinking among females of reproductive age.
Materials and Methods: The intervention used a one-group pre-test design. University of Michigan - Flint female students aged 18 to 45 who wished to become pregnant in the next 2 years were recruited via email, classroom contact, and flyers. A survey was administered at the start of and two weeks after the end of the intervention to investigate changes in knowledge, skills, and behaviors. The online course consisted of these sessions:
• How to take care of oneself to have a healthy pregnancy one day: The session focused on the importance of a healthy diet, use of folic acid, and regular exercise.
• Lead water contamination: The session focused on lead contamination and the effects of lead on the mother and baby. Types of food to consume if exposed to lead were discussed.
• Prevention of exposure to contaminated water: Demonstrations of testing water, installing filters, and cleaning aerators were given in videos.
Results: A total of 27 women completed the course. Most women were White/Caucasian, were either married or in a committed relationship, and had health insurance. A higher percentage of women answered true/false and multiple-choice answer questions on lead correctly at follow-up compared to baseline. For example, at baseline, 77.8% of females (21 of 27) correctly answered the question “Eating food high in calcium, iron and vitamin C may help protect the pregnant woman and her unborn baby from lead poisoning” compared to 96.3% (26 of 27) at follow-up. In addition, 25.9% of participants (7 of 27) stated they were confident/very confident in installing a lead water filter on a kitchen sink at baseline compared to 88.8% (24 of 27) at follow-up.
Conclusion: Knowledge about lead and strategies to prevent exposure to lead increased from pre- to post-test. This study may assist in the development of a randomized-controlled trial on the influence of an improved intervention on healthy behaviors and pregnancy outcomes.

ID: 201 / PO1: 13
Poster Presentation Topics: Rare Diseases
10 Year-Old Girl with Juvenile Arthritis and Alpha-1 Antitrypsin Deficiency

Marta Laizane[1], Ieva Saulite[1,2], Ingrida Rumba-Rozenfelde[1,2]
[1]University of Latvia, Latvia; [2]Children University Hospital, Riga; ingrida.rumba@lu.lv

Introduction: The majority of studies confirm the association between alpha-1 antitrypsin deficiency and juvenile idiopathic arthritis(JIA). Reduced concentrations of alpha 1-antitrypsin may be insufficient to inhibit the proteolytic enzymes released into the joints of patients with rheumatoid arthritis during phagocytosis of immune complexes, and it may promote severe joint destruction [Cox et al. 1980]. Alpha-1 antitrypsin deficiency is caused by point mutations in the SERPINA1 gene, and most common genotypes are PI*SZ, PI*ZZ, and PI*SS. Genotype PI*ZZ is present in 95% of individuals with clinical manifestations [de Serres & Blanco 2012] although less than 10% of severely affected people are currently diagnosed [Stoller et al. 2013]. Individuals with PI*ZZ genotype usually have a serum concentration of alpha-1 antitrypsin that is approximately 10-20% of normal [Stoller et al. 2007] and are at high risk for both severe liver and lung damage.
Case report: A 2-year-old girl was first admitted to hospital with a swollen right knee. Ultrasound revealed bilateral prepatellar bursitis. Rheumatoid factor, antinuclear antibodies, anti-nDNA antibodies and HLA B27 antigen were negative. However, there were positive parvovirus B19 IgM antibodies. Two months later patient returned to hospital with complaints of pain in both knees. Physical examination showed limited range of motion in right knee, subcutaneous tissue atrophy in both upper and lower legs, and soft-tissue swelling of both ankles. Girl was diagnosed with juvenile idiopathic arthritis. Therapy with nonsteroidal anti-inflammatory drug was initiated. Four months after first admission, elevation of liver enzymes (ALAT – 84 U/l, ASAT – 59 U/l) was noticed. It was decided to test alpha-1 antitrypsine level in serum, which turned out to be decreased. Molecular genetic testing was done and mutation PI*Z of the SERPINA1 gene was found in the homozygous form (genotype PI*ZZ). In later years disease went into remission and no pharmacological therapy was necessary. Currently patient is 10 years old. Lately, she has been complaining about pain in right knee. Laboratory tests reveal vitamin D deficiency, but liver enzymes stays within normal range. Most recent ultrasound shows bursitis in right knee. For disease control it is necessary to choose medications without hepatotoxicity.
Conclusion: Alpha-1 antitrypsin deficiency is a rare coincidence with JIA, may be a risk factor for development of JIA and also a challenge when it comes to choosing disease-modifying antirheumatic drugs.

ID: 159 / PO1: 14
Poster Presentation Topics: General Pediatrics, Allergy, Immunology & Pulmonology

Evaluation of Clinical and Immunological Characteristics of Children with Common Variable Immunodeficiency

Gülsüm Alkan[1], Sevgi Keleş[2], İsmail Reisli[2]
[1]Pediatric Infectious Diseases, Department of Paediatrics, Selcuk University Faculty of Medicine, Konya-Turkey; [2]Department of Pediatric Allergy and Immunology, Department of Paediatrics, Necmettin Erbakan University Meram Faculty of Medicine, Konya-Turkey; galkan-85@hotmail.com

Introduction: Common variable immunodeficiency (CVID) is a primary immunodeficiency (PID) that typically presents with hypogammaglobulinemia and impaired antibody production. It is one of the most frequently occurring PID disorders, after IgA deficiency and transient hypogammaglobulinemia.
Purpose: This study aims to promote awareness of CVID, whose clinical spectrum is quite broad.
Materials and Methods: The demographic, clinical, and laboratory characteristics of 12 children (seven male, five female) with CVID were analyzed retrospectively. Patients were diagnosed in line with the diagnostic criteria of the European Society for Immunodeficiency Diseases.

Results: The median age at disease onset was 6.4± 5.2 years, and the mean age at diagnosis was 11.6 ± 3.8 years. The delay in diagnosis was 5.1 ± 3.3 years. Additionally, in nine of the 12 cases, there was parental consanguinity. Overall, 75% of patients reported frequent infections. Recurrent lower respiratory tract infection (percentage with LRTI-10: 83.3%), recurrent upper respiratory infection (percentage with URI-8:66.6%), and recurrent gastroenteritis (five cases; 41.6%) was learned from the anamnesis collected at diagnosis. Growth retardation was detected in 75% of patients, and bronchiectasis presented in four patients (33.3%). We detected autoimmune disease in five patients (41.6%). All patients diagnosed with autoimmune diseases were over the age of 10. Patients with CVID before the age of 10 years are more susceptible to infections rather than non-infectious complication. The Ig G levels of 10 patients (83.3%) were low; those of another two patients were found upon follow-up to have decreased. The number of B cells in CVID patients is variable. All patients received IVIG replacement therapy at doses of 500 mg/kg every three weeks. There was a decrease in LRI and AGE frequency in the first year of IVIG treatment, and a statistically significant decrease in URI at 5 years ($p < 0.05$).
Conclusion: CVID is a heterogeneous disease, and so diagnosis is frequently delayed. In CVID patients, pulmonary complications relate to diagnosis delays, the age at onset of symptoms, and the prevalence of lung infection before treatment. In children, PIDs are life threatening, and so early diagnosis and the early initiation of treatment will help preclude complications. As a result, it is important for all specialist physicians to be aware of these manifestations, to assist in ameliorating diagnostic delays.

ID: 299 / PO1: 15
Poster Presentation Topics: Orthopaedics
Effect of Kinesio Taping® Application On Heel Contact in a Case with Idiopathic Toe Walking

Deniz Tuncer[1], Yilmaz Kutuk[2], Hulya Nilgun Gurses[1]
[1]Bezmialem Vakif University, Turkey; [2]Yalova University, Yalova, Turkey; tuncerdeniz82@gmail.com

Introduction: Idiopathic toe walking (ITW) is a stubborn gait pathology with no known etiology that is characterized as premature heel-rise or no-heel contact. The aim of this case report is to examine the acute effects of Kinesio-taping® (KT) in a child with ITW.
Case Report: A 3 year-old girl with persistent toe walking, who was referred to the Department of Pediatric Physiotherapy Rehabilitation was examined with Toe Walking Tool Questionnaire Form and Video-Based Observational Gait Analysis. KT applied on m.tibialis anterior bilaterally. 5 gait trials were video-recorded from frontal and sagittal plans in 15 minutes after KT application. Pausing and frame-by-frame monitoring functions of video player were used while evaluating the gait. 10 steps of 5 gait trials which corresponding to the exact middle of the walking way were taken for right and left sides. The case was evaluated for only foot section, which consists 7 items of EVGS. Totally score of 10 steps for dominant and nondominant sides was noted before and after KT. According to the scores of EVGS, there was no heel contact before KT. After KT application on m. tibialis anterior the child showed 4 times heel contact and 2 times flatfoot and 4 times toe contact in stance phase of 10 steps. The difference between the scores of before and after KT application is shown in Table 1. The score decreases as the steps improves.

Table 1. The total score of foot section of EVGS for bilateral 5 steps

	Initial Contact in Stance	Heel Lift in Stance	Maximum Ankle Dorsiflexion in Stance	Hind-foot Varus/Valgus in Stance	Foot Rotation in Stance	Clearance in Swing	Maximum Ankle Dorsiflexion in Swing
Before KT	20	20	20	0	0	10	15
After KT	10	10	14	0	0	10	10

Initial Contact in Stance Heel Lift in Stance Maximum Ankle Dorsiflexion in Stance Hind-foot Varus/Valgus in Stance Foot Rotation in Stance Clearance in Swing Maximum Ankle Dorsiflexion in Swing Before KT 20 20 20 0 0 10 15 After KT 10 10 14 0 0 10 10

Conclusion: This case report conducted to evaluate the acute effects of KT on m.tibialis anterior of the child with ITW. Our results showed that the child had an improvement in the score of foot section of EVGS after the application of KT. In the light of this finding, larger sample studies, which display the effects of KT on gait in children with İTW, are needed.

ID: 279 / PO1: 16

Poster Presentation Topics: General Pediatrics, Infant Development

Support Early Childhood Development (Ecd) by Strengthening the Capacity of Paediatric Health Care in Serbia

Dragana Lozanović[1], Radovan Bogdanović[2], Jelena Zajeganović Jakovljević[3], Marica Milidrag[2], Ljiljana Sokal Jovanović[2], Nenad Rudić[4], Veronika Išpanović[5], Stanislava Vučković[3]

[1]Institute of Mothet and Child Health Care of Serbia "Dr Vukan Čupić", Belgrade, Serbia; [2]Pediatric Association of Serbia; [3]UNICEF Office in Serbia; [4]Institute of Mental Health of Belgrade; [5]Society for Child and Adolescents Psychiatry and Related Professions; dr.lozanovic@gmail.com

Introduction: In the last 6 years, the cooperation of UNICEF and the Ministry of Health of Serbia (MoH), has been aimed at supporting children in early development, and their families, through several projects, which have been carried out by the Pediatric Association of Serbia (PAS) and partners.

Purpose: To present the main results of the 3-year long Project (2013-2016), conducted by Paediatric Association of Serbia implemented with support of MoH and UNICEF, aimed at building the health care system for supporting ECD. The primary outcome and objective of this Project is the creation of national and local health systems to support ECD. At national level: Developing of basis for sustainable education and training of health care professionals in the field of ECD. At local level: support of the quality of the PHC system in 9 municipalities using: training modules, instruments for screening and assessment of ECD and organizational changes in PHC for improving availability and quality of services.

Materials and Methods: Analyzing the data obtained by both Project and primary health care center (PHC) coordinator reports: tests of knowledge gained, satisfaction of courses participants, and activities in the implementation of knowledge gained at the educational courses.

Results: Training of 90 pediatricians in 9 municipalities was conducted through 11 basic courses. The level of knowledge increased by an average of 33%, 98% participants were satisfied. Instruments for ECD assessment (ASQ-3, IGMCD) were applied in more than 4000 children. 4061 ASQ filled in by parents and returned to pediatricians. Trained paediatricians reached a total of 5,500 children (25 Roma) having some risks factors. Paediatricians' filled check lists for monitoring the development of 1429 children. Analysis of 1429 children (30% Roma) showed: 59% had difficulties in any domain, 45% to 64% improved developmental outcomes after pediatric interventions; in Roma families, age specific play stimulation rose from 29% to 43%. About 50% of Roma parents improved their practices reducing identified risks for ECD, using adequate developmental play and positive interaction with children. At the national level, an elective course on ECD for medical students in 2 medical faculties (Belgrade, Novi Sad); ongoing process for improving education on ECD for postgraduate students in Pediatrics.

Conclusion: The improvement of ECD outcomes for children, increase of families actively applying early stimulation were achieved by increasing the quality of pediatric support to tham and their families. These results confirm that the investment in knowledge of pediatricians on ECD, including in-service training, introducing of standardized instruments for monitoring child development, and on-site support represent the effective way for increasing the quality of health care system to support ECD at the primary health care level.

ID: 145 / PO1: 17
Poster Presentation Topics: Preterm Infant, NICU
The Using of Abdominal Regional Saturation in Preterm Neonates When Organizing Enteric Feeding

Tetiana Kurilina, Andrii Pysariev, Tetiana Znamenska
S I "Institute of Pediatrics, Obstetrics & Gynecology NAMS of Ukraine", Ukraine; kurilina.neo@gmail.com

Introduction: High frequency of the food intolerance and development of necrotizing enterocolitis in deep and extremely preterm neonates despite of the implementation of standardized order of enteric feeding for preterm neonates motivate a search for additional resources of monitoring the state of intestine and the evaluation of tolerance of feeding.
Purpose: The aim of the research was the obtain of data of regional abdominal oxygenation with the near infrared spectroscopy in clinical stabile preterm neonates under 32 weeks of gestation in the dynamics of the formation of enteral nutrition.
Materials and Methods: 107 preterm neonates under 32 weeks of gestation with the monitoring of regional abdominal oxymetria when the increasing the capacity of feeding during all the period of transition into the total enteric feeding were observed. The monitoring was provided with the help of oxymeter INVOS 5100C with neonatal sensory devices. Children were divided into groups with the step of 2 weeks of gestational age. The human research ethics committees of the Institute approved the study, and informed parental consent was obtained for all infants. There were no conflicts of interest for the authors.
Results: The assessment of regional abdominal saturation started from the day of transition from the minimal trofic feeding and was continued when increasing the capacity of feeding. The duration of monitoring was no less than 6 hours (2-3 feeding). In the beginning of enteric feeding regional abdominal saturation was 78±3,8 %, 71±4,2 %, 67±2,6 % corresponding in children 30-32 weeks, 28-29 weeks, 26-27 weeks. The decrease of data to 55 % was the reason for reduction of enteric strain (a pause in feeding or cut-off of increasing of capacity). Individual organization of feeding under the NIRS data allowed to decrease the frequency of NEC development to one third in all groups. Besides that, a positive moment of the monitoring of abdominal oxygenation was the reduction of duration of transition into the total enteric feeding, especially in extremely preterm infants (under 28 weeks of GA).
Conclusion: The monitoring of abdominal saturation may be a useful diagnostic method of detection of hypoxia/ischemia of the intestine, which allows to provide individual program of enteric feeding in deep and extremely preterm neonates.

ID: 104 / PO1: 18
Poster Presentation Topics: General Pediatrics, Health Economics
Challenges Towards Use of Self-Directed Learning in Acgmei Multi Cultural Pediatric Residency Program; the Residents Perspective

Khaled Siddiq[1], Ahmed Essam[1], Manasik kamil Hassan[1], Muna Maarafiya[1,2], Hatim Abdelrahman[1,2], Ahmed Alhammadi[1,2]
[1]Hamad medical corporation, Qatar; [2]Weill cornell medical college; aalhammadi@hamad.qa

Introduction: Self-assessment, self-directed learning(SDL)is one of the cornerstone for the new aura of teaching and learning . it had been Considered as one way to support transition from undergraduate to postgraduate Learning. using the skills of self-directed learning (SDL) by the residents in their training will improve their own professional development; challenges toward implanting (SDL) in the

training program will create gap between residents and efficient training,thus better understanding of those challenges will ensure earlier intervention by the program faculties and directors.
Purpose: To identify barriers to use SDL among pediatrics residents. To explore potential recommendations that can overcome challenges. To explore ideas to ward effective creation of individual learning plan and life long learning among residents.
Methods: Cross-sectional Survey included details of demographics and barriers to Self-Directed Leering use in clinical practice conducted from July -November 2016 among pediatrics residents at Hamad Medical Corporation main tertiary teaching hospital in Qatar.it include details of demographic, perception and attitude toward self-directed learning and challenges that might prevent effective SDL among residents. Questions offered objective answers utilizing 3-point Likert scale.
Results: Out of 50 respondents,(31) juniors and (19) Seniors. Nearly (90%) perceived lifelong learning as necessary to physician's carrier. Major barrier identified were; Lack of balance between social life and clinical workload (20%), Insufficient understanding of how to construct an effective Individual learning plan (18%), Lack of time to create plan for (ILP) and to apply it (17%),Lack of monitoring (qualified teacher/ adviser) in (ILP (16%), maintaining residency training requirements (16%), Lack of support from residency program (13%).
Conclusion: Nearly all the residents in this study placed a high value on SDL and perceive it as beneficial for promote education and academic advancement. Our study shed light on the barriers limiting use SDL in ACGMEI multi-cultural program. Residents in training identified several barriers related to their learning level, program level and external environments. allow residents to have protected time and resource for teach SDL, implement Hands-on workshop in their curriculum, use frameworks support on-going learning; regular meet with advisor to discuss ILPs and evaluate process can overcome these obstacles.

ID: 103 / PO1: 19
Poster Presentation Topics: General Pediatrics, Management
Current Practice of Verbal Handover Using Sbar Modality Among Pediatric Residents in Acgme-I Program Doha, Qatar

Manasik kamil Hassan, Najla Ba Sharahil, Bassil Laghrouz, Ahmed El Makki, Amira Mustafa
Hamad medical corporation, Qatar; mhassan17@hamad.qa

Introduction: Patient handover is a crucial process for transfer of patients' information. The ultimate goal of handover is to ensure patients safety, thus, its standardization enables concise relay of information across team members. Many factors is contributing to efficient and safe handovers such as: organization of the whole process of handover, insure presence of protected time, standard systems and training for all staff. Different systems of communication have been developed to achieve effective and safe handover such as SBAR and IPASS, however still there is an area of improvement for the patients' information handover.
Purpose: To study the completion of patient information during handover using SBAR modality at the time of residents endorsement. To identify frequent missing elements in the residents handover. To study the organization of the whole handover process.
Methods: An observational study was conducted in Pediatric Department of Hamad General Hospital. The observational tool was structured to examine the contents of the oral handover using SBAR method, which was filled by chief residents. the observation was done at the time of handover between morning team and the on call team . It included the organization of the handover, 9 essential elements conveyed in SBAR format and flow of the endorsement throughout different team levels.
Results: There were 26 endorsement observations collected from different types of endorsement (Junior to Junior, Senior to Junior, Junior to Senior, Senior to Senior, Senior to Fellow, and Fellow to Fellow). 30.8% of the endorsement comes from Senior to Senior, 23.1% from Senior to Junior, 19.2% Junior to Junior, 15.4% Junior to Senior; while Senior to Fellow, Fellow to Fellow, and undescribed had 3.8% each. 50% of the residents' handovers had completed 100% the 9 elements of

endorsement using SBAR, while 35% covered 75% of the SBAR element in endorsement. The commonest missing elements were patients' demographics and location (23%) followed by situation awareness (19%). Organization of the whole handover process was 38% of more than 4 that is very good and only 12% of 1, which is poor organization.
Conclusions: The majority of the residents' handovers were inclusive of the 9 elements of SBAR. An extra important element was observed in 12% of the endorsements, which is "read back by the receiver"; an element not part of the SBAR modality. The study was highlighted areas for improvement in SBAR content. Adding "read back by receiver" = (R) to the SBAR may ensure that crucial patients' information is well understood by the receiving team. Creating a modified handover modality in form of SBARR may greatly improve endorsement safety and quality.

ID: 281 / PO1: 20
Poster Presentation Topics: Endocrinology & Growth
Congenital Hypothyroidism and Brain-Lung-Thyroid Syndrome

Sofia Helena Ferreira, Sandra Pereia, Sylvia Jacob, Mariana Abreu, Daniel Gonçalves, Mafalda Sampaio, Miguel Leão, Cíntia Castro-Correia, Manuel Fontoura
Centro Hospitalar de São João, Portugal; sofiahferreira@gmail.com

Introduction: Choreoathetosis and congenital hypothyroidism with or without pulmonary dysfunction is a rare condition and it is characterized by congenital hypothyroidism (CH), respiratory distress syndrome and benign hereditary chorea. It is caused by heterozygous mutation in the NKX2-1 gene on chromosome 14q13.
Case report: Five-year-old girl, the first daughter of non-consanguineous parents. Term pregnancy and childbirth without complications. Congenital hypothyroidism was detected in the neonatal screening of metabolic diseases and levothyroxine was started at 8 days of age. Ultrasound showed thyroid hypoplasia. Hypotonia and ataxia were noticed at 12 months and 2 years of age, respectively. Brain magnetic resonance imaging showed images suggestive of Chiari malformation type I. She maintained normal thyroid function and the genetic panel for ataxia was negative. At 4 years of age, besides ataxia, choreoathetosis was noticed, which, in association with previous diagnosis of HC and global developmental impairment, led to the molecular study of the NKX2-1 gene. It was identified a pathogenic mutation in heterozygosity in exon 3. She began treatment with tetrabenazine with improvement of coreoatetosis. Pulmonary disease was excluded and she was referred to the local team for early intervention, with favorable clinical evolution.
Discussion: We should suspect of a deficiency in NKX2-1 when HC is associated with neurological and/or respiratory disease. Multidisciplinary follow-up was crucial for the diagnosis of CAHTP, allowing preconception counselling. The Chiari malformation type I found in this patient may be included in the expression of the CAHTP phenotype.

ID: 252 / PO1: 21
Poster Presentation Topics: Orthopaedics, Injuries & Trauma
Fat Embolism Syndrome – A Clinical Case

Catarina Ferraz de Liz, Nuno Ferreira, Joaquim Cunha, Ângela Machado
Centro Hospitalar Tâmega e Sousa, Portugal; catarina.liz@gmail.com

Introduction: Fat embolism is a condition often under diagnosed, mostly associated with surgical procedures in traumatic long bone fractures. The incidence of clinically detected fat embolism (which occurs in <1%) differs from the incidence found in post mortem examination (20%). In rare cases, this condition evolves into a fat embolism syndrome, which is characterized by the triad: respiratory failure, altered state of consciousness and petechiae. The clinical symptoms usually develop within the first 12 to 72 hours postoperative and the respiratory system is usually the first to be affected. The diagnosis is clinical and the treatment is based on supportive care. In severe cases,

admission to an intensive care unit may be necessary. The prognosis of the fulminant form is reserved, with acute right heart failure being the lead cause of death.
Case report: A 15-year-old male, presents to the emergency department due to trauma of the right lower limb. The x-ray confirmed a fracture of the femoral shaft. He was admitted to surgical correction, which was uneventful. On the first postoperative day he presented periods of prostration and altered state of consciousness. On physical examination he had a slow but oriented speech, cutaneous pallor, dry mucous membranes and a petechial rash in the anterior upper chest. In pulmonary auscultation he had rare crepitations on both bases. He maintained saturations of 89% with a fiO2 0,21 and a diastolic blood pressure in the percentile 5 for his age. Cerebral computed tomography (CT) showed no signs of fracture or acute blood collections. Arterial blood gas analysis revealed hypoxemia (pO2: 59 mmHg). The analytical study showed thrombocytopenia (127 000 mcg/L) with D-Dimers elevation (812 ng/mL). He presented a prolonged protrombine time (16 seconds to a normal of 10,9 seconds) and an international normalized ratio of 1,45. Considering the clinical and analytical alterations, the diagnosis hypotheses were fat embolism and pulmonary thromboembolism. CT scan of the chest with contrast was performed confirming the diagnosis of peripheral adipose embolism. The patient was then transferred to an intermediate care unit. He had a gradual clinical improvement with normalization of analytical and vital parameters as well as neurological state and was discharged after four days.
Conclusion: Fat embolism syndrome is a rare complication in paediatric patients and a high index of suspicion is essential for its early diagnosis. The main focus consists in an effective preventive management.

ID: 200 / PO1: 22
Poster Presentation Topics: Preterm Infant, NICU
The Effect of Maternal Age On Pregnancy Outcome in Cyprus

Paraskevi Stylianou-Riga[1], Petros Galanis[2], Angelos Rigas[3], Thalia Papadouri[1], Mamas Theodorou[2]
[1]Neonatal Intensive Care Unit, "Archibishop Makarios III Hospital"; [2]Open University of Cyprus; [3]Apollonion Hospital; angerigas@yahoo.gr

Introduction: The effect of maternal age (<18 and >35) on pregnancy outcome and more specifically on the incidence of preterm birth (<37 weeks of gestation) and low birth weight of the newborn (<2500 grams) is well known in the international literature.
Purpose: To investigate the effect of the mother's age on the incidence of premature (preterm) birth and low birth weight of the newborn, among Cypriot population.
Material and Method: This article describes a prospective study carried out in Cyprus from March 2015 to April 2016. The participants were women who gave birth in either a private or a state hospital. Questionnaires were administered to 348 women who gave birth prematurely (<37 weeks) (cohort group) and 349 women who carried their pregnancy to term (>37 weeks) (control group). The aim was to collect data relating to the gestational age and the newborn's birth weight as well as the demographic, economic and social profile of the mother. The statistical analysis was performed using the statistical package IBM SPSS 21.0.
Results: Results indicate a statistically significant correlation ($p<0.001$) between the age of the mother on the day of delivery, premature birth and low birth weight. The older the mother on the day of the delivery, regardless of demographic, social and economic status, significantly correlated with increased incidence of preterm delivery ($p<0.001$) and of a newborn with low birth weight ($p<0.001$).
Conclusion: The above mentioned results are in line with the results of similar surveys in other countries and document that, compared to younger women, older women in Cyprus are at increased risk of giving birth prematurely and to newborns with low birth weight.

ID: 183 / PO1: 23
Poster Presentation Topics: Preterm Infant, NICU
Urine Metabolomic Profiling in Neonatal Brain Injury

Nikolaos G. Efstathiou[1], Olga Begou[2], Kosmas Sarafidis[1], Vasiliki Soubasi[1], Helen G Gika[2], Georgios Theodoridis[3], Vasiliki Drosou[1]
[1]1st Department of Neonatology, School of Medicine, Aristotle University of Thessaloniki, Greece; [2]Laboratory of Forensic Medicine and Toxicology, School of Medicine, Aristotle University of T hessaloniki, Greece; [3]School of Chemistry, Aristotle University of Thessaloniki, Greece; nikos.efstathiou@gmail.com

Introduction: Brain injury is a leading cause of perinatal mortality and long-term neurological disability in neonates. In term infants, most often this is due to perinatal asphyxia and subsequent hyp oxic-ischemic encephalopathy (HIE) whereas intraventricular hemorrhage and periventricular leukomalacia are the major forms of brain damage in preterm ones. Nowadays, management is largely supportive, with the exception of therapeutic hypothermia, which nonetheless is applicable only in term infants during the first 6 hours of life. Moreover, outcome in both preterm and term infants developing brain damage is to a great extent unpredictable. Therefore, early identification and prognostication of neonates at risk for brain damage is of great clinical value. Metabolomics could contribute in this end, providing evidence on the metabolic alternations in neonatal brain injury possibly associated with clinical manifestations, survival and long-term neurological outcome.
Purpose: We aimed to define urine metabolomic profiles in encephalopathic preterm and term neonates and identify early diagnostic and prognostic biomarkers of brain injury.
Materials and Methods: Preterm neonates(<32 weeks gestational age) with encephalopathy of prematurity and term ones suffering HIE as well as preterm and term neonates without brain injury were prospectively studied during a 2-year period (2014-2016). Urine samples were collected on days 1, 3 and 9 of life for metabolomic analysis using liquid chromatography-tandem mass spectrometry. Data related to demographic-clinical characteristics, brain injury and outcomes were also recoded.
Results: 40 preterm neonates (15 neonates with encephalopathy of prematurity and 25 controls) as well as 33 term ones (13 with moderate/severe HIE, 10 with mild HIE and 10 controls) were evaluated. Metabolomic profiling documented separation between preterm neonates with encephalopathy vs.preterm controls, as well as between term infants with moderate/severe HIE and respective controls. Significant differences were observed at the sampling time points. Urine metabolomics was possible to predict unfavorable neonatal outcomes.
Conclusion: Urine metabolomics has the potential to early identify neonates at high-risk for adverse neurological outcome, which constitutes a valuable information to the bedside clinician.

ID: 144 / PO1: 24
Poster Presentation Topics: NICU
Congenital Idiopathic Pleural Effusion Resolving Spontaneously in a Newborn

Sunaina Arora, Lokesh Tiwari
ST STEPHEN HOSPITAL, DELHI; suns_arora@yahoo.com

Introduction: Congenital idiopathic pleural effusion is a rare condition with an incidence of about 1 in 12000 to 1 in 15000 pregnancies. It can be severe enough to cause significant respiratory distress. Here in, we report a case of isolated idiopathic pleural effusion, which resolved spontaneously without intervention.
Case Report: A full term baby girl delivered to a 26-year-old primigravida mother by normal vaginal delivery. Antenatal USG revealed complete collapse of left lung with pleural effusion and left sided renal pelvis dilatation. There was a lot of parental and obstetrician anxiety regarding the finding. The paediatrician and paediatric surgeon were well informed about the case and all the necessary equipment for resuscitation was arranged prior to delivery. Mother was hypothyroid and was started on

eltroxin from 2nd trimester, Mothers CMV IgG was positive. After birth baby cried immediately, Apgar scores was 9, 9 at 1 and 5 minutes. Baby shifted to nursery for observation. Sepsis screen was sent and she was started on intra venous antibiotics prophylactically. Blood gas analysis was normal. Chest X ray done revealed left sided haziness. USG chest done revealed left sided minimal pleural effusion. Echo done showed mild pericardial effusion with a VSD of about 2.5 mm with left to right shunt. Baby did not develop respiratory distress during nursery stay. She was started on feeds at 2 hrs. of life, which she accepted well. Chest X ray and USG chest was repeated which was normal and pericardial effusion resolved in 48 hours. As there were no dysmorphic features, karyotype was not done. As pleural effusion was minimal and not resulted in respiratory distress, and resolved spontaneously, diagnostic tap was not done. No other fluid compartment was involved, so hydrops was ruled out. USG cranium was normal. Baby's CMV IgM was negative . Cord TSH and TSH on day 3 was normal. Sepsis screen was negative and antibiotics were stopped on 3rd day, baby was shifted to mother and discharged on day 5 of life and is doing well till one month of age.
Conclusion: Congenital idiopathic pleural effusion is a rare entity in a newborn, which can be resolved spontanously without intervention.

ID: 261 / PO1: 25
Poster Presentation Topics: General Pediatrics, Allergy, Immunology & Pulmonology
Features of the Spectrum of Sensitization in Children with Asthma Living in a Large Industrial City

Elena Turganova, Tamara Kosenkova, Natalia Bogdanova
National Medical Research VA Almazov Center. Russian Ministry of Health, St. Petersburg, Russia, Russian Federation; alfa_psy@mail.ru

Introduction: The state of environment and ambient air has considerable influence on the formation and course of diseases of respiratory system, especially bronchial asthma. The most significant contribution to air pollution in the city make vehicle emissions containing nitrogen oxide, hydrocarbons, volatile organic compounds. Each of the pollutants affects the respiratory tract of the child, playing a decisive role in either running processes of allergic inflammation, hyper secretion, or maintaining, both at the cellular and humeral level. The purpose of this study was to examine the relationship between ambient air pollutants and the characteristics of the spectrum of sensitization in children with asthma of moderate severity residing in different districts of the metropolis.
Materials and Methods: The study included 114 children (mean age – 5,33±0,27 years). Depending on place of residence (environmentally safe or environmentally disadvantaged district) the children were divided into 2 groups. In each district the most significant air pollutants were detected. In all the examined children was studied the level of total and specific IgE to five groups of allergens (food, household, pollen, epidermal and fungal).
Results: It is established that the most important pollutant in the industrial city was nitrogen dioxide. Explored children of both groups were characterized by polyvalent sensitization, however, patients from ecologically unfavorable regions had significantly higher values of total IgE and more expressed degree of sensitization to the cause-significant allergens. Sensitization to household allergens (house dust) were determined in the first year of life with increasing severity of household sensitization with age. Pollen sensitization has also been detected in children in the first years of life, but there were, as a rule, in the form of having sIgE to the pollen of trees only, while not in isolation but in combination with sensitization to other groups of allergens (epidermal, household, food). The greatest number of children with sensitization to 4 groups of allergens have been observed in patients aged 6-7 years (41%).
Conclusion: Studying the spectrum and severity of sensitization in children living in ecologically unfavorable areas of the industrial city, is important both for the diagnosis of the disease, and for development of elimination activities to reduce the antigenic load on the organism of the child suffering bronchial asthma.

ID: 186 / PO1: 26
Poster Presentation Topics: Preterm Infant, Infant Development
Brain Ultrasound as a Prognostic Tool for Neurodevelopmental Outcome in Preterm Newborns

Gabriela Tavchioska
General Hospital Prilep, Macedonia, Former Yugoslav Republic of; gtavcioska@gmail.com

Introduction: Brain ultrasound as a non-invasive, safe and not expensive tool can provide in real-time useful information about the brain tissue in newborns and infants. In preterm newborns high-frequency sound waves are used to screen for brain conditions associated with prematurity such as p eriventricular leukomalacia, intraventricular hemorrhage and their complication such as hydrocephalus.
Purpose: to present prognostic value of brain ultrasound findings in preterm newborns for their neurodevelopmental outcome in secondary health care facility.
Materials and Methods: This single center study is prospective with observational design. Out of 978 newborns, 56 (5.7%) were born before the full 37 weeks. 39 of preterm newborns had gestational age from 31 to 36 weeks and were included in the study. Brain ultrasound initially was done at the third day of life. Next ultrasound examinations were performed according to initial findings. The findings were interpreted according to Papille classification for haemorrhagic changes and Pidcock classification for ischemic changes. The neurological examination was done at the age of 6 and 12 months.
Results: Out of 39 premature newborns, 2 had PV-IVH gradus III and one of them consequent hydrocephalus, 17 had PV-IVH gradus II, 18 had PV-IVH gradus I, and 2 premature newborns had normal brain ultrasound. 97% of newborn with normal initial brain ultrasound or with PV-IVH gradus I according to Papille had normal neurological examination at the age of 6 and 12 months.
Conclusion: The results of this moderate but locally important study have clinical relevance. Normal ultrasound confidently predicts reduced risk for neurodevelopmental disorder in preterm newborns. Brain ultrasound is very useful in secondary health care because provides information for both pediatricians and parents.

ID: 180 / PO1: 27
Poster Presentation Topics: Gastroenterology & Metabolism, Infant Development
Glycerol Kinase Deficiency – A Metabolic Cause of Global Developmental Delay

Andreia Ribeiro[1], Maria Adriana Rangel[1], Cátia Leitão[1], Isabel Pereira[1], Ana Vieira[1], Sara Melo[1], Carla Valongo[2], Armanda Passas[1], Helena Santos[1]
[1]Hospital Center of Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal; [2]National Health Institute Doutor Ricardo Jorge, Porto, Portugal; andreia.ribeiru@gmail.com

Introduction: Glycerol kinase deficiency (GKD) is a rare X-linked recessive disorder characterised by hyperglycerolaemia and glyceroluria, due to loss of function of glycerol kinase enzyme which catalyses the phosphorylation of dietary glycerol to glycerol-3-phosphate, necessary in lipids synthesis. Its phenotype is remarkably variable with clinical and biochemical presentations varying from a life-threatening childhood metabolic crisis, mental retardation and/or dysmorphic features, to asymptomatic adult pseudohypertriglyceridaemia.
Case Report: We present an eighteen months-old boy, referred to neurodevelopmental outpatient department by developmental delay. He was the first son of a 38 years old mother and a young father, non-consanguineous. No other relevant family history. Gestation was complicated by gestational diabetes, and the newborn had hypoglycaemic episodes in the first two days of life, corrected with feeding alone. His psychomotor developmental stages were remarkable for delayed cephalic control (5 months), sitting alone (9 months), first words (20 months) and autonomous, yet instable gait (24 months). At 33 months autistic features were noted (monotonous babbling, sensorial peculiarities with aversion to new food textures, poor ocular contact and reciprocal interaction). Physical examination revealed significant hypotonia and hiperlaxity for age and no dysmorphic features.

Growth assessment was normal, as well as ophthalmologic and hearing evaluation. He was referred to early childhood intervention services and started occupational therapy with sensorial integration, speech therapy for oromotor development. Complementary exams revealed normal comparative genomic hybridization microarray analysis and brain magnetic resonance imaging with spectroscopy. Blood chemistry showed hypertriglyceridemia (317 mg/dL) with normal creatine kinase, cholesterol, serum electrolytes, liver and thyroid function. Urine organic acid analysis revealed a high urine glycerol level and GKD was confirmed by genetic identification of GK gene mutation. He started a carbohydrate-reinforced diet and maintained autism-directed intervention. Slow progressive improvement was noted. So far, no metabolic crises or clinical hypoglycaemic episodes were registered.
Conclusion: Despite normal comprehensive metabolic neonatal screening, inborn errors of metabolism should be considered in the differential diagnosis of global development delay in the presence of key biochemical markers, such as lipid or muscular enzyme abnormalities. The diagnosis of GDK demands a multidisciplinary and dietetic approach to prevent metabolic decompensation during illness or fasting, promote development and provide genetic counselling to families. The pathogenesis of psychomotor retardation in GKD is not yet clear, but subclinical episodes of hypoglycaemia are a proposed mechanism.

ID: 131 / PO1: 28
Poster Presentation Topics: Emergency Pediatrics
Clinical Spectrum of Intra-Abdominal Abscesses in Children Admitted to the Pediatric Emergency Department

Chun-Yu Chen[1,2], Wen-Chieh Yang[1,2], Yu-Jun Chang[3], Han-Ping Wu[4,5]
[1]Department of Pediatric Emergency Medicine, Changhua Christian Children's Hospital, Changhua, Taiwan; [2]School of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; [3]Laboratory of Epidemiology and Biostastics, Changhua Christian Hospital, Changhua, Taiwan; [4]Division of Pediatric General Medicine, Department of Pediatrics, Chang Gung Memorial Hospital, Taoyuan, Taiwan; [5]College of Medicine, Chang Gung University, Taoyuan, Taiwan; 116984@cch.org.tw

Introduction: Intra-abdominal abscesses generally form following the entry of enteric microorganisms into the peritoneal cavity through a defect in the intestine wall or other viscus as a result of infarction, obstruction, or direct trauma. As we know, clinical presentations of intra-abdominal abscesses may include fever, chillness, nausea and vomiting, flank pain, abdominal pain, ileus, signs of peritonitis, raised erythrocyte sedimentation rates, leukocytosis, and less often positive blood cultures, it is not easy for clinicians to make the definite diagnosis immediately. Early diagnosis is imperative to minimize the potential for prolong admission and life-threatening complications.
Purpose: In this study, we aim to analyze the clinical spectrum of intra-abdominal abscesses in patients who presented to the pediatric ED, and attempt to find some initial clinical characteristics that could help primary emergency physicians to diagnose intra-abdominal abscesses earlier.
Materials and Methods: This study collected retrospectively pediatric patients aged 18 years or younger who presented to the ED with a discharge diagnosis of intra-abdominal abscesses based on their medical histories. We reviewed the medical charts of all eligible patients from January 2004 to December 2011. The following information was obtained from the medical records of each patient: age, gender, clinical symptoms and signs (such as fever, abdominal pain, diarrhea, anorexia or vomiting, signs of peritonitis and flank pain), laboratory tests [white blood cell (WBC) counts, hemoglobin (Hb), platelet counts, blood urea nitrogen (BUN), creatinine (Cr), C - reactive protein (CRP) levels.], microbiology, imaging findings, treatment modalities, complications, and long-term outcomes.
Results: During the 8-year study period, a total of 66 patients (30 males and 36 females; mean age, 9.27±4.16 years; range, 6 months to 18 years old) who presented to the ED with intra-abdominal abscesses were enrolled in our series. In clinical presentations, the most two common symptoms at presentation were fever and abdominal pain (90.9% and 78.8%, respectively). Moreover, abdominal

pain was a major complaint in the adolescent group than other age groups (P < 0.001) (Table 1). The mean serum WBC counts of all patients were 17,980.45 ± 9,500.53/μL (range 1,600 to 55,500/μL) (Table 2). Of all the patients with intra-abdominal abscesses, 54 (81.8%) of them presented with leukocytosis (WBC counts of >10,000/μL) and 63 (95.5%) of them presented with elevated CRP levels (normal range ≥8 mg/L). Of all the 66 children, 25 (37.9%) patients were treated with broad-spectrum intravenous antibiotics alone; 11 (16.7%) cases had a combination of broad-spectrum intravenous antibiotics therapy and percutaneous abscess drainage by US-guided or CT-guided needle aspiration (Table 3).

Conclusion: Primary physicians should keep the diagnosis of intra-abdominal abscesses in mind when children present with predisposing risk factors, fever, abdominal pain, leukocytosis and elevated CRP level. Most importantly, children with intra-abdominal abscesses have good prognoses when they receive diagnostic imaging studies and appropriate treatment early, with broad-spectrum antibiotics plus percutaneous or surgical drainage. Finally, the initial choice of antimicrobials should be based on the location of abscesses and antibiotics effective against anaerobic organisms must be administrated when intra-abdominal abscesses located in non-solid organs.

Table 1. Demographics and clinical presentations of the patients with intra-abdominal abscesses

				Age								
		Total (n=66)		0-3 (n=6)		4-6 (n=11)		7-12 (n=36)		13-18 (n=13)		P-value
		N	%	N	%	N	%	N	%	N	%	
Gender	Female	36	54.5	2	33.3	4	36.4	21	58.3	9	69.2	0.306
	Male	30	45.5	4	66.7	7	63.6	15	41.7	4	30.8	
Fever	Yes	60	90.9	6	100.0	10	90.9	32	88.9	12	92.3	1.000
Abdominal pain	Yes	52	78.8	0	0.0	6	54.5	33	91.7	13	100.0	<0.001*
Diarrhea	Yes	21	31.8	1	16.7	0	0.0	16	44.4	4	30.8	0.025*
Anorexia or vomiting	Yes	39	59.1	2	33.3	9	81.8	21	58.3	7	53.8	0.262
Flank pain	Yes	15	22.7	0	0.0	6	54.5	6	16.7	3	23.1	0.045*
Signs of peritonitis	Yes	45	68.2	1	16.7	4	36.4	30	83.3	10	76.9	0.001*
Location of abscesses	Liver abscess	4	6.1	0	0.0	1	9.1	1	2.8	2	15.4	0.006*
	Renal abscess	17	25.8	5	83.3	6	54.5	4	11.1	2	15.4	
	Periappendical abscess	25	37.9	0	0.0	2	18.2	17	47.2	6	46.2	
	Intraperitoneal abscess	14	21.2	1	16.7	2	18.2	10	27.8	1	7.7	
	Pelvic abscess	6	9.1	0	0.0	0	0.0	4	11.1	2	15.4	
Admission unit	Ward	62	93.9	6	100.0	10	90.9	34	94.4	12	92.3	
	ICU	4	6.1	0	0.0	1	9.1	2	5.6	1	7.7	

*Statistically significant by theχ2 test or Fisher's exact test when appropriated.Age, years; ICU = intensive care unit.

Table 2. Comparison of laboratory tests of patients with intra-abdominal abscesses based on location

laboratory tests	Renal or liver abscesses						P-value
	No			Yes			
	N	Mean	SD	N	Mean	SD	
WBC (× 10^9/L)	45	16553.56	8710.51	21	21038.10	10584.29	0.057
Hb (mg/dl)	44	11.98	2.81	21	11.21	1.45	0.007*
Platelet count (× 10^9/L)	44	363.86	174.17	21	356.00	183.77	0.614
CRP (mg/L)	45	16.93	11.81	20	16.27	10.49	1.000
BUN (mg/dl)	19	8.66	4.54	11	9.75	6.91	0.863
Creatinine (mg/dl)	25	0.62	0.19	13	0.62	0.18	0.805
ALT (U/L)	25	18.92	25.82	11	22.36	17.85	0.033*
Sodium (mmol/L)	38	134.05	3.83	7	136.29	3.09	0.134
Potassium (mmol/L)	38	3.67	0.43	7	3.87	0.52	0.346

WBC = white blood count; Hb = hemoglobin; CRP = C - reactive protein; BUN = blood urea nitrogen; ALT = alanine aminotransferase.

*Statistically significant by Mann-Whitney U Test.

Table 3. Clinical management of patients with intra-abdominal abscesses

			Management						
	Total(n=66)		Antibiotics only (n=25)		Percutaneous aspiration (n=11)		Surgery (n=30)		P-value
	N	%	N	%	N	%	N	%	
Location of abscesses									
Liver abscess	4	6.1	1	4.0	3	27.3	0	0.0	<0.001
Renal abscess	17	25.8	13	52.0	4	36.4	0	0.0	
Periappendical abscess	25	37.9	7	28.0	2	18.2	16	53.3	
Intraperitoneal abscess	14	21.2	2	8.0	2	18.2	10	33.3	
Pelvic abscess	6	9.1	2	8.0	0	0.0	4	13.3	

ID: 157 / PO1: 29
Poster Presentation Topics: General Pediatrics, Gastroenterology & Metabolism
Cyclic Vomiting Syndrome in Infancy and Adolescence: Case Report

Francisco Ribeiro-Mourão, Vera Gonçalves, António Pedro Marinho, Mariana Branaco, Ana Rita Araújo
Pediatrics Department, Unidade Local de Saúde do Alto Minho, Hospital de Santa Luzia, Portugal; franciscoribeiromourao@gmail.com

Introduction: Vomiting is a frequent cause of pediatric ER admissions and is associated with a large number of numerous conditions. Repeated vomiting episodes require a different approach and a better characterization. One of the causes of repeated vomiting is the cyclic vomiting syndrome

(CVS), which can be an exhausting condition for children and their parents with impact on their quality of life.

Case report: The authors report the case of a previously healthy 10-year-old female patient referred for a consultation due to repeated vomiting episodes. She has been admitted 8 times before on ER with sudden appearance of incoercible vomiting, 2 of them requiring hospitalization. All the episodes were characterized by a preceding non-localized headache with phono phobia, usually in the morning. Incoercible vomiting started usually 5 to 6 hours after headache onset, with 8 to 10 vomits per episode, solving spontaneously in less than 24 hours. These episodes occurred usually once each 2 months over the last 2 years, with the patient returning to her basal health state between those periods. All the vomiting episodes were accompanied by onset of pale skin, tiredness and discomfort and the patient was not able to tolerate her saliva's taste, spitting it frequently. None of these episodes was associated with fever or diarrhoea. There was no weight loss. The patients' mother described that "at the end of the episode it looked like nothing happened" and that the episodes always occurred in the same order and that she would be able to predict them: on the precedent hours the patient was usually uninterested on watching TV and had loss of appetite. Besides light de-hydration on some episodes, there were no abnormal findings on physical examination on any of the episodes. Additional studies including blood and urine analysis didn't show abnormalities. Considering the symptoms, cyclic vomiting syndrome diagnosis was assumed and explained to the patient and family with appropriate counselling including prompt analgesic treatment of headache, rest and darkness as soon as prodromes begin. On a 6 month follow-up period vomiting didn't recur. There were two prodromes episodes that the patient promptly self-managed.

Conclusion: Cyclic vomiting syndrome is a functional disorder consisting of stereotypical episodes of vomiting separated by weeks to months, with typical onset on infancy. Primary treatment, without using targeted therapy can be effective and the involvement of patient and family is crucial for the treatment of the disease.

ID: 113 / PO1: 30

Poster Presentation Topics: General Pediatrics

Neurodisability with Severe Restriction of Mobility is Associated with Reduced Serum Creatinine Values

Chun Lim, Marianne Phillips, Liam Watson, Michael Eisenhut
Luton & Dunstable University Hospital NHS Foundation Trust, United Kingdom; Chun.Lim3@ldh.nhs.uk

Introduction and Purpose: Patients with low muscle mass due to malnutrition can have reduced creatinine levels. We investigated whether reduced mobility is associated with a reduction in serum creatinine in otherwise well children with neurodisability compared to healthy controls.

Materials and Methods: Data for children with neurodisability were obtained from a physiotherapy and hospital databases. The data extracted included age, gender, diagnosis and categories of Gross Motor Function Classification System (GMFCS) score, weight, creatinine level, drug history and co-morbidities. Age matched controls without neurodisability were obtained from phlebotomy records. Exclusion criteria were children less than 2 year of age, unwell with signs of dehydration at time of blood test, on nephrotoxic drugs or with renal disease. We divided children into the following three groups: GMFCS 1, 2 or 3 (group I), GMFCS 4 or 5 (group II) and healthy age matched controls (group III) and compared their creatinine levels.

Results: 180 children were included: 25 children in group I, 65 in group II, and 90 in group III. Age and gender were not different between groups, with children with and without neurodisability having a mean age of 5.6. Creatinine values were significantly different (p=0.003) between patients with neurodisability (mean 32.2 SD 9.4) compared to patients without (mean 36.5 SD 9.8). There was no significant difference in creatinine level (p=0.953) between Group I (mean 35.9 SD9.5) and Group III (mean 35.8 SD 9.5). A significantly lower creatinine level (p=0.001) was found in group II (mean 30.7 SD 9.1) compared to group III (mean 36.7 SD 10.0).

Conclusion: Children with neurodisablility with mobility restriction requiring physical assistance or powered mobility in most or all settings (GMFCS 4 or 5) have a significantly lower serum creatinine compared to healthy controls and may need a lower reference range for estimation of glomerular filtration rate.

ID: 228 / PO1: 31
Poster Presentation Topics: Gastroenterology & Metabolism
Impact of Connective Tissue Disorders on the Formation of Gastrointestinal Pathology in Adolescents

Inna Yakovleva
Institute of Children and Adolescents Health Care - National Academy of Medical Sciences of Ukraine, Ukraine; inna.yakovleva@awml.lu

Introduction: Connective tissue pathology is a base of formation chronic diseases in children and associated with an expressed immunodeficiency. Many connective tissue disorders (CTD) carry high risks for life-threatening heart and blood vessel conditions. Gastrointestinal tract, as it contents a lot of collagen, may also be impacted with the subsequent development of inflammatory-destructive damages.
Purpose: This study aimed to evaluate the significance of collagen level content and the state of immunological reactivity in the formation of peculiarities of gastroduodenal pathology in adolescents.
Materials and Methods: Inflammatory-destructive diseases of gastroduodenal tract were studied in 155 adolescents 11 to 18 years of age. The traits of the CTD, including the Marfan syndrome, were determined relying on the Ghent criteria. CTD were revealed in 90 adolescents. 65 peers without CTD were included in the comparison group. Collagens content in the lamina propria of gastric-duodenum mucosa was evaluated by immunohistochemistry with using monoclonal antibodies of collagen 1, 3, 4, 5 types. Biopsy samples were studied in luminescent microscope with using light filters. Immunologic homeostasis has been studied according to the monocyte-phagocytic, humoral and cell links of immunity. Complex evaluation of immunity and connective tissue parameters was carried out using the system correlation analysis.
Results: Gastrointestinal involvement against the background of the CTD is characterized primarily by motility disorders, including gastroesophageal reflux disease, reflux-gastritis (77%; comparison group - 29%, P<0,001) and a reduced level of interstitial collagens. The average immunofluorescence intensity of collagen types 1 and 3 in patients with CTD was significantly lower (P<0,01). The connective tissue matrix of the mucosa is characterized by structural transformation of collagen fibrils (wrong orientation, focal sclerosis, immaturity). It is accompanied by decrease in a mucosa functional ability with development of the valve-sphincter failure. The form of mucosal lesions is a chronic non-atrophic gastritis with simultaneous inflammation in the antral and fundal parts. Duodenal ulcer was identified rarely (10,0%; comparison group - 33,8%; P=0,035), and it was accompanied by detection of Helicobacter pylori.It has been revealed that clinical manifestation of gastroduodenal pathology in adolescents with CTD are formed against the background of an increase in functional activity of monocyte-phagocytic link cells accompanied by a pronounced deficiency of phagocytic cells in the form of a decrease in the phagocytic number (60,9%, comparison group - 77,5%; P<0,001) and the phagocytic index (5,3; comparison group - 7,3; P<0,001). The T-system of immunity is characterized by depressive state, which is manifested by CD4+ reduction (39,5%; P<0,05) and CD8+ reduction (8,8%, P<0,001), while the B-system of immunity works in the activation mode with hyperproduction of antibodies to collagen and elastin.

Conclusion: Thus, CTD in adolescents is characterized by low level of interstitial collagens in gastric-duodenal mucosa, and accompanied by specific disorders in immunological reactivity, that is the basis of formation of motility disorders with the subsequent development of gastritis and esophagitis against the background of reflux. The work provides grounds for employing rehabilitation measures connected with a prevention of reflux disease and correction of immune system in adolescents with CTD.

ID: 259 / PO1: 32
Poster Presentation Topics: Gastroenterology & Metabolism
The Use of Denver Shunt in a Patient with Congenital Lymphedema, Chylous Ascites and Chylothorax - First Experience in the Czech Republic

Filip Fencl[1], Jiří Náhlovský[2], Michal Rygl[2], Petr Bukovský[3], Veronika Stará[1], Květa Bláhová[1]
[1]Department of Pediatrics, 2nd Faculty of Medicine, Charles University in Prague and University Hospital Motol, Prague, Czech Republic, Czech Republic; [2]Department of Paediatric Surgery, 2nd Faculty of Medicine, Charles University in Prague and University Hospital Motol, Prague, Czech Republic; [3]Children's Heart Centre, 2nd Faculty of Medicine, Charles University in Prague and University Hospital Motol, Prague, Czech Republic; filip.fencl@gmail.com

Introduction: The Denver shunt is a system used for drainage of ascitic fluid to the circulatory system. It contains a unidirectional pump that is placed subcutaneously over the ribs. This allows use of external manual compression to move fluid from the peritoneal cavity to the central venous system.
Case report: We present a 3-year old female patient with generalised lymphedema, chylous ascites and right-sided chylothorax on the basis of dysplasia of the lymphatic system. Polyhydramnion, fetal hydrops and ascites were present since the 30th week of pregnancy. Postnatal conservative therapy, including total/ partial parenteral nutrition from 3 to 12 months of age, special diet, pharmacotherapy (diuretic therapy and albumin substitution), was unsuccessful. Long-term parenteral nutrition is limited by poor access to the central venous system (subclavian vein thrombosis on the left side). Due to massive ascites and breathing difficulties, repeated ascites punctures were needed (first at 2 months of age). For these reasons, the insertion of a peritoneoatrial Denver shunt was indicated at 2 years of age. Ascites drainage is still functional, drainage malfunctions were only short-term and repeated compressions of the catheter led to its unblocking. At the age of 2.8 years, thrombus in the right atrium was detected and treated with low molecular heparin. The patient also has a right-sided chylothorax for which repeated punctures of the fluid are required.
Conclusion: We demonstrate our experience from the first use of the Denver shunt in the Czech Republic. Our case report confirms that Denver shunt is a safe method for treating of refractory ascites in small children and improves the quality of life of these patients.

ID: 293 / PO1: 33
Poster Presentation Topics: Endocrinology & Growth.
Congenital Adrenal Hyperplasia Due to 21-Hydroxylase Deficiency: Genotype-Phenotype Correlation

Inês Falcão[1], Catarina Mendes[2], Catarina Carvalho[2], Joana Freitas[1], Maria João Oliveira[1], Helena Cardoso[1], Teresa Borges[1]
[1]Centro Materno Infantil do Norte – Centro Hospitalar Universitário do Porto; [2]Centro Hospitalar Tâmega e Sousa; inespatriciofalcao@gmail.com

Introduction: Congenital adrenal hyperplasia is a common autossomal recessive disorder caused mainly by defects in the steroid 21-hydroxylase, the enzyme encoded by the CYP21A2 gene. In the majority of cases the disease's severity correlates with CYP21A2 allelic variation and there are general, but not precisely, correlation between genotype and phenotype.

Purpose: Describe the mutational spectrum of CYP21A2 and evaluate genotype-phenotype correlation in a cohort of Portuguese patients with 21-hydroxylase deficiency.
Material and Methods: Retrospective study of 28 patients with clinical and biochemical diagnosis of 21-hydroxylase deficiency. Molecular analysis of CYP21A2 was performed and genotype-phenotype correlation was established.
Results: Genotyping was performed in 28 unrelated patients: 7 with classic salt wasting (average age of diagnosis 14.9 days; minimum 1, maximum 30 days), 8 with classic simple virilizing (average age of diagnosis 3.1 years; minimum 0 days, maximum 7 years) and 13 with nonclassical form (average age of diagnosis 6.9 years; minimum 4 years, maximum 17 years). The most frequent genetic defects in the classic forms were I2 splice (22%), I172N (19%), followed by F306+nt (13%) and Q318X (13%) and in the nonclassical form, the V281L (71%). The overall concordance between genotype and phenotype was 79%. Genotype accurately predicted phenotype of patients with classic salt wasting, classic simple virilizing and nonclassical mutations in 75%, 100% and 86%, respectively.
Conclusion: In this study there was a high genotype-phenotype correlation, as described in other studies. Despite the high concordance, the CYP21A2 mutation phenotype doesn't correlate precisely with the genotype, suggesting that other genes influence the clinical manifestations. Furthermore, molecular analysis of CYP21A2 provides useful information in prediction of disease severity, genetic and prenatal counseling.

ID: 140 / PO1: 34
Poster Presentation Topics: Gastroenterology & Metabolism, Emergency Pediatrics
How Long is the Ideal Npo Duration for Vomiting Patients?

Wen Chieh Yang
CCH, Taiwan; v1004@hotmail.com

Introduction: During the acute phase of vomiting, even small amount of water may be intolerant by mouth. Therefore, nothing by mouth (NPO) would generally be recommended by pysician. An early refeeding maynot be tolerant and the patients may still vomit after early refeeding. But a late refeeding may result in dehydration and hypoglycemia. The study aimed to looking for the ideal NPO duration for the patients with acute abdominal pain and vomiting, and analysis the possible reasons that failed to refeeding.
Methods: We retrospectively recruited 304 patients with the chief complaints of abdominal pain and vomiting and received the therapies of antiemesis agents and NPO. The general data, final diagnosis, clinical manifestations, medical managements, NPO duration, and lab data were analyzed.
Results: The major diagnoses in sequence were acute gastroenteritis (82.9%), acute gastritis and colitis. The patients aged less than 6 years was the major part (43.8%), followed by adult patients (33.6%). Except abdominal pain and vomiting, nausea (93.1%) and abdominal distension (79.6%) were the most symptoms. Among them, antiemesis agents were used in 160 patients (52.6%). The patients with NPO duration of 4 to 6 hours has lower rate of refeeding failure (3.7%). The patients vomited even during NPO had higher vomiting frequency before NPO. The patients has abdominal distension has 10.6 times odd's ratio of refeeding failure.
Conclusion: For patients in the acute phase of vomiting, NPO of 4 to 6 hours was recommended and the patients with higher vomiting frequency and abdominal distension should have prolonged NPO duration.

ID: 127 / PO1: 35 (Moved to **PO2: 46**)
Poster Presentation Topics: General Pediatrics
Improvement of Beta-Thalassemia Diagnosis in Children

Sorin Ioan Iurian[1,3], Liana Bera[2,3]
[1]Pediatric Clinic Hospital from Sibiu, Romania, Romania; [2]Department of Statistics, Faculty of Medicine, Sibiu, Romania; [3]Lucian Blaga University of Sibiu, Romania; iurian_sorsab@hotmail.com

Introduction: Beta-thalassemia represent a spectrum of genetic disorders characterized by insufficient synthesis of beta-globin chains. This anomaly cause mild to severe microcytic anaemia. The differential diagnosis between thalassemia (minor type) and anaemia due to iron deficiency (AID) is frequent difficult. Purpose. The authors analysed the differences regarding haematological indices between 2 children-groups suffering from anaemia: thalassemia patients and AID patients. The endpoint aim was to improve thalassemia diagnosis and to conceive an algorithm for thalassemia diagnosis.
Material and Methods: The authors selected 87 patients (age between 1-18 years) with microcytic anaemia (mild type) during a 12 month-period. According to age, mild type anaemia correspond to following haemoglobin-ranges: 10,0-10,9 g% (age 1-5 years), 11,0-11,4 g% (age 6-11 years), 11,0-11,9 g% (age 12-14 years) and 11,0-12,9 g% respectively (age > 15 years). All patients were evaluated according to haemoglobin level, red blood cell count (RBC), red blood distribution width (RDW), mean cell volume (MCV), haemoglobin electrophoresis, Coombs test and ferritin level. Then the patients were divided in 2 groups: first group confirmed with thalassemia (38 patients) and the second one with AID (49 patients). Inclusion criteria: increased haemoglobin A2 level based on haemoglobin electrophoresis (first group) and normal haemoglobin A2 level for the second group. Exclusion criteria: age under 1 year, beta-thalassemia major type, blood transfusion or bleeding episode during previous month or other haemolytic anemias (autoimmune, enzyme deficiencies, microspherocytosis). No patient has simultaneously AID and thalassemia. In order to compare both groups from haematological point of view, the authors have examined 8 haematological indices for all patients: Mentzer, England and Fraser, Shine and Lal, Srivastava, Green and King, Ricerca, Sirdah and Ehsani indices. Data was statistically analyzed using independent sample T test and likelihood ratio. Results. We observed significant statistical difference between groups regarding MCV and RDW. RBC (mean value) was 5.41 for thalassemia group and 4.31 for AID patients, with significant statistical difference (p value < 0.05). The authors noticed a high sensitivity, specificity and positive and negative predictive values for Mentzer, Ricerca, Sirdah und Ehsani indices concerning difference between both microcytic anemias (> 90%).
Conclusion: We remarked a strong correlation between thalassemia (minor type) and haematological parameters / haematological indices: MCV (reduced), RBC (increased), RDW (increased), Menzer index (< 13), Ricerca (< 4.4), Sirdah (< 27) and Ehsani (< 15). The authors proposed a diagnosis-algorithm for thalassemia minor.

ID: 226 / PO1: 36
Poster Presentation Topics: Emergency Pediatrics, Neurology
"When Migraines Are More Than What They Seem..."

Benedita Sousa Amaral Bianchi de Aguiar, Alexandra Martins, Magalys Pereira, Miguel Costa
Centro Hospitalar Entre Douro e Vouga, Portugal; beneditabaguiar@gmail.com

Introduction: Migraines are a common cause of recurrence to the emergency department, commonly presenting a diverse etiology. In the pediatric phase, in particular with adolescents, there are some particularities that can sometimes complicate the diagnosis of certain disorders.
Case report: A previously healthy 16 year old adolescent, was brought to the emergency room due to bilateral frontal migraines with a 3 day course as well as aqueous vomiting that began hours before his arrival. He comes from a poor social background, with soft drugs consumption, although denying he had done so in the last week. When he was first assessed he presented as conscious and collaborative. Despite a discrete asymmetry of the muscular strength in the upper limbs he had a normal neurological examination. During his stay he maintained vomiting and started to become drowsy and less responsive. His neurological deficits (sensitive and motor) on the right hand side progressed to his face and lower limbs, impeding autonomous walking. The only alteration present in the blood work was a thrombocytopenia of 20.000x109. He then undertook a cranial computed tomography scan (CT), which revealed a round 4.5 by 5cm lesion with compression of the third ventricle and consequent expansion of the left ventricle with peri lesional bleeding. He was then sent to

a central hospital in order to be evaluated by neurosurgery, who subsequently subjected him to surgery where an atypical central neurocytoma was diagnosed.
Discussion: Migraines are a common complaint in pediatrics, with a 5.9 to 37.7% prevalence in the emergency room. Most of these situations are caused by extracranial or psychosomatic conditions. Serious intracranial conditions amount to a small, non-representative percentage. However, this clinical case should prompt are attention to the importance of a thorough physical and neurological examination, as well as it´s integration with the medical history. Every case should be evaluated individually and it is important to remember that cranial CT is recommended when a cerebral organic disease is suspected.

ID: 211 / PO1: 37
Poster Presentation Topics: Infectious Diseases & Vaccines, Allergy, Immunology & Pulmonology
A Case of Atopic Dermatitis with Invasive Candidiasis

Youngeun Roh, Kwanghoon Kim, Hye-Young Kim
Pusan national university hospital, Korea, Republic of (South Korea); roheun2@hanmail.net

Introduction: Atopic dermatitis is a chronic recurrent inflammatory skin disease that characterized by pruritus, xerosis and typical eczema. In this condition, patients easily suffered from secondary infection with bacteria, virus or fungus due to vulnerable skin barrier. Here we introduce one case of severe atopic dermatitis with invasive candidiasis.
Case Report: A 8-month-old girl presented with eczematous skin rash on whole body for 3 days. From age of 40 days, the girl had erythematous and pruritic eczema on face. Considering relapsing episodes of pruritic dermatitis on typical area and maternal history of atopic dermatitis, she was diagnosed with atopic dermatitis at 3 months by physician in the local clinic. At that time laboratory test showed elevated specific IgE for egg, 1.05 KUA/L. She was educated to try careful skin care with emollient and topical corticosteroid, but her parents didn't followed directions and performed folk remedies, believing her skin could improve naturally. From one month before admission, her both legs became edematous and had difficulty in extending both knees. One day before admission she came to local clinic for vaccination. On physical examination oral thrush and severe eczema on whole body with very poor condition were noted, and she was referred to our hospital. Initial vital signs were blood pressure, 80/50 mmHg, heart rate, 148 times per minute, respiratory rate 24 times per minute, body temperature 36.4℃, oxygen saturation, 97%. Laboratory tests showed a WBC count of 6880/uL, a segmented percentage of 70.2%, hemoglobin of 0.6 g/dL, platelet count of 68000/uL, C-reactive protein of 12.29mg/dL, total protein 2.5 mg/dL, albumin 1.0 g/dL. Serum total IgE was elevated as 5942 IU/mL with specific IgE, egg white, >100 KUA/L, soy bean, >100 KUA/L, milk, 96.6 KUA/L, wheat, 45.2 KUA/L. Intravenous antibiotics, first generation cephalosporin with clindamycin and total parenteral nutirition were given upon a diagnosis of skin infection and malnutrition. Despite repetitive transfusion, her platelet count continuously dropped. Empirical antibiotics were changed to vancomycin in combination with cefotaxime, and antifungal agent, fluconazole was added upon suspicion of sepsis and disseminated intravascular coagulation rather than simple skin infection. Initial blood and urine cultures had no growth and laboratory findings become improved. So vancomycin and fluconazole were stopped. After one day, fever 38.2℃ was checked and then blood culture was done again. Fluconazole was re-injected considering invasive candidiasis. Reattempted blood culture showed growth of Candida albicans after 2 days. The patients treated with antifungal agent for about four weeks and educated to general skin care for atopic dermatitis.
Conclusion: We report a atopic dermatitis patient with invasive candidiasis. Untreated atopic dermatitis can lead to severe systemic infection. Proper parental education for careful skin care is important for treatment of atopic dermatitis.

ID: 231 / PO1: 38
Poster Presentation Topics: General Pediatrics, Adolescent Health Choices
Academic Performance in Adolescents – Biological, Social and Behavioral Determinants.

Maria Isabel Bento Ayres Pereira Leite[1], Andreia Ribeiro[1], Cátia Leitão[1], Ana Luísa Esteves[2], Ana Luísa Leite[1], Conceição Macedo[2], Hugo Tavares[1]
[1]Pediatric Department, Centro Hospitalar Vila Nova de Gaia Espinho, Portugal; [2]Unidade de saúde familiar Serpa Pinto, ACES porto Ocidental, Portugal; isabbap@gmail.com

Introduction: Adolescents academic performance is determined by their biological and environmental milieu and may influence future professional and personal achievements.
Purpose: To characterize the biological, social, behavioral and academic features of a primary care setting adolescent population and identify factors determining academic performance.
Materials and Methods: Retrospective longitudinal observational study conducted in 2015. Bio-psycho-social information of adolescents attending their 15th year global health consultation was assessed following a HEEADSSS psychosocial interview. School outcomes (pass/repeat grade, any/no subject failure, transition to vocational/maintaining regular school system) were retrospectively assessed and associations with the clinical information were evaluated using the SPSS® v.20.
Results: Thirty-eight adolescents were identified, 55.3% boys, 26.3% with a health problem and 21.1% on regular medication. Parent divorce rate was 68.4%; 47.4% of the mothers and fathers completed 12th grade, with 86.8% of both having a job. 84.2% had at least one brother and most reported good family relations (71.1%); 71.1% didn't share their room, and 44.7% were engaged in house chores. Ninety-two percent were on regular curriculum and 84.2% attended public schools; 34.2% had ≥1 school retention and 36.8% had changed school that year. Most reported liking school (86.8%) and studying ≥1h/day (60%), 84.2% alone, 31.6% listening to music; 52.6% attended study support groups.
All considered themselves happy and reported having friends; 57.9% had a best friend and 86.7% reported to have a confident (their mother in 39.4%). 18.4% reported having been a bullying victim. Mean night sleep during school week was 8,8h, with 76% going to bed after 22 pm every day. Regarding school performance, 10.5% had school retention that year, 76.5% of those who passed had no subject failure, and 21.1% changed to a vocational program. Studying accompanied (p=0,029) and dating (p=0,047) was associated with academic failure that year. Poor school outcomes/any subject failure were associated with being a bullying victim (p=0,003), father/mother not completing 12th grade (p=0,039/p=0,073), father smoking (p=0,048); it was also more common if regular medication, parents divorced and great screen time/day (p=0,061/p=0,085/p=0,078). Change of curricula to vocational area was associated with parental divorce (p=0,006), mother not completing 12th grade (p=0,041), studying accompanied (p=0,053) and great screen time/day (p=0,017).
Conclusion: Bad school results determinants identified were dating, studying accompanied, being a bullying victim, parents not completing the 12th grade, parental divorce and great screen time/day. All adolescents should have a structured bio-psycho-social evaluation for a timely identification and holistic intervention on the determinants affecting school performance, literacy, and adult professional success.

ID: 100 / PO1: 39
Poster Presentation Topics: General Pediatrics, Allergy, Immunology & Pulmonology
New Arguments for Double Action Release Active Drugs Among Children with Chronic Sites of Infection in Nasopharynx.

Vera Vavilova[1], Alexander Vavilov[1], Asya Cherkaeva[1], Irina Nechaeva[2], Alla Evstratenko[2]
[1]Kemerovo State Medical University, Russian Federation; [2]Pediatric Clinic; vavilovavp@mail.ru

Aim: To evaluate the results of the prospective comparative study on efficacy of use of Anaferon among 994 children (aged from 2 to 5 years) with chronic nasopharyngeal diseases.

Materials: The study period: December 2011 to April 2015. Presents a comparative analysis of the incidence rate of respiratory and ENT-infections. In addition, the total number of cell elements and the main cell population ratio were analyzed, lysozyme activity and secretory immunoglobulin A (sIgA) in nasal secretions were evaluated.
Results: It was shown that use of Anaferon for children during a 1-month period beginning 10 days prior to vaccination increases vaccination coverage among children. The group taking Anaferon for children showed that over a year period the incidence rate of acute respiratory infection was 1.2 times less (p<0,022), pneumonia — 1.4 times less (p=0,354), acute bronchitis —1.2 times less (p=0,374), acute otitis media and chronic maxillary sinusitis — 1.2 (p=0,467) and 1.5 times less (p=0,279) than in the control group. The vaccination and release active drugs also showed a positive impact on the local protective factors of the upper respiratory tract such as lysozyme, sIgA, cell elements of nasal secretions.
Conclusion: The study showed good tolerability of Anaferon for children and PCV13, safety of its use among children with chronic nasopharyngeal diseases.

ID: 282 / PO1: 40
Poster Presentation Topics: Rare Diseases, Infant Development
Shaaf Yang Syndrome - Case Report

Carmén Silva[1], Marta Rosário[2], Isabel Vieira[3], Renato Nunes[4], Micaela Guardiano[1], Miguel Leão[5]
[1]Unit of Neurodevelopment - São João Hospital, Porto; [2]Pediatrics - São João Hospital, Porto; [3]Association of Cerebral Palsy, Porto; [4]Pediatric Rehabilitation Unit - North Rehabilitation Center, Porto; [5]Genetics - São João Hospital, Porto; marta_fdr@hotmail.com

Introduction: Truncating mutations in the maternally imprinted, paternally expressed gene MAGEL2, which is located in the Prader-Willi critical region 15q11-13, have recently been reported to cause Schaaf-Yang syndrome.
Case report: A boy, first born of a nonconsanguineous couple. Family history of trisomy 21 on the maternal side and clubfoot and anencephaly in the paternal family. A pre-natal diagnosis of bilateral clubfoot was performed and amniocentesis was made with normal karyotype and Array tests. Fetal echocardiogram was normal. He was born at 41 weeks of gestation, after an emergent C-section delivery. APGAR at 1'/5'/10' was 6/8/10, being resuscitated with bag-hand-mask and oxygen. Weight and length was inferior to percentile 3 and cephalic perimeter was in the 97 percentile. He was hospitalized up to 2 months for food difficulties with frequent situations of regurgitation, being necessary nasogastric tube feeding. He had hypotonia and delayed global development so started early intervention at 5 months. Were been observed temperature instability with hyperthermia and excessive sweating. Body dysmorphic disorders were evident over time: dolichocephalic with bitemporal constriction and salience of metopic suture, micrognathia, distal arthrogryposis in both hands especially on the fourth and fifth fingers, right single transverse palmar groove, syndactyly in both feets, sryptorchidism in the right side of the body. During the etiological investigation, he performed brain MIR that showed a thin corpus callosum, the aCGH was normal and genetic studies related to family dysautonomy and a panel of arthrogryposis were normal. At the same time a Whole Exome Sequencing (WES), revealed a truncated mutation of the MAGEL2 gene, compatible with the Shaaf-Yang syndrome, a mutation bearded by the father. Currently, the child has 3 years and 7 months of age, an overall delay in his development, including delay in the motor skills, in language development, with some features connected to autism.
Conclusion: Schaaf-Yang syndrome is a Prader-Willi-like disease that manifests as developmental delay/intellectual disability, hypotonia, feeding difficulties, contraction of the small fingers joints and autism spectrum disorder. Currently, there are 28 cases of Schaaf-Yang syndrome drescribed in literature. The clinical complexity of this syndrome demands the monitoring and an early intervention from a multidisciplinary team, with a fundamental genetic counselling to the family.

ID: 289 / PO1: 41
Poster Presentation Topics: Adolescent Health Choices, Adolescent Wellbeing
Interpretations of Schoolchildren on the Health Behaviour in School-Aged Children (Hbsc) Findings Regarding Nutritional Behaviour: Qualitative Analysis

Eliška Štefanová[1], Tibor Baška[1], Zuzana Boberová[2], Daniela Husárová[3], Zuzana Dankulincová Veselská[3], Henrieta Hudečková[1]

[1]Department of Public Health, Jessenius Faculty of Medicine in Martin, Comenius University in Bratislava, Slovakia; [2]Department of Biology Didactics, Faculty of Science, P. J. Šafárik University in Košice, Slovakia; [3]Department of Health Psychology, Faculty of Medicine, P. J. Šafárik University in Košice, Slovakia; eliska.stefanova@gmail.com

Introduction: Eating habits rank among the most important health determinants. Development of healthy eating habits during childhood and adolescence may prevent several chronic diseases. One of the most crucial aspects of unhealthy eating behaviour includes breakfast skipping, which is associated with overweight and obesity during adultness. Among other important aspects belong inadequate consumption of fruits and vegetables, lack of family mealtimes, increased consumption of soft and energy drinks and concerns about body image. Unhealthy eating habits can be also associated with knowledge deficit in this area.
Purpose: Understanding the opinions, attitudes and knowledge of schoolchildren regarding eating habits is essential to develop effective preventive measures in this target group.
Materials and Methods: Data were collected in selected elementary schools from April to November 2015. Pupils of 5th to 9th grade (11, 13 and 15 years old) attended sessions in classrooms where they discussed their opinions and attitudes regarding dietary habits. After debate, children wrote their opinions into working sheets. Data was processed by a qualitative content analysis.
Results: Schoolchildren expressed adequate knowledge on healthy eating habits. However, the attraction of sweets is much stronger than fruits and vegetables. 11-year olds complained about absence of family mealtimes. Children reported taste and social motives as main reasons for drinking soft and energy drinks. Girls were more concerned about their body image.
Conclusion: Children possess general principles of healthy eating habits but they do not implement them in their life. Preventive measures should be focused both on children and their parents as role models in development of eating habits.

ID: 158 / PO1: 42
Poster Presentation Topics: General Pediatrics *Keywords:* Umbilical granuloma, Common salt, Infants
Therapeutic Effect of Common Salt On Umbilical Granuloma in Infants

Abdullah Saleh Al Saleh
King Abdualziz Medical City, Saudi Arabia; saleh050@yahoo.com

Introduction: Umbilical granuloma is a common umbilical abnormality in neonates and young infants. It is usually noticed by the parents because of the persistent drainage or moisture involving the umbilicus after the cord has dried and separated. If umbilical granuloma remains untreated, it could ooze and present with persisting irritation for several months. Many treatment modalities are available for umbilical granuloma such as chemical cauterization with silver nitrate or copper sulphate, electrocauterization, cryocauterization, granuloma ligation, and surgical excision.
Purpose: To evaluate the therapeutic effect of common salt (table or cooking salt) on umbilical granuloma in infants.
Materials and Methods: This prospective study was conducted on 50 infants, their ages 3–16 weeks [Table 1], both boys and girls, with clinically evident umbilical granuloma. Parents of these 50 infants were given instruction to treat their infants at home. The treatment consisted of application of common salt on the lesion twice a day, washing 30 min later, and repeating the procedure for 5 days. All infants were re-evaluated after 1 week and 3 weeks to see the effect of common salt on umbilical

Table 1. Age group distribution (n = 50)

Age group (weeks)	Number of infants	Percentage
3 - 8	36	72
9 - 12	10	20
13 - 16	4	8

Table 2. Response to the treatment (n = 50)

Response	Number of infants	Percentage
Excellent	50	100
No effects	0	0

granuloma. The effects were graded as (a) excellent response (complete regression, no discharge, and healed with complete epithelialization) and (b) no response (no regression of umbilical granuloma, and persistent umbilical discharge).
Results: All 50 infants with umbilical granuloma showed complete resolution after the 5-day course of common salt treatment.
Conclusion: The use of common salt in treating umbilical granuloma is simple, cost-effective, curative, and safe. It is easily administered and can be performed by parents at home.

ID: 217 / PO2: 1
Poster Presentation Topics: Sports Medicine, Obesity & Physical Activity
Comparison of Flexibility of Children Taekwondo Athletes in Different Belt Levels

Kamer Unal Eren[1], Gul Sener[2]
[1]Bezmialem Vakıf University, Turkey; [2]Hacettepe University, Turkey; kamerunals@yahoo.com

Introduction: Taekwondo is a martial art including hand and foot techniques and could perform in all age groups. Taekwondo has gained in popularity in recent years. There are some studies that Taekwondo develops physical fitness parameters such as cardiovascular endurance, muscular strength and endurance, flexibility and agility in children.
Purpose: The aim of this study was to compare the flexibility of children who perform Taekwondo at different belt levels.
Materials and Methods: A total of 100 children, 50 girls and 50 boys, between the ages of 10 and 12 years participated in the study. The children were divided into 4 groups of 25 children in each group. Group 1 was the highest level of belt (black and red), Group 2 was better than mid level (blue and green), Group 3 was the mid level (yellow) and Group 4 was the lowest level of belt (white). Flexibility was assessed with sit-and-reach test and groups were compared among themselves.
Results: The mean age of the children participating in the study was found to be 11.0 ± 0.8 years. The height, weight and Body Mass Index means were 146.1 ± 10 cm, 38.8 ± 8.6 kg and 17.9 ± 2.5 kg / m2, respectively. There was no significant difference between the groups in terms of demographic characteristics ($p > 0.05$). The sit-and-reach test means were 28.6 ± 6.3 cm, 30.8 ± 6.4 cm, 24.6 ± 5.8 cm and 23.6 ± 5.9 cm for the 1st, 2nd, 3rd and 4th groups, respectively. There was a significant difference between the 3rd and 4th groups and the other groups ($p < 0.05$).
Conclusion: Taekwondo is a suitable martial art in the development of physical fitness in children. According to the results of the study, the flexibility of lower extremity muscles was also increased with the increase of Taekwondo specific skills and performance. Because Taekwondo is a discipline, especially dominant with foot techniques. Further studies should be examined flexibility in with different age groups, also the effect of performing Taekwondo on the general health status in children and adolescent.

ID: 283 / PO2: 2
Poster Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines
All Diarrhoea and Vomiting in Children is Not Gastroenteritis

Lydia Baldwin, Muhammed Khan, Chetana Kallappa
Heart of England Hospitals NHS foundation Trust, Birmingham, United Kingdom; lydiabaldwin@nhs.net

Introduction: Most meningococcal disease in the UK has been due to group B (MenB) and group C (MenC). Since the introduction of vaccine against MenC in 1990 and Men B from 1st September 2015, the incidence of meningitis due to these two strains has reduced significantly. However, an alarming rise in a particularly deadly strain of group W disease is seen. Children under 14 are not immunised against this strain and present with unusual signs and symptoms.
Purpose: To raise awareness of meningitis due to W strain which is atypical and progressively fatal.
Materials and Methods: We had 4 children present with acute diarrhoea and vomiting illness with mild to moderate fever for over 24 hrs and rapidly deteriorated. Subsequently, was found to have meningitis due to Men W 135. 22 children tested positive for Neisseria meningitides between Jan 2015 to July 2017, 15 were MenB, 1 MenC, 4 Men W135, 2 not typed. All were sensitive to cephalosporin.
Results: All 4 patients were male and aged around 13.5 months, all males and fully immunised but none had received Bexsero. Men W135 isolated from blood in 2 and CSF in the other 2. All 4 presented with diarrhoea and vomiting illness with fever. 2 patients with blood culture positive deteriorated rapidly and died and the other 2 had more insidious illness and survived.
Conclusion: Though MenW has caused only a small proportion of meningococcal infections worldwide and tends to be more prevalent outside of Europe, recently there is an increase in the incidence and mortality (13% compared to 5-10%) Rather than symptoms of meningitis or septicaemia, patients present with septic arthritis or a severe respiratory tract infection. Several adults and children with MenW septicaemia present mainly with gastrointestinal symptoms but without the characteristic non-blanching rash and progress rapidly to death as in our patient cohort. Although 14-18 year olds are being immunised with ACWY vaccine, it will take over a year for herd protection to establish so babies as the vulnerable group will remain unprotected. It has been shown that the MenB vaccine Bexsero would protect against MenW strain. But none of the infants in our cohort had received the vaccine. It is important to suspect MenW in infants and toddlers presenting with atypical symptoms of acute gastroenteritis.

ID: 291 / PO2: 3
Poster Presentation Topics: Adolescent Mental Health
Bullying Among Adolescents Living in Orphanages in Turkey

Yasemin Özkan[1], Metin Pişkin[2], Pınar Kütük Yılmaz[3]
[1]Hacettepe University Turkey; [2]Ankara University Turkey; [3]Yalova University, Turkey; pinarkutuk@yahoo.com

Introduction: Bullying is repetitive physical, verbal, social, or electronic aggressive actions by a person or group against a person. It is stated that there is an increase in mental and physical health problems in people who are bullied or exposed. Children who are exposed to bullying are more likely to avoid school than those who do not, and psychosomatic problems are more likely to have legislative and low academic achievement. Therefore, bullying is an important public health problem in schools.
Purpose: The main objective of this research is to assess the frequency and types of victim/bully behavior among adolescents staying in orphanage houses, in 12 regions of Turkey. Different types of bullying behaviors (physical, verbal, isolation, rumor spreading, and harming property) are also examined in relation to the sex.

Materials and Methods: The sample consisted of 543 adolescents (48,4% males, 51,6% females). The ages of participants varied between 11-18 (X = 15.05, SD = 1.71). "Peer Bullying Identification Scale –Adolescent Form" developed by Pişkin and Ayaş (2007) was used to collect data. The scale consists of "Victim Scale" and "Bully Scale". In the Victimization Scale, participants were asked to answer how often their mates victimized them while in the Bullying Scale they were asked to answer how often they did bullying behaviors. The sub-dimensions are: Physical, Verbal, Isolation, Rumor spreading, Harming property, Sexual bullying. In the analysis, descriptive statistics were calculated first. Subsequently, bully, victim, bully-victim, and the neutral rates were calculated both in general and in terms of gender. Gender analysis is calculated separately for different types of bullying dimensions. Mann Whitney U-Test was used to analyze the distribution of different types of bullying by sex. A statistical significance level of 0.05 was taken.
Results: Frequency of Adolescents Identified as "Victims" and "Bullies".

	Victims				**Bullies**		
Types of Victimization	**Total (N=543) %**	**Males (N=258)**	**Females (N=275)**	**Chi-Square Tests**	**Total**	**Males**	**Females**
Physical	73.1	74,8	71,3	n.s.	55,2	55.0	%
Verbal	63.4	66,3	60,0	n.s.	42,7	41,9	54,9
Harming Porperty	50.8	52,3	49,5	n.s.	26,2	25,2	44,0
isolation	44.9	49,2	41,1	p< .036	21,9	25,2	27,3
Rumor spreading	44.6	48,1	41.8	n.s.	16,8	18,2	19,3

(chi[sub 2] (d.f. 1) =3,56, p< .036.

Conclusion: The results indicate that bullying is a substantial problem for adolescents staying in orphanage houses, in Turkey. It appears that orphanage houses don't always effectively deal with bullying problems among adolescents.

ID: 251 / PO2: 4
Poster Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines
Cat Scratch Disease: Beyond a Lymphadenopathy

Vera Lúcia Gonçalves, Francisco Ribeiro-Mourão, Francisca Martins, Ariana Teles, Ana Vaz, Sandrina Martins
Unidade Local de Saúde do Alto Minho, Portugal; vgveragoncalves@gmail.com

Introduction: Evidence on treatment of cat scratch disease (CSD) is missing and the clinical approach may be a challenge.
Case Report: An eleven-year-old girl, without relevant pre-existing conditions, presented to the Emergency Department (ED) with a painful tumefaction in left inguinal area of 2 weeks' duration. No other symptoms or events were reported; the family had 2 kittens at home. She was initially treated with oral amoxycillin/clavulanic acid for 48 hours with no improvement. At physical examination, a 4 cm tender tumefaction in left inguinal area and erythema of the overlying skin were noted. An ultrasound of the area revealed a lymphadenopathy measuring 3.7 X 1.5 cm with inflammatory characteristics. CSD was suspected and serologic testing for Bartonella sp. was performed. Patient started treatment with oral azithromycin 10 mg/kg/day and ibuprofen. On the third day of treatment, she returned with worsening of the tumefaction and inflammatory signs. An ultrasound showed slight increase in lymphadenopathies' size (4.3 X 1.7 cm). Patient was admitted to the hospital and treated with intravenous antibiotics: amoxycillin/clavulanic acid and azithromycin. During the hospitalization, the diagnosis of CSD was confirmed. A 5-day course of azithromycin was completed, with slight reduction of lymphadenopathy (3.4 X 1.5 cm), and the patient was discharged.

About 10 days after the diagnosis, the patient developed a draining sinus tract and presented with a larger tumefaction with fluctuance in left inguinal area. Ultrasound evaluation confirmed an abscess (4.5 X 3.5 X 3 cm) with a fistulous tract for the skin. She was admitted for drainage and completed an 8-day course of cefazolin. No organisms grew on the abscess fluid and a sustained increase of the immunoglobulin M and G response to Bartonella sp. was registered. Patient improved with full recovery.
Conclusion: Regional lymphadenopathy is the hallmark of CSD and is generally self-limiting. Abscess formation is rare. In this clinical case, a bacterial superinfection of the lymph node could be the aetiology of the abscess. However, no bacteria were identified in the abscess fluid, which makes the Bartonella Henselae the most probable causative agent. There are only a few case reports of abscess-forming lymphadenopathy in children with CSD. These are even rarer when considering immunocompetent patients. A more virulent pathogenetic variant is a possible explanation for these cases. Like our clinical case, to the best of our knowledge in none of the reported cases it is known the cause of progression of the disease.

ID: 203 / PO2: 5
Poster Presentation Topics: Infectious Diseases & Vaccines, NICU
Cerebrospinal Fluid Protein and Glucose Levels in Neonates with Sepsis Without Meningitis

Mona Noureldein, Roxana Mardare, Jack Pickard, Hoi Shing, Michael Eisenhut
Luton & Dunstable University Hospital NHS Foundation Trust, United Kingdom; monafathe1979@yahoo.com

Introduction: Increased cerebrospinal fluid (CSF) protein and reduced CSF glucose levels have previously been associated with adverse neurological outcome in sepsis associated with bacterial meningitis. Increased interleukin-1 levels in the CSF of neonates with sepsis without meningitis have previously been associated with white matter damage on magnetic resonance imaging.
Purpose: We investigated whether neonatal sepsis in the absence of meningitis is associated with elevated CSF protein and reduced CSF glucose levels in order to determine whether these parameters indicate a risk for neurological damage in these patients.
Materials and Methods: Retrospective case control study comparing CSF results of neonates with fever (temperature >38.0 degrees Celsius) or elevated C-reactive protein levels (>5mg/l). and absence of meningitis as evident from normal CSF white blood cell count and negative polymerase chain reaction and CSF culture result with neonates who had a CSF obtained without fever or CRP elevation.
Results: We included data of a total of 183 neonates systematically for a 2-year period. The gestational age at the time of the lumbar puncture was between 26+6 and 42+3 weeks. CSF protein levels were with 0.84g/l (SD 0.23) in neonates with fever (n=19) not significantly different from neonates without with 0.92g/l (SD 0.39) (n=164) and in neonates with suspected sepsis and elevated CRP level (n=161) not significantly different from neonates with normal CRP (0.98 (SD 0.4) (n=22). CSF-glucose levels where available were in infants with sepsis 2.68 mmol/l (SD 0.85) (n=151) and not significantly different from infants without with 2.58 (SD 0.40) (n=26).
Conclusion: CSF protein and glucose levels are not affected by a systemic inflammatory response syndrome, as seen in sepsis, if there is no meningitis. If there is a low CSF glucose or elevated CSF protein this should therefore alert the clinician to the possibility of additional meningitis.

ID: 264 / PO2: 6
Poster Presentation Topics: Neurology, Adolescent Health Communication
Children with Epilepsy - Knowledge and Beliefs of Teachers in Poland and the Czech Republic Towards Students with Epilepsy

Agnieszka Malkowska-Szkutnik[1], Dorota Kleszczewska[2], Ferdinand Salonna[3], Jakub Gajewski[4]
[1]University of Warsaw, Faculty of Education, Department of Biomedical Foundations of Development and Sexology, Poland; [2]The Institute of Mother and Child Foundation, Poland; [3]Palacky University Olomouc, Faculty of Physical Culture, the Czech Republic; [4]Royal College of Surgeons in Ireland, Department of Epidemiology; Ireland; amalkowska2007@wp.pl

Introduction: Epilepsy is one of the most common neurological diseases in children and adolescents. It occurs particularly in school-aged children. Estimates show that around 1% of population at this age suffer from it.
Purpose: The aims of this study were to assess: a) knowledge of teachers about epilepsy and their beliefs towards teaching students with epilepsy; b) preparedness of teachers to work with these students, and the difficulties with working with this group of students and expected forms of assistance to overcome possible issues.
Material and Methods: This study was a part of the project "EPISCHOOL – "Let`s overcome barriers together!" It has been realised in cooperation with the Foundation for the Development of the Education System - the Polish Agency of the Erasmus+ Programme. Data were collected in Poland (PL) and the Czech Republic (CzR) in 2016 on the sample of 1277 teachers. The study was conducted in two groups - class teachers and physical education teachers. A questionnaire consisted of two parts was used: 1) for all teachers, including questions on: preparedness to work with students with epilepsy; knowledge/skills in this field; level of knowledge about epilepsy, skills for providing assistance in the event of seizure; beliefs about teaching children with epilepsy; 2) for teachers who are currently teaching or have taught students with epilepsy in the past 10 years.
Results: The majority of teachers said that they knew little or very little about epilepsy. 44% of Polish and 29% of Czech teachers did not feel prepared to talk with their students who witnessed seizure at school. Almost all teachers said epilepsy could occur at all stages of life (92%). The majority said that the most common causes were foetal brain damage, malformations of the brain and brain tumour. The percentage of teachers who chose the wrong procedure in the case of seizure: to insert an object into the mouth (PL 35%, CzR 46%) and to hold the extremities (PL 28%, CzR 22%) was substantial. Among the class teachers teaching students with epilepsy, it was considered difficult/stressful by - 32% PL teachers and 21% CzR. The surveyed teachers indicted the following forms of support: increasing public awareness of epilepsy, better cooperation between teachers and parents, training for teachers.
Conclusion: Teachers with the knowledge and ability to work whit this group should help them studying, strengthen self-esteem and prevent stigmatization and isolation the extent possible.

ID: 116 / PO2: 7
Poster Presentation Topics: General Pediatrics, Rare Diseases
Clinical Case of Bean's Syndrome

Minira Bulegenova, Dilyara Kachurina, Badim Litosh, Gulnara Kaukenbaeva
Scientific center of pediatrics and children surgery, Kazakhstan; mbulegenova@yandex.ru

Introduction: Hemangioma is a benign tumor, refers to vascular malformations that occur during embryogenesis. There is a combination of skin cavernous hemangiomas and mucosal lesions of the gastrointestinal tract, called Bean syndrome. This syndrome was described by American hematologist W. B. Bean, (1909-1989) as a kind variant of blue nevus syndrome: congenital multiple cavernous hemangioma of the skin and gastrointestinal tract. Bean's syndrome is a rare and we did not meet in the available literature data on the disease outcome, efficacy of surgical treatment, mortality.

Clinical Case: We present a clinical case of a child with the Bin's syndrome. Child A, 12 days old, was admitted to our center with a preliminary diagnosis: "congenital malformations. Kasabach-Merritt syndrome. Congenital hemangioma. Severe post-hemorrhagic anemia, thrombocytopenia". Anamnesis: heredity is not burdened. First pregnancy, first childbirth. Mom: At the first trimester mom had respiratory viral infection. Urgent delivery. The girl was born with a weight - 3694 g, 7-8 Apgar score. Visually: pale skin. Multiple hemangiomas are defined on the upper, lower limbs, face. Hemangiomas of a pink color, with a purple tint in the middle, a different diameter from 0.2-0.5-0.8-1.0 sm, turning pale when pressed. St. Localis: Lesion of the soft tissue palpated in the upper third of the thigh. The skin is bluish or purple color, painless. There are areas of the seal protruding above the surrounding tissue, turn pale when pressed. Gastrointestinal bleeding occurred in the maternity hospital, and as the result anemia - (hemoglobin-97g/l), thrombocytopenia (49 x10 9/l). Blood test: RBC-2.9 x10 9/l, Hb-77 g/l, Ht – 22%, WBC-21 x10 9/l, PLT-81.0 x10 9/l, sedimentation ratio-2 mm/h. Biochemistry - all parameters within reference norms. Coagulation: APTT – 37 min.,PTI – 85%, Fibrinogen – 2.5 g/l. Impairment of platelet aggregation (reduced aggregation with adrenaline) - 12,5% (N :50-80%). Chest X-ray, ECG, EEG – normal. MRI: Small-cystic formations of the left hip, gluteal, inguinal and left lumbar region. Vascular malformation? Fibro-esophagogastroduodenoscopy: hemangiomatous of the stomach and the jejunum. Colonofibroscopy - Hemangioma of the rectum and lower colon. Intestinal bleeding. During the time spent in the hospital, the child had repeated gastrointestinal bleeding in the form of hematemesis, melena and as a result the pronounced decrease in hemoglobin (60 g/l), platelets (18x109/l). For the health condition stabilization blood transfusions and transfusion of platelet concentrate have been performed. The following treatment was prescribed: prednisolone (6 mg / kg / day) every other day + beta-blocker propranolol (3 mg / kg / day). Gastrointestinal bleeding confined for a while that resulted in insugnificant platelet increase. Improvement of the condition was observed for a week, but then relapses have repeated. The active surgical interventions in the neonatal period were not appropriate. In 1.5 months positive dynamics was observed. After stabilization of clinical and laboratory indicators the girl was discharged home. Currently child is an outpatient surgeon at the place of residence. According to the literature the main treatment of disseminated hemangiomatosis is combination of conservative treatment and surgical procedures, radiation therapy is available in older ages. The prognosis is unfavorable.

ID: 206 / PO2: 8
Poster Presentation Topics: General Pediatrics
Clinical Case: Cytomegalovirus Infection Complicated By the Development of the Hemolitic-Uremic Syndrom.

Gulshat Alimhanova, Anar Shekenova, Dmitriy Bondarenko, Daniyar Kusainov, Minira Bulegenova
Scientific center of pediatrics and children surgery, Kazakhstan; anarmedi@mail.ru

Introduction: Hemolitic-uremic syndrom (HUS) is a chronic disease requiring lifelong observation and treatment. The target organ of microangiopathic thrombus formation is the kidneys, however, generalization of TMA is possible leading to the development of multi-organ ischemia with a multiple organ dysfunction. In pediatric practice the most likely complication of HUS, developed on the infectious process background is syndrome of disseminated coagulation, which occurs mainly in children up to 5 years. As the symptoms caused by the syndrome of disseminated coagulation are prevailing, the identification of the underlying infectious disease sometimes does not seem possible.
Clinical Case: In connection with above mentioned, it was interesting to analyze a clinical case with a similar picture of the disease in a child of the first year of life. Patient R., was charged to Scientific center of pediatrics at the age of 3 months. Mother noted the marked jaundice of the skin at the age of 1 month old, after what the child was directedto the children's city clinical infectious diseases hospital. Instrumental-diagnostic studies confirmed the hepatobiliary syndrome. Total bilirubin exceeded the reference norms ten times as much, direct bilirubin – 30 times as much, hepatic enzymes

figures exceeded the reference values 3-3.5 times as much, indicating the presence of hepatocytes's cytolysis. PCR studies on intrauterine infection: 06.01.2017 CMV in the mother's milk – positive, 14.03.17 CMV in the urine of the child) - positive. The child's health condition progressively worsened due to intoxication, which caused the development of multiple organ failure, neurologic symptoms, hemorrhagic, hepatorenal syndrome, intestinal paresis symptoms and deep metabolic disorders. On March 31th the child's health condition deteriorated because of severe hyperthermia (39,90C), diarrhea, anemia, thrombocytopenia, anuria.
Decision: Decision of the consilium was as follows: the final diagnosis "hemolytic-uremic syndrome". The consilium recommended the following intensive medical measures: - peritoneal dialysis, - Plasmotransfusion, - hemotransfusions (washed red blood cells), - prednisolone (2 mg / kg), - heparin (500ED/lphysiognil 2.27%), - antibacterial therapy (according to the results ofantibiotical sensitivity), - Immunoglobulins intravenous,- In cases of unstable hemodynamics: titration of noradrenaline, Performing of combined treatment with peritoneal dialysis has been resulted in the child's condition improved, the patient has been transferred for further treatment to the profile department.

ID: 137 / PO2: 9
Poster Presentation Topics: General Pediatrics, Rare Diseases
Computerized Follow-up System for Medical Recommendations in Chronic Diseases such as Familial Dysautonomia

Channa Maayan, Natan Rosenfeld, Elchanan Fried, Rivka Brooks, Naama Holzer
Hadassah Medical Center, Jerusalem, Israel; cmaayan@hadassah.org.il
Familial Dysautonomia Center, Pediatric* and Internal** Department, Hadassah Medical Center, Hebrew University Medical School, Jerusalem, Israel

Introduction: We aim to implement in time, follow-up of medical recommendations for a chronic, autosomal, recessive, genetic, complicated disease known as Familial Dysautonomia (FD). FD is characterized by extensive autonomic and sensory dysfunction. Abnormal autonomic neuronal development results in defective neuro-regulation of multiple organ systems. Most of the body's organ systems are affected. As there is no specific treatment for this disease, the FD patients need to be treated symptomatically for each organ system, or in combination. We used the computer program of Microsoft's "Outlook," which, by a specific sound, reminded us to tell each FD patient to perform the various tests or medical recommendations, at the specific dates required, so they could receive the appropriate treatment in time.
Purpose: To evaluate the efficiency of this computerized program to enable the patients to perform the required tests and given medical recommendations.
Materials and Methods: Twenty-five FD medical records were randomly chosen to be evaluated and compared over one year with the computerized follow-up program; and over another year, without the use of this program. The information inserted was: date of the clinic appointment, date of next clinic appointment, the type of clinical order, the type of tests, or recommendations (e.g. blood tests, urine tests, X ray, CT, medical specialist, physiotherapy), implementation date of the clinical recommendation and the audio-sound reminder for this date.
Results: A comparison of the test results and the clinical recommendations, of the year using the computerized follow-up program, with the year without this program, showed a 62% increase of efficiency using the computerized program.
Conclusion: This program was proved to be a simple and efficient way to follow up chronic FD patients. This model can be suitable for all complicated chronic diseases. The patient, or the family who takes care of him, is usually very busy either with the complex disease itself, with other siblings, or with work. This program enables the patient to deliver the results to the physician, so that appropriate treatment can be given in time. This also inspires in the patient, confidence in his physician, knowing that the latter cares about his medical condition.

ID: 229 / PO2: 10
Poster Presentation Topics: Infant Development, Neurology
Coreoathetosis and congenital hypothyroidism

Lara Lourenço[2], Ana Reis e Melo[1], Daniel Gonçalves[2], Mafalda Sampaio[3], Cintia Correia[4], Micaela Guardiano[2]
[1]Hospital Pediátrico Integrado, Centro Hospitalar de São João, Portugal; [2]Unidade de Neurodesenvolvimento, Centro Hospitalar São João, E.P.E; [3]Unidade de Neurologia Pediátrica, Centro Hospitalar São João, E.P.E; [4]Unidade de Endocrinologia Pediátrica, Centro Hospitalar São João, E.P.E; anareismelo@gmail.com

Introduction: The perturbations related to NKX2-1 are rare and due to autossomal dominant transmission. In 50% of cases, there is brain, lung and thyroid involvement and in 30% there is only involvement of brain and thyroid. Despite chorea being a classical and early sign, the initial neurologic manifestations can be various, like hypotonia, dystonia, dysarthria and ataxia.
Case Study: A 27-month child was referred to Neurodevelopmental consultation, due to global delay on psychomotor development (more significate in motor fields). The child also had a congenital hypothyroidism medicated with levotiroxin. On physical exam, she had peculiar face (thin lips, low implantation of the ears), a trunk ataxia, including in seated position and an unstable broad- based gait, needing support. At 31 months of age, she did a formal psychometric evaluation with Ruth Griffiths developmental scales revealing a developmental age of 18 months and a global intelligence quotient of 60. She had multimodal stimulation, including physiotherapy, psychomotricity and speech therapy. The cerebral MRI showed type I Chiari malformation, with no other anomalies. She performed an etiologic study regarding ataxia that revealed no alterations. At 3 years and 10 months, she presented choreoathetosis (specially in superior members) with important dysmetria. At this time, before the hypothesis of coreoathetosis and congenital hypothyroidism with or without lung affection the specific genetic test is performed. A mutation in NKX-2 was detected corroborating the hypothesis. The child began tetrabenazine for the chorea and vigilance of lung symptoms. In her last formal evaluation with Ruth Griffiths developmental scales she had a global intelligence quotient of 75 (delay in language and locomotor). The suspicion of a perturbation related to NKX2-1 must be raised when there is a congenital hypothyroidism with neurologic or pulmonary manifestations, or when there is a non-progressive chorea presenting in early childhood.
Conclusion: It is essential for the diagnosis, the clinical progression of the case and the multidisciplinary approach.

ID: 248 / PO2: 11
Poster Presentation Topics: Obesity & Physical Activity
Different Adiposity Indices and Its Relation to Metabolic Abnormalities in 5-15 Year Old Children From an Urban Area of Sri Lanka

Vithanage Pujitha Wickramasinghe[1], Carukshi Arambepola[2], Priyantha Bandara[1], Mithila Abeysekera[1], Suran Kuruppu[1], Prasanna Dilshan[1], Buddhini S Dissanayake[1]
[1]Department of Paediatrics, Faculty of Medicine, University of Colombo, Sri Lanka.; [2]Department of Community Medicine,Faculty of Medicine, University of Colombo, Sri Lanka; pujithaw@yahoo.com

Introduction: Obesity related metabolic abnormalities occur from a very young age and it is directly related to the fat content of the body. South Asian populations are known to have high fat content of the body for any given BMI value compared to many other ethnic groups. This has lead to the difficulty in using internationally available anthropometric cutoff to detect adverse fat content associated with increased non-communicable (NCD) disease risk. This could be due to the fact that most of the disease risk is associated with visceral adiposity rather than whole body adiposity. Different

anthropometric indices such as waist hip ratio (WHR), waist to height ratio (WHtR), Body Adiposity Index(BAI) are used for screening for obesity related metabolic risk. However none of them take metabolic parameters for its calculation. Visceral Adiposity Index (VAI) is a new index developed using BMI, waist circumference (WC), Triglycerid (TG) and HDL-c.
Purpose: The aim of this study is to examine the relationship between different obesity-related indices and biochemical parameters and body composition in 5-15 year old school children in Colombo district of Sri Lanka.
Materials and Methods: A cross sectional descriptive study, using two-stage probability proportionate cluster-sampling technique. After a 12 hour overnight fast, blood was drawn for lipid profile, fasting blood glucose and insulin. Standard OGTT was done with anhydrous glucose 1.75 g/kg body weight (max 75g). Random blood sugar and insulin was done 2 hours later. Height, weight, WC and fat mass (FM) was measured using BIA. Blood pressure was measured after 10 min rest. Insulin resistance assessed by HOMA-IR.
Results: Data from 920 children (boys 542) were collected. The mean±SD age of the study group was 10.2±2.7 years. According to IOTF-BMI cutoff, 32(3.2%) were obese and 90(9.7%) were overweight. The mean±SD values of triglyceride (0.870.39 mmol/L), HDL-c (1.2±0.41 mmol/L), VAI (1.05±0.8), BAI (25.64±4.9). Percentage body FM showed significant association with VAI, BAI, WHtR, WHR, WC, BMI. WC and BMI showed significant association with all metabolic parameters (TG, LDL-C, HDL, FBS and RBS at 2 hour OGTT). VAI and WHtR showed strong association with all metabolic parameters but FBS and BAI showed also showed good association with all but LDC-C. WHR did not show a significant association with the metabolic parameters.
Conclusion: Results show that WC, BMI, VAI, BAI and WHtR can be used in the assessment of obesity related metabolic abnormalities. However, further studies are needed to develop VAI and BAI cutoff values to detect presence of adverse metabolic profiles.

ID: 209 / PO2: 12
Poster Presentation Topics: Emergency Pediatrics
Effects of Analgesia and Sedation On Non-Surgical Reduction of Intussusception in Children: Systematic Review

Veronica Mugarab Samedi[1,2], J Thull-Freedman[1,2], A Stang[1,2], Nillifer Hasanova[3], Anar Samedi[3], Adel Elsharkawy[3], Alnura Akanayeva[1,2,3]
[1]Alberta Health Region, Canada; [2]Alberta Children Hospital, Calgary, Canada; [3]University of Calgary, Calgary,Canada; veronica.samedi@albertahealthservices.ca

Introduction: Intussusception (ITS) is one of the most common causes of the bowel obstruction during infancy and early childhood. It is an emergency condition that requires immediate medical intervention. The impact of analgesia and sedation during enema reduction has been addressed in the literature but the reported results are inconsistent.
Purpose: The purpose of this literature review was to determine if analgesia and/or sedation, in children population aged age 0 to 17 years with intussusception, impacts the likelihood of successful non-surgical reduction, pain, adverse events and patient/caregiver satisfaction compared to children who do not received analgesia and/or sedation.
Materials and Methods: Sources: medical electronic databases: Google scholar, Ovid, Medline, PubMed, CINAHL, EMBASE, the Cochrane Library, Science Citation Index and Evidence-Based Emergency Medicine Time period : 01.01.1980 – 30.11.2015. (Non-operative reduction of intussusception was introduced in 1980) Primary outcome: the proportion of patients with successful non-surgical reduction who receive sedation and/or analgesia ("experimental group") compared with those who do not ("control group") Secondary outcomes: differences between experimental and control group in: 1) the proportion of patients with adverse events, 2) pain score or rating (either by patient, parent, or observer using a validated pediatric pain score), 3) patient or parent satisfaction with care provided.
Results: 209 records were identified through database searching, 145 full text articles were assessed for eligibility. Inclusion criteria: all RCT's, cohort and case control studies relevant to the

subject of the effects of analgesia and or sedation on non-surgical reduction of intussusceptions. 15 studies were included in final review. Reviewed studies were highly heterogeneous in design, approach, mode of sedation and outcomes. There is no single study with level I of evidence. Despite all above-mentioned limitations, majority of studies found that anesthesia improves outcome in this population of pediatric patients. 60% of eligible studies confirmed that analgesia improves success in both pneumatic and hydrostatics reductions. No adverse reactions related with anesthesia or sedation were reported in all reviewed studies. One survey with 78 responders reported less success in ITS reduction with regular use of analgesia. None of reviews studies included assessment of pain or commented about evaluation of pain before and after reduction. There is no single study that used Pain Assessment Scales in children with ITS. The only 2 eligible for review surveys were completed by radiologists in 1991 and 1992. No surveys were conducted for parents or caregivers or patients.
Conclusion: Analgesia/ sedation for ITS reduction currently is not a standard of care. We are planning to start survey focused on pain assessment for children with ITS using appropriate for age pain scales. We are preparing questioner for parents/caregiver to assess satisfaction after ITS reduction with and without analgesia and/ or sedation.

ID: 163 / PO2: 13
Poster Presentation Topics: Infectious Diseases & Vaccines, Management
Enteral Baclofen for Tetanus Treatment in Resource Limited Settings

Cynthia Centauri, Nina Dwi Putri, Hindra Irawan Satari
Faculty of Medicine University of Indonesia, Ciptomangunkusumo Hospital, Indonesia; dr.cynthiacentauri@gmail.com

Introduction: Tetanus is a serious bacterial infection caused by Clostridium tetani. Clostridium tetani produces a toxin that is taken up into terminals of lower motor neurons and blocks the release of inhibitory neurotransmitters leading to muscle rigidity, spasms, and seizure. The treatment of severe tetanus is still challenging, usually the patient needs to be intubated to control the airway and knocked down to control the seizure. Such facilities may not be available at peripheral health centers. Therefore oral/enteral drugs which reduce spasticity and seizure would be desirable.
Case report: A 4-year-old boy had a history of foul smelling ear discharge since 2 weeks before the admission. Three days before admission he developed fever and trismus. One day prior to the admission he developed flat board abdomen, nuchal rigidity, opistotonus, and seizure. There was no decrease of consciousness. Patient was diagnosed as tetanus and treated with human tetanus immunoglobulin, antibiotics (metronidazole and cefotaxime), fluids, and diazepam. There was a frequent-persistent seizure even with a maximum dose of intermittent diazepam, so we planned to intubate and gave continuous infusion of midazolam. Unfortunately, there were no availability of ventilator and pediatric intensive team. Thus enteral balofen was added on day 13 of admission at a dose of 9 mg per day (0.6 mg/kg/day, in three devided doses). Subsequently, the seizures frequency and duration were reduced as well as the nuchal rigidity, flat board, and trismus were improved. The child discharged from hospital on the day 19th of admission, 2 days after the diazepam and enteral baclofen was stopped. Vaccination catch-up were given on the outpatient follow-up.
Conclusion: Enteral baclofen may be considered as a additional anti-spasms agent in tetanus, especially in limited resource settings. Further studies are suggested before the treatment can be recommended routinely as an alternative anti-spasms agent protocol in all cases of tetanus.

ID: 280 / PO2: 14
Poster Presentation Topics: General Pediatrics, Adolescent Wellbeing
Hypentension in Adolescence – the First Sign for the Diagnosis…

Vanessa Oliveira Gorito[1], Cristina Baptista[2], Paulo Santos[2], Ana Margarida Costa[2], Joana Carvalho[2]
[1]Integrated Pediatric Hospital, Centro Hospitalar S.João, Porto - Portugal, Portugal; [2]Centro Hospitalar de Trás-os-Montes e Alto Douro, Portugal; vanessaoliveiragorito@gmail.com

Introduction: Coarctation of aorta (CoAo) is a common pathology, representing 5-8% of congenital heart diseases. It may occur isolated or associated with other anomalies. The diagnosis may be late, until a clinic with a high level of suspicion is established - congestive heart failure in early childhood or hypertension (HT) in preadolescents. Although the percentage of cases of primary hypertension increases in adolescence, the etiological study should always be performed, especially in adolescents who have a previous personal/family history or objective examination suggestive of secondary causes.
Case report: We report the case of a 17-year-old female adolescent with menarche at age 13 and regular cycles. She was observed in the emergency department due to headache episode and malaise during exercise, which improved spontaneously. At the examination was objectified HT, witch motivated referral to Pediatrics Consultation. From the anamnesis, she described similar episodes with a year of evolution, with association of headaches and hypertensive spikes, which had already motivated normal previous study (normal ECG, analytical study and renal ultrasound). At the consultation, after confirmation of HT, an etiological study was made that revealed no alterations. By notion of disproportion between upper and lower body segments, it was performed a karyotype that revealed a mosaic of Turner Syndrome (10%). She underwent a telemedicine echocardiographic study - which raised the question of coarctation of the aorta (CoAO). A study by Angio-CT confirmed hemodynamically important CoAO, which motivated referral to Cardiothoracic Surgery.
Conclusion: CoAo is a common pathology, and the diagnosis may be late due to non-specific clinical presentation. International studies indicate 5-13% prevalence of Turner Syndrome in girls with CoAo. Despite the association between Turner Syndrome and CoAo, this case alerts us for the possibility of an association between mosaics of Turner Syndrome, without other phenotypic manifestations and this pathology.
We present this case to claim attention to general symptoms and signs presented by adolescents that should be valued underlying the clinical suspicion, because sometimes it traduces important pathology in apparently previous healthy patients.

ID: 246 / PO2: 15
Poster Presentation Topics: Rare Diseases
Idiopathic Pulmonary Hemosiderosis in Pediatrics Patients: Survival Rates

Catalina Bica[1], Cristian Gheonea[2], Ligia Stanescu[3], Liana Cismaru[4], Sorin Dinescu[5]
[1]University of Medicine and Pharmacy of Craiova, Romania, Pediatric Department; [2]University of Medicine and Pharmacy of Craiova, Romania, Pediatric Department; [3]University of Medicine and Pharmacy of Craiova, Romania, Pediatric Department; [4]University of Medicine and Pharmacy of Craiova, Romania, Pediatric Department; [5]University of Medicine and Pharmacy of Craiova, Romania, Epidemiology Department; cbulucea@yahoo.com

Introduction: Idiopathic pulmonary hemosiderosis (IPH) is a rare disorder of unknown etiology which can cause diffuse alveolar hemorrhage. It is classically described as a triad of hemoptysis, anemia and pulmonary infiltrates and has a variable outcome. The outcome is severe with death in 2.5-3 years.
Purpose: Our purpose is to identify survival rates for patients with IPH.
Material and Method: We conducted a retrospective study of patients diagnosed with IPH from eight tertiary pediatric clinics from Romania covering a 58 years period of time. We calculated survival rates depending on various parameters we considered relevant for the course of the disease, like sex, frequency of crisis, classical triad at diagnosis, hemoglobin level and presence of immunological alterations. We calculated survival rates from onset of the disease and from diagnosis.
Results: We identified 39 cases of IPH in the studied period. In the first year, median survival rate was 74,4% from onset of the disease and by the end of the fifth year we found only a 15,4% survival. Girls had a median survival rate better than boys (35,15 months vs. 19,9 months). Also, patients who presented classical triad at diagnosis had better survival than those without (41,5 months vs. 22,45 months). Patients with severe anemia (hemoglobin level under 4,99 g/dl) had the lowest median survival rate of 18,6 months from diagnosis. Also, mortality was double (42,86%) in those patients.

Regarding frequency of crisis, we observed that patients with more than 10 crisis before diagnosis had the best survival. Survival time was almost four times higher compared to fewer than 5 crisis patients and two times higher compared to 5-10 crisis patients. On the other hand, patients with immunological alterations survived the longest time. We observed a correlation between patients with more than 10 crises and those who had immunological alterations that improved the survival time.
Conclusion: Our data suggests a better survival rate of IPH patients if they were girls, with classical triad at diagnosis, with more than 10 crisis before diagnosis or if immunological alterations were present.

ID: 132 / PO2: 16
Poster Presentation Topics: Infectious Diseases & Vaccines, Emergency Pediatrics
Initial Radiographic Findings in Children with Croup in a Pediatric Emergency Department

Yu-Jun Chang, Chun-Yu Chen
Changhua Christian Hospital, Taiwan; june@cch.org.tw

Introduction: Croup is the major cause of upper airway obstruction in children. Croup is caused by the human parainfluenza virus types 1 and 2, and typically begins in autumn. As the upper airway narrows, the child may breathe more and more rapid and even feel difficult to breathe, the child is at risk for rapid worsening and need to treat in an emergency department.
Purpose: We aimed to determine whether various features of neck radiographs can be used to objectively predict outcomes in patients with croup treated in a pediatric emergency department (PED).
Materials and Methods: We prospectively recruited 192 patients with croup admitted to the PED between 2012 and 2014. Data regarding clinical factors, fever, age, radiographic findings, and the length of hospital stay were gathered. The initial Westley score (WS), presence of enclosed steeple sign, extent of narrowing, and narrowing ratio on soft tissue neck radiographs were determined before and after treatment. The extent of frontal narrowing, extent of lateral narrowing, frontal ratio (FR), and lateral ratio (LR) were analyzed to predict clinical outcomes in patients with croup.
Results: The extent of frontal/lateral narrowing and LR were significantly correlated with outpatient status. Approximately 71% of patients with FR values below 0.23 remained in the hospital for further care, while approximately 98% of patients with FR values >0.65 were discharged to outpatient treatment. Approximately 85% of patients with LR<0.45 remained in the hospital for further care. Almost all patients with LR values above 0.6 were discharged to outpatient treatment.
Conclusion: Patients with mild croup (LR>0.6 and FR>0.65) can receive outpatient care following treatment with single doses of inhaled epinephrine and dexamethasone. Patients with moderate croup (LR: 0.45-0.6 and FR: 0.23-0.65) should be closely monitored after initial treatment and admitted if necessary. Patients with severe croup (LR<0.45 and FR<0.23) should be hospitalized after initial treatment.

ID: 268 / PO2: 17
Poster Presentation Topics: General Pediatrics
It's a Pneumoperitoneum? Oh No, It's Chilaiditi's Sign!

Pedro Mantas, Sara Rocha, Margarida Marujo, Aldina Lopes
Pediatric Department. Hospital de Santarém. Santarém, Portugal; pedromantas@gmail.com

Introduction: First described in medical literature in 1910 by Greek radiologist Demetrius Chilaiditi, the Chilaiditi sign refers to the rare incidental radiologic finding of temporary or permanent hepatodiaphragmatic interposition of the bowel, usually the transverse colon. One published report estimated the worldwide incidence at 0.025-0.028% and although it is more common in older adults, it has been reported in children. In general, patients are asymptomatic and this entity requires no treatment in the absence of symptoms. When associated with symptoms, typically gastrointestinal or respiratory, it is designated as Chilaiditi's syndrome.

Case report: A seven-year-old female, with no relevant medical history and normal development, presented acutely with a six day history of coughing and pyrexia, with the exception of being apyrexial on day four. Physical examination was normal except for tympany on percussion over the right upper quadrant of the abdomen. A plain chest radiograph showed a right lower lobe consolidation with a small pleural effusion and hepato-diaphragmatic interposition of the colon known as Chilaiditi's sign. The observed colonic haustration suggested the gas was located inside a colon segment, with no free intraperitoneal air. Blood tests showed a rise in inflammatory markers (CRP 9,14mg/dl) and the blood culture was negative. The patient was admitted for observation and started on antibiotics for pneumonia. She remained stable throughout her admission, with no associated gastrointestinal symptoms or worsening radiological changes and she was discharged home after three days.
Conclusion: The clinical relevance of Chilaiditi's sign and syndrome relates to a wide differential diagnosis that includes more serious conditions such as pneumoperitoneum, which requires urgent surgical management. Although no intervention is required for an asymptomatic patient and initial management of Chilaiditi's syndrome is conservative, patients should be kept under clinical and radiologic observation in order to prevent complications.

ID: 177 / PO2: 18
Poster Presentation Topics: General Pediatrics, Adolescent Health Communication
Lack of Specialized Health Care in Congenital Heart Disease Due to Insufficient Transition?

Rhoia Clara Neidenbach[1], Lars Pieper[2], John Venz[2], Renate Oberhoffer[1,3], Anna Kraußß[1], Max Schwarz[1], Kathrin Nebel[1], Lavinia Seidel[1], Jörg Schelling[4], Linda Sanftenberg[4], Nicole Nagdyman[1], Peter Ewert[1], Harald Kaemmerer[1]
[1]Department of Paediatric Cardiology and Congenital Heart Defects, German Heart Centre Munich, Technical University Munich, Germany; [2]Department of Behavioural Epidemiology, Technical University of Dresden, Germany; [3]Department of Preventive Paediatrics, Department of Sport and Health Sciences, Technical University of Munich, Germany; [4]Institute for General Practice, University Hospital of the Ludwig-Maximilians-University Munich, Germany; rhoia.n@gmail.com

Introduction: Due to medical advances, >90% of children with congenital heart disease (CHD) survive into adulthood. The number of adults with congenital heart disease (ACHD) in Germany has approached >280.000, suffering from serious sequelae, residua and complications with significant effects on morbidity and mortality. The majority of ACHD (>200.000) is not tied to a specialized doctor/centre, which is related to a lack of transition.
Purpose: The aim of this study is the analysis of the "actual care situation" of ACHD in Germany, regarding both patients and primary care physician's point of view.
Materials and Methods: In a cross-sectional, questionnaire- based survey, medical health supply of ACHD was evaluated regarding type-, number-, age-, gender-distribution, comorbidities of CHD as well as needs, knowledge and local distribution of specific medical care.
Results: Patients-survey: 954 ACHD (36± 12.4 years, 52 % woman) were included into analysis. 57% of ACHD had relevant comorbidities. Cardiac sequelae and residual diseases such as arrhythmia (29%), heart failure (11%) and pulmonary vascular diseases (5%) are mainly treated by general practitioners (>70%). Certified specialists and centers are known in only 39% of the cases, less than 40% of ACHD had known patient-organizations. ACHD reported an inadequate guidance considering health- and life insurance (98%), exercise capacity (80%), pregnancy and genetics (47%).
Results: General Practitioners (GP)-survey: 369 GPs were included into analysis. >50% treat CHD patients in the transitional phase from childhood into the adult age. 82% of GPs treat ACHD with simple (65%), moderate (32%) and complex CHD (24%). Specialists and Centers are consulted in only 23%. GPs are not aware of certified institutions in more than 50% of the cases, although they treat ACHD with complex comorbidities such as heart failure (43%), arrhythmia (45%) and pulmonary hypertension (18%).
Conclusion: The need for specific healthcare in patients with CHD is gaining importance, especially since an increasing number of children survive into adulthood. ACHD supply in Germany is not

sufficient. Medical care is mainly carried out by primary care providers due to a failing transition to ACHD specialized institutions and doctors. A better awareness for ACHD and GPs about the nationwide certified supply is relevant, to cover patients medical needs and to reduce morbidity and mortality.

ID: 153 / PO2: 19
Poster Presentation Topics: Neonatal Nutrition
Late Supplementation of Phosphorus is Associated with Severe Hypophosphatemia in Elbw Infants with Early Introduction of Amino Acids

Jang Hoon Lee, Moon Sung Park
Ajou University School of Medicine, Korea, Republic of (South Korea); neopedlee@gmail.com

Introduction: In recent studies, it has been reported that early aggressive amino acids supply causes hypophosphatemia. there have been few studies whether lower phosphorus supply develops severe hypophosphatemia in extremely low birth weight infants (ELBWI) with early introduction of amino acids.
Purpose: To investigate the incidence of severe hypophosphatemia during the first week after birth and analyze the associated clinical factors with severe hypophosphatemia in ELBWI with early introduction of amino acids
Materials and Methods: Eighty-two ELBWI were enrolled in this study. Medical records were reviewed retrospectively. Severe hypophosphatemia was defined as a level of serum phosphate < 2mg/dL during the first week after birth.
Results: 23.2% (19/82) of ELBWI had severe hypophosphatemia. In Hypophosphatemia group (N=19), the supplementation of phosphorus was started later than Control group (N=63) (73 [61; 88.5] vs. 85 [71.5; 142.0], hours after birth, P = 0.036). Small for gestational age infants (SGAI) (36.8% (7/19) vs. 7.9% (5/63), P = 0.006) and bronchopulmonary dysplasia (BPD) (100% (19/19) vs. 56.4% (39/63) P = 0.001) were more prevalent in Hypophosphatemia group.
Conclusion: Severe hypophosphatemia was common in ELBWI with early introduction of amino acids. Late supplementation of phosphorus and SGAI were associated with severe hypophosphatemia in this population and severe hypophosphatemia may become a predictive factor of BPD.

ID: 179 / PO2: 20
Poster Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines
Likely Bacterial Acute Cervical Lymphadenitis in Children: Factors Predictive of Favorable Outcome

Karina Deshaies Poliquin[1], Laurence Arsenault-Blanchard[1], Alexandre Marceau[2], Richard Bélanger[3], Simon Berthelot[4], Daniel Philippon[5], Josée-Anne Gagnon[1]
[1]Department of Pediatrics, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; [2]Faculty of Medecine, Université Laval; [3]Population Health and Optimal Health Practices Research Unit, Centre de recherche du CHU de Québec Université Laval, Québec, QC, Canada; [4]Department of Emergency Medecine, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; [5]Department of Surgery, Centre-Mère-Enfant-Soleil, CHU de Québec - Université Laval, QC, Canada; karina.deshaies-poliquin.1@ulaval.ca, laurence.arsenault-blanchard.1@ulaval.ca

Introduction: Cervical lymphadenitis is frequent in the pediatric population and usually the result of infectious agents. Management of likely bacterial acute cervical lymphadenitis (LBACL) mainly relies on expert advice and may vary widely from antibiotherapy to surgery as no official guidelines have been published over the last decade.
Purpose: To identify clinical factors associated with favorable outcome in the management of LBACL in children in order to create a decision algorithm and its further evaluation.
Materials and Methods: This retrospective observational study was based on the review of medical records of patient from 1 month to 18 years old who have consulted for LBACL between July 1st

2010 and July 31st 2015 at a tertiary care pediatric center. LBACL were identified using 2 electronic record databases (hospitalization, emergency). Patients were included if they had acute (≤10 days) episode of unilateral cervical mass of which the final diagnosis was LBACL. Exclusion criteria were: mycobacterial adenitis, Kawasaki disease, Cat-scratch disease, bilateral cervical lymph node involvement, congenital malformation, immunodeficiency or underlying neoplasia. Favorable evolution was defined as outpatient treatment or hospital stay of 48 hours or less without surgical drainage. To identify factors at initial consultation predictive of a favorable outcome, we performed univariate logistic regression models with several potential independent covariates, including, among others, age (years), size of lymph node (mm), fever (38,5°C) and antibiotic use prior to consultation, fluctuation, absolute white blood cell count (x10^9/L), and purulent material at ultrasonography (yes/no).
Results: Our final study cohort was composed of 166 patients with a mean age of 4,5 years (3,5SD) and 62% male. Ultrasound was obtained in 139(83,7%) patients and cervical tomodensitometry in 31(18,7%). Surgical drainage was performed in 35(21,1%). Overall, 68(41,0%) patients presented a favorable evolution from which 27(16,9%) were treated as outpatient (diagram1). Factors associated with favorable outcome were (OR; 95%CI): age (1.17; 1.06-1.29; p=0.002), absolute white blood cell count (0.91; 0.87-0.96; p=0.001), no antibiotic use prior to consultation (0.26; 0.07-0.92; p=0.037) and absence of purulent material on ultrasound (0.07; 0.02-0.29; p<0.001). Size of lymph node (0.98; 0.96-1.00; p=0,057) or fluctuation (0.71; 0.21-2.39; p=0.57) did not achieved statistical significance.
Conclusion: Older patients without prior antibiotic use, those with lower absolute white blood cell count and no purulent material on ultrasound seem to better evolve than other children with likely bacterial acute cervical lymphadenitis. A decision algorithm to identify patients eligible for conservative management should include those predictive factors.

ID: 270 / PO2: 21
Poster Presentation Topics: General Pediatrics, Epidemiology
Neonatal Brachial Plexus Palsy – A Review

Cristina Ferreras LLamazares[1], Marta I Pinheiro[1], Hernâni Brito[2], Paulo Ferreira[2], Carlos Sistelo[2], Célia Madalena[2]
[1]Department of Pediatrics. Integrated Pediatrics Hospital, Centro Hospitalar de S. João, Porto-Portugal; [2]Department of Pediatrics. Centro Hospitalar da Póvoa de Varzim/Vila do Conde, Póvoa de Varzim-Portugal; cristinaferreras87@gmail.com

Introduction: Neonatal brachial plexus palsy (NBPP) is a motor and sensory disturbance of the upper limb, related to injuries of the spinal nerves that constitute the brachial plexus and it is usually a birth complication. NBPP is uncommon, with an incidence that ranges from 0.04 to 0.3 percent of live births. The only established risk factor for NBPP is shoulder dystocia. There are other risk factors, however, none of these factors have demonstrated a statistically significant predictive value for the occurrence of NBPP.
Purpose: The aim of this study was to know the NBPP incidence, the characteristics of them and their evolution.
Methods: Retrospective and descriptive study through the consultation of the clinical records and/or clinical trial of the newborns with brachial plexus lesion at the Pediatric Service of the Hospital Póvoa do Varzim / Vila do Conde between 2010-2016.
Results: There were 60 newborns with NBPP, 53% were female. The incidence was 1,06%. Instrumental vaginal childbirth happened in 50% of cases and a newborn with NBPP was born by cesarean. Shoulder dystocia occurred in 55% of birth. In this study 6% (4 newborns) were premature. The median birth weight was 3705g, 30% were macrosomic. 15% had a diabetic mother. The right arm was impaired in 65% of the newborns. It was detected to paralysis by asymmetrical Moro reflex in 53% of the cases, an asymmetry of the upper limb in 25% of the cases and crepitation of the clavicle in 21% of the newborns. All were sent for consultation of Physical and Rehabilitation Medicine, being 87% of the newborns were discharged with complete resolution of the paralysis. Using the Narakas Classification, the other 13% (8 newborns) without favorable evolution: 4 belonged to Erb

Palsy, 3 to Erb Palsy Plus and 1 newborn with complete paralysis. Fifty percent of these newborns required surgical intervention.
Conclusion: The NBPP is a complication in some ways unpredictable before birth, leaving many children with physical and motor disabilities of many degrees.Early identification and orientation is essential to minimize the appearance of sequelae.

ID: 165 / PO2: 22
Poster Presentation Topics: Infectious Diseases & Vaccines, Orthopaedics
Non-Typhoid Salmonella Infection of a Child Complicated with Spondylodiscitis in Taiwan

Tsung-Hua Wu[1], Fang-Liang Huang[2]
[1]Changhua Show Chwan Memorial Hospital, Taiwan; [2]Taichung Veterans General Hospital, Taiwan; pedcutegainer@gmail.com

Background: Although non-typhoidal Salmonella is the main cause of human salmonellosis, non-typhoid Salmonella infection complicated with spondylodiscitis is still a rare condition in immunologically normal children and it is difficult to diagnose.
Case Report: In this study, we describe the case of an immunologically normal 11-year-old girl with initial pneumonia and subsequently felt left low back pain. We diagnosed a spondylodiscitis of vertebral bodies L5–S1 (between lumbar 5 and sacral 1) due to Salmonella species group C1 infection, and totally recovered with cefotaxime therapy.
Conclusion: In our experience, we suggested that magnetic resonance imaging (MRI) is useful equipment for spondylodiscitis examination, and followed by microbiological diagnosis is also essential for decision of appropriate choice of antibiotic treatment.

ID: 255 / PO2: 23
Poster Presentation Topics: General Pediatrics
Pediatric Peri-Orbital Cellulitis: A 10 Year Review of Patients Admitted Into a Tertiary Hospital in Portugal

Tiago Augusto Paiva de Magalhaes[1], Vicente Rey y Formoso[1], Augusto Magalhaes[2], Carolina Faria[1], Ana Maia[1], Irene Carvalho[1]
[1]Department of Pediatrics, Integrated Pediatric Hospital, Centro Hospitalar S.João, Porto - Portugal; [2]Department of Ophthalmology, Centro Hospitalar S.João, Porto - Portugal; tiagoaugmagalhaes@hotmail.com

Introduction: Peri-orbital cellulitis is an infection of the eyelid and soft tissues surrounding the eye without affecting the ocular globe. It is an uncommon condition occurring mostly in children. It is divided into pre-septal and post-septal cellulitis depending upon the infection being anterior to the orbital septum including the surrounding soft tissues or posteriorly, involving the orbit. Although clinically similar, they are two different entities with distinct clinical implications. Despite being less common, post-septal cellulitis is more serious and can lead to severe complications. Hence the importance of early diagnosis and treatment.
Purpose: To characterize a population with peri-orbital cellulitis and compare the clinical features of pre and post-septal cellulitis.
Materials and Methods: A retrospective analysis of medical reports of patients (<18 years old) admitted to Hospital de São João in Porto–Portugal over a 10-year period with peri-orbital cellulitis. Diagnosis was confirmed by TC-scan. Comparison of both pre- and post-septal cellulitis concerning epidemiology, clinical presentation, treatment, complications and outcome.
Results: In total 183 patients were included: 126 with pre-septal and 57 with post-septal cellulitis. The mean ages for pre- and post-septal cellulitis were 3,9±3,6 and 6,5±6,8 years respectively. Post-septal cellulitis was more common in older patients (p=0,018). Sinusitis was the most frequent predisposing cause of disease in both cases (70,6%vs.84,2%). The most common clinical features were fever (44,8%) and ophthalmologic findings such as peri-orbital swelling (96,2%) and/or erythema

(69,4%) and ocular pain (18%). Photophobia was more frequent in post-septal cellulitis (p=0,033). Laboratory tests showed leukocytosis in 47,5% and increased CRP in 79,8%. No complications were described among patients with pre-septal cellulitis, whereas in post-septal cellulitis 14 (7,6%) patients had complications: 7 subperiosteal abscesses, 5 orbital abscesses (2 with cerebral empyema), 1 central venous thrombosis and 1 periosteal abscess. No laboratory test or other clinical finding showed statistically significant differences between pre- and post-septal cellulitis. The majority of cases were treated with ceftriaxone (65%) however, in most post-septal cellulitis (59,6% p<0,01) multiple antibiotics were preferred. Surgical sinus drainage was performed in 15 cases of post-septal cellulitis. Hospitalization was longer in post-septal cellulitis (10,21±8, 6 days p=0,002). Every patient had a favorable outcome.
Conclusion: Post-septal cellulitis is more common in older patients. Although photophobia is more frequent in post-septal cellulitis, there are no other laboratory or clinical finding able to differentiate between pre- or post-septal cellulitis. Hospitalization was longer in post-septal cases. Both forms had favorable outcomes in most cases.

ID: 168 / PO2: 24
Poster Presentation Topics: General Pediatrics
Perception and Attitudes Toward Self-Directed Learning Among Pediatric Residents and Faculties in Acgmei Pediatric Residency Program-Qatar

Ahmed Elghawaby, Khaled Siddiq, Muna Maarafiya, Hatim Abdelrahman, Manasik Hassan, Ahmed Alhammadi

Hamad medical corporation, Doha, Qatar; aalhammadi@hamad.qa

Background: Self-assessment, self-directed learning (SDL) is one of the cornerstones for new era of teaching. Considered as one of the ways to support transition from undergraduate to postgraduate learning. Self -directed learning is supporting the concept of lifelong learning and is considered one of the main new methods in medical education and teaching. Despite the importance of self-assessment to lifelong learning, studies had shown that physicians have limited ability to self-assess, therefore skills need to be developed to insure implanting and success of SDL among resident and faculty.
Purpose: To explore the concept of self-assessment, Self-directed Learning among pediatric residents and faculty. To explore the readiness of residents and faculty to implement SDL into the pediatric training program. To identify skills and methods that can be used to insure the success implantation of SDL in training program.
Methods: A cross sectional survey administered among pediatric residents and faculties from July -November 2016 in Hamad General Hospital, main tertiary hospital in Qatar. It includes; details of demographics, perception, attitude and experience toward Self-directed learning concept. Questions offered objective answers utilizing 5-point Likert scale that can be used to perform statistical analysis.
Results: Out of 99 respondents, 50%residents and 49%faculties. 90 percentage of both perceived lifelong learning as necessary to physicians. Good understanding of SDL and how to construct effective Individualized Learning Plan (60%) and (50%) respectively. Faculty can assess their own skills (80% vs 50 %, P=0.03), but less comfortable helping their resident write goals (45% vs 30%).
Conclusion: Faculty believe that SDL improve patient care. They comfortably identify area of strength and improvement compared to residents .Residents and faculties have different attitudes and skills related to self-assessment and SDL, Better understanding their knowledge and experience will guide residency program on how best to teach and further develop these skills. Postgraduate residents desire more guidance on how to engage in SDL, Residency programs need to provide explicit education during early years of the residency training on process of SDL, while Faculty modeling of SDL motivate learners and provide opportunity to demonstrate the process.

ID: 266 / PO2: 25
Poster Presentation Topics: Infectious Diseases & Vaccines
Pneumococcal and Rotavirus Vaccination in Primary Paediatric Care in Croatia

Helena Živić
Health facility Zagreb Center, Croatia; helena.strizic@gmail.com

Introduction: Invasive pneumococcal disease (IPD) and Rotavirus infections are a significant health problem among infants and toddlers in Croatia. There are opportunities for prevention in the form of vaccines, which are not yet included in the national routine vaccination program in Croatia.
Purpose: Aim was to evaluate the number of patients vaccinated with Pneumococcal 13-valent Conjugate vaccine Prevenar 13 and Rotavirus vaccine Rotarix in our primary paediatric practice.
Materials and Methods: We retrospectively collected and analysed electronic data of children aged 2 months-3 years in the period from January 2015 – June 2017, in our primary paediatric practice. Descriptive statistical analysis was used.
Results: From a total of 900 patients aged 2 months-3 years, in the period from January 2015 – June 2017, 87 children (9.66%) received Prevenar 13 and 13 children (1,44%) received Rotarix. All parents were advised to vaccinate their child with Prevenar 13 and Rotarix additionally at their first systematic examination at 1 month of age. The mean age of the patients who received Prevenar 13 was 14 months, age range from 2 to 30 months. Most of the patients 50 (57,47%) received 2 doses of vaccine, 12 (13,79%) received 3 doses, 20 (22,98%) received 1 dose, only 5 (5,76%) patients received 4 doses. None of the patients vaccinated during the first year of life with at least 2 doses developed IPD. In all cases of IPD children weren't vaccinated prior the disease, but parents decided to vaccinate them after the recovery. Side effects were registered in 30 cases, mostly injection site reactions, and fever in 10 cases. Only 13 (1,44%) children received Rotarix, which is a very low rate of vaccination against Rotavirus infection. The mean age of the children who received Rotarix was 4 months, age range 2 to 6 months All children received 2 doses of vaccine. Most of the children had an older sibling with complicated Rotavirus infection before, so parents decided to vaccinate this child. We registered side effects in 2 children, one had traces of blood in the stool for 2 days and the other had diarrhea for 3 days. None of the vaccinated children later developed Rotavirus infection.
Conclusion: Most cases of IPD and Rotavirus infection occur in otherwise healthy children and could be prevented by existing vaccines Prevenar 13 and Rotarix. It would be beneficial if these were included in the national routine vaccination program in Croatia.

ID: 272 / PO2: 26
Poster Presentation Topics: Obesity & Physical Activity
Prevalence of Overweight and Obesity in the Paediatrica Population of Martorell

Ana Moreira Echeverria, Mayela Solis Baltodano, Roger Garcia Puig, Evelyn Berbel
Hospital Sant Joan de Deu Martorell, Spain; anam9400@gmail.com

Introduction: Overweight and childhood obesity are a public health priority, especially in developed countries, because their high prevalence and health consequences. Due to this increase Spain has come to occupy one of the first positions in excess weight rates.
Hypothesis: We estimate that the prevalence in Martorell reaches similar rates to those of countries with high prevalence and that the high percentage of immigrant population of our área could be a factor of influence in their .
Objective: The objective of this study was: 1) to assess the prevalence of excess weight in children attending schools in our municipality 2) to determine the association with different variables that could influence their appearance. 3) analyze the trend throughout the study period.
Methodology: Cross-sectional and observational study. The study population consisted of a sample of 1892 schoolchildren aged between 3 and 12 years, who attended the 7 schools in the

municipality. BMI was calculated by measuring weight and height, and defined overweight and obesity according to IOTF standards. The prevalence of excess weight was analyzed according to the sex, age, type of school and nationality of the mothers.
Results: The prevalence of excess weight was 31.4% (22% overweight and 9.4% obese). Overweight in girls was 5.9% (p = 0.01) higher than in boys. They were overweight: 35.1% of students over 9 years of age, 37.2% of children enrolled in public schools and almost 50% of children of Latin American mothers, as well as obesity, 12.8% the children of Maghrebi.
Conclusion: The prevalence of overweight in Martorell schoolchildren was 31.4%. According to the multivariate analysis, in our municipality, the risk factors associated with overweight and obesity were: female sex, age over 9 years old, attending public school and being the son of a Latin American mother, adding the Maghreb origin of the mother for obesity. The trend over the period remained stable.

ID: 136 / PO2: 27
Poster Presentation Topics: Infectious Diseases & Vaccines, Orthopaedics
Pyogenic Spondylitis and Paravertebral Abscess Caused By Salmonella Saintpaul in an Immunocompetent 13-Year-Old Child: A Case Report

Shota Myojin, Naohiro Kamiyoshi, Masaaki Kugo
Himeji Red Cross Hosipital, Japan; shotamyojin@gmail.com

Introduction: Salmonella spondylitis is a rare disease, and it is known as an uncommon complication of Salmonella infection in immunocompetent children. To prevent treatment failure and neurological deficits, it needs prompt diagnosis and sufficient effort to identify the causative organism, and definitive therapy should be started as soon as possible. The positive rates of blood cultures are generally low. There are some other options to identify the causative organism such as Computed Tomography (CT) guided biopsy or surgical debridement, however when to perform these invasive interventions remains controversial.
Case Report: We report a case of a 13-year-old boy with 4-month history of occasional high fever and 3-month history of lower back pain, who was diagnosed with spondylitis of the L4-5 vertebral bodies and paravertebral abscess. Initial blood cultures were negative, therefore empirical antibiotic treatment was started intravenously. He responded well to initial conservative management, and was discharged after clinical improvement. During this course, we did not perform invasive interventions since the clinical course was favorable. However, he was re-hospitalized 2 weeks after discharge, and surgical debridement was performed which led to the detection of Salmonella saintpaul as the causative pathogen. Through thorough medical history taking, it was revealed that the possible source of infection was consumption of raw poultry eggs, or contact with poultry and its feces. Definitive antibiotic therapy was started. After a 6-week hospitalization, he was discharged and is currently under follow-up observation at our outpatient clinic with good recovery.
Conclusion: This is the very first case report of pyogenic spondylitis caused by Salmonella saintpaul. Salmonella should be considered as a causative pathogen of pyogenic spondylitis in immunocompetent children. Identifying the causative organism is essential to prevent treatment failure, and a high index of suspicion is needed for prompt diagnosis especially when blood cultures are negative. Invasive interventions such as CT-guided biopsy should be considered even if the clinical course seems to be uncomplicated. Taking a detailed social history can help to find the source of infection.

ID: 134 / PO2: 28
Poster Presentation Topics: General Pediatrics, Infectious Diseases & Vaccines
Recognition of Sepsis in the Paediatric Emergency Department

Rebecca Jane Fiona Powell
Leeds Teaching Hospital, United Kingdom; rebecca.powell7@nhs.net

Purpose: As part of the development of new sepsis guidelines in response to the national CQUIN and new NICE guidelines on sepsis in Paediatrics we undertook a retrospective audit comparing the new

guidelines to previous cases that had attended our emergency department to see how the new guidelines would affect management.
As part of the audit we looked at the literature available around observations and predicting significant illness based on these have shown that a single set of observations does not predict severity of illness but rather the trend of the observations show more significance. With the significant sign of illness being loss of beat to beat variability of heart rate which cannot be established after a single set of observations.
Materials and Methods: We looked at all children who attended the emergency department with a booking in diagnosis of unwell/feverish child. We reviewed 153 sets of notes and compared the initial observations to the new NICE guidelines for the septic child.
Results: Of the 153 notes reviewed 64 (41.8%) fell into the high-risk criteria for sepsis. Most this was due to one raised parameter such as raised respiratory rate or heart rate. Of the 64 cases 55 of them would not have been appropriate to treat as sepsis. Of the 9 cases that received IV antibiotics, only one had a concluding diagnosis of sepsis and required intensive care admission. The other 8 cases had infective diagnoses but were not septic. Of the 153 children reviewed in the ED over 125 of them were discharged home with no adverse events.
Conclusion: Had the new NICE guidelines been followed 64 children would have received IV antibiotics and required admission and further investigations. This would have had a significant financial and resource implication of unnecessarily treating children as septic. The average cost of a single night stay in hospital is £400 so had all these children received IV antibiotics and admission to hospital for one night the cost saved by discharging (correctly) the 55 children was £22000. Because of this audit we have created a sepsis flow chart to help with management of medically unwell children and have used elements from the sepsis 6 and NICE guidelines as well as considering opinions of senior paediatric staff. This chart is currently in use and we are auditing its use within the emergency department.

ID: 287 / PO2: 29
Poster Presentation Topics: Adolescent Health Choices
Reduction and Prevention of Tobacco Use Among Adolescents - Which Policy Measures Are Effective?

Gunter Maier
Institute for Health Promotion and Disease Prevention, Austria; gunter.maier@ifgp.at

Introduction: Adolescence is the stage of life where certain behavioral patterns develop and solidify. During this time adolescents typically experiment with legal and illegal substances and make their first experiences with tobacco, alcohol, and other drugs. These experiences often times lay the foundation of future health- and addictive behavior in adulthoodChildren and adolescents therefore are equally in the focus of health promotion efforts or health policy initiatives as well as marketing departments of tobacco and alcohol corporations.
Purpose: Using recent data from the Health Behavior in School-aged Children (HBSC) study we examine the relationship between health policy measures in the field of tobacco control/prevention and the actual smoking behavior of 15-year old students in 33 European countries. The main purpose of the analyses is to ascertain which policies are effective and therefore have the potential to protect children and adolescence and reduce smoking rates among them.
Materials and Methods: The HBSC study conducted in 2014 in 42 countries and regions across Europe and North America provides data on the smoking behavior of 15-year old students, which serve as basis for our analyses. We supplemented the HBSC-Data with information on national tobacco control policies obtained from the "Tobacco Control Scale 2013 in Europe". We then calculated the influence of each policy/measure by conducting logistic regression analysis.
Results: Increasing the price of cigarettes is widely regarded as most effective measure in order to reduce smoking prevalence on a population level. Our analyses clearly confirm this assumption: in countries where cigarette prices are relatively low, 15 year old students are twice as likely to smoke compared to countries where prices are high. Additionally strict legislation on smokefree work- and

public places, high national spending on public information campaigns as well as compulsory large direct health warning labels on cigarette packs are associated fewer adolescents who smoke.
Conclusion: Some of the measures we examined seem to have an impact on the smoking behavior of adolescents. The data at hand also supports the conclusion that a comprehensive implementation of a wide range of tobacco control policies lead to a significant reduction of smoking prevalence among adolescents.

ID: 173 / PO2: 30
Poster Presentation Topics: General Pediatrics, Emergency Pediatrics
Simulation-Based Pediatric Resuscitation in Undergraduate Medical Education

Uthen Pandee
Department of Pediatrics, Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand; uthenp@hotmail.com

Introduction: Simulation-based medical education (SBME) has been increasing use to be the effective teaching tool in medical education. Due to the high risk nature of pediatric resuscitation, it is unlikely that clinical competence in this area can be developed by bedside teaching alone. Therefore, it may be beneficial to use SBME teaching of pediatric resuscitation in undergraduate medical students.
Objective: To evaluate the use of SBME teaching of pediatric resuscitation in medical students.
Methods: Group of sixth year medical student from pediatric rotation attend simulation session from March 2015 to February 2016. The session has 30 minutes of skill teaching: Pediatric Basic Life Support and Pediatrics Advanced Life Support. Next 20 minutes will run case simulation and followed by 10 minutes of debriefing. The course was evaluated by self-evaluation and program evaluation questionnaires.
Results: A total of 132 medical students attend the simulation sessions. Almost of them were very valuable learning experience 123/132 (93%) students. There was 117/132 (89%) felt that the scenarios was realism and appropriate for the level of learner. The summarized and debriefing of the session very useful 121/132 (92%) and have more confidence to apply the knowledge in the future 115/132 (87%) students. They have add up some positive feedback; the session facilitate critical thinking and decision making, more engage and benefit than traditional learning as the lecture.
Conclusion: The medical students value pediatric resuscitation medical simulation highly as the learning strategy to enhancing critical thinking and decision making in the safe environment.

ID: 184 / PO2: 31
Poster Presentation Topics: Emergency Pediatrics
singapore paediatric heat injury study - a ten-year review

Wen Yang Neo, Samuel En Ci Quek, Sashikumar Ganapathy
KK Women's and Children's Hospital, Singapore; samuel.quek@mohh.com.sg

Introduction: Heat disorders are common in Singapore due to its tropical climate. Studies of paediatric heat injuries are few; and there have been no Singaporean studies on this topic. Our study hopes to fill this gap in knowledge.
Purpose: We hope to study the epidemiology and patterns of heat injury in Singapore. With this data, we aim to make recommendations in clinical management and prevention of heat injuries in children.
Materials and Methods: We conducted a retrospective study of patients between 0 and 17 years of age presenting to our paediatric emergency department who were diagnosed with heat disorder. We studied the demographic and clinical data over a ten-year period between 2005 and 2015.

Results: 58 patients presented to our paediatric emergency department for heat injuries between 2005 and 2015, of which 45 cases were identified for analysis. The greatest number presented with heat exhaustion (18 males and 18 females), followed by heatstroke in males (6), females (2), and heat cramps in males (2). Most of our patients were between 12 and 14 years old. The majority of heat disorder cases were exertional with an environmental component - usually involving sports in hot weather. There were no deaths during this period. Most patients survived till discharge with no sequelae. However, 18 patients developed end organ involvement, with 3 patients requiring intensive care, and 2 developing long term neurological sequelae.
Conclusion: Heat disorders are common worldwide and especially so in Singapore given the tropical climate. Our study has shed some light on the local prevalence, contributing factors, management and outcomes of heat disorders. We have highlighted areas of improvement in both pre-hospital and emergency department management which we hope will reduce the incidence, as well as the morbidity of heat disorders.

ID: 191 / PO2: 32
Poster Presentation Topics: Adolescent Health Communication
Socio-Demographic, Clinical Characteristic and Etiology of Dsocio-Demographic, Clinical, Diarrhea, Etiology, Pregnant Womeniarrhea Among Pregnant Women Visited to Icddr, B Hospital

Shahnawaz Ahmed, Abu Syed Golam Faruque
icddr,b, Bangladesh, People's Republic of; shahnawz@icddrb.org

Introduction: Gastrointestinal symptoms lead to morbidity in pregnancy, yet remain an unexpectedly under-researched topic. Infectious diarrhea is common in pregnancy but still poorly understood in developed as well as developing countries like Bangladesh.
Purpose: The present analysis aimed to underscore clinical, socio-demographic and etiological characteristics of pregnant women with diarrhea reported to the icddr,b hospital in Bangladesh.
Materials and Methods: During July, 2013 - Oct, 2016, a total of 1836 female aged 15-49 years patients attended in the Dhaka and Matlab Hospital of icddr,b, Bangladesh. Among them we have recruited 229 pregnant women who reported diarrhea with pregnancy as case and those were not pregnant but reported with diarrhea considered as control (1607). They were included into the hospital based Diarrheal Disease Surveillance System (DDSS) where 2% systematic surveillance patients from urban Dhaka Hospital and Health and Demographic Surveillance System (HDSS) patients from rural Matlab Hospital.
Results: A total of 229 (12%) pregnant women were visited to the Dhaka and Matlab icddr,b hospital for diarrheal illness. The analyzable sample was 229 pregnant women with diarrhea in which 86 (38%) from Dhaka hospital and 143 (62%) from Matlab hospital who admitted during this period. Mean age ±SD was 25±3.4, whilst maternal age ≤18 yrs (11% vs. 3%; p<0.001), use of non-sanitary toilet (40% vs. 33%; p<0.052), no treatment of drinking water (86% vs. 78%; p<0.006) and monthly income of the family (>100$), (92% vs. 86%; p<0.019) significantly higher among the pregnant women with diarrhea compared to counterpart. Only 10% reported diarrhea during their 1st trimester and rest 90% (29% vs. 61%) pregnant women developed diarrhea during 2nd and 3rd trimester respectively. Salmonella (14% vs. 6%, p <0.001) was detected more commonly amongst pregnant mother with diarrhea relative to their counterparts. Use of antibiotic prior to hospital (38% vs. 72%, p <0.001), dehydration status (55% vs. 81%, <0.001), number of stool (>10times/24 hrs), (66% vs. 74%, p <0.007) observed lower in pregnancy with diarrhea compare to opposed group. In multivariate analysis, significant associations with diarrhea among pregnant women were observed with Salmonella [OR: 3.71 (95% CI-2.04-6.76)], rural site [OR: 1.55 (95% CI-1.07-2.25)] and age group [OR: 3.83 (95% CI- 2.12-6.93)] after controlling for other co-variates.
Conclusion: Our study results highlight the ≤18 yrs of age, rural women and remarkable infectiousness of Salmonella in pregnant women with diarrhea and emphasize the need of active surveillance and comprehensive approach for prevention and control strategies.

ID: 298 / PO2: 33
Poster Presentation Topics: Rare Diseases, Preterm Infant
Subcutaneous Fat Necrosis in a Preterm Newborn – An Atypical Case

Alexandra Martins, Benedita Bianchi de Aguiar, Ana Maria Ferreira, Joana Rodrigues, Denise Schmitt, Margarida Azevedo
CHEDV, Portugal; lmartins.alexandra@gmail.com

Introduction: Subcutaneous fat necrosis is a rare clinical entity, which affects mostly term and post-term newborns. Although it's a self limited pathology, with spontaneous resolution without sequelae, adequate management and follow-up of these patients is extremely important due to the risk of late complications, namely hypercalcemia.
Case Report: A male preterm newborn was delivered at 33 gestational weeks after a preterm premature membrane rupture with placental abruption. A cesarean section was performed due to acute fetal distress. Birth weight was 2425g. There was no need for resuscitation, only supplementary O2, which was maintened for 48h and chest x-ray was compatible with a transient tachypnea of the newborn. Hypocalcemia was diagnosed on D3 (min 6,3mg/dL), with need for oral supplementation until D16 and presenting with normal leves afterwards. On D12 of life, inflammatory signs appeared on anterior surface of the right leg and right ankle, with pain during manipulation. Fever, hipotension and aggravation of the inflammatory signs progressed during the same day. C reactive protein and procalcitonin were elevated and antibiotics were initiated (flucloxacillin, cefotaxime and gentamicin). Hemocuture of this same day showed an Enterobacter cloacae. Inflammatory signs of the leg continued to progress, but there was no analytic aggravation. Flucloxacillin was replaced but vancomycin. An ultrasound excluded intra-articular compromise. On D16 a painful induration was noticeable on the location of the previous inflammatory signs. An x-ray showed subcutaneous calcification areas, which were confirmed by ultrasound, suggesting the diagnosis of subcutaneous fat necrosis. The newborn was discharged on D34 of life, with improvement of the inflammatory signs and no pain at manipulation. Analytic inflammatory markers were always negative from the D13 on. The newborn was reassessed with 1 month and 13 days of life, maintaining a slight induration on the leg, but with no inflammatory signs and no pain ate manipulations. Laboratory results were normal, including calcium level.
Conclusion: This case demonstrates an atypical case of subcutaneous fat necrosis, since calcium levels were low at the beginning and remained normal afterwards – this may be related to the low gestational age of the newborn, since published cases are mainly of term newborns. The etiology is still questionable, but may be due to sepsis, anoxia induced by local trauma during venous puncture or infection also caused by venous puncture as a portal of entry, Either way, subcutaneous fat necrosis is a rare entity which needs clinical awareness due to potential serious complications.

ID: 192 / PO2: 34
Poster Presentation Topics: General Pediatrics, Injuries & Trauma
Suspected Non-accidental Injury: The Double-Edged Sword

Lauren Edwards, Anindya Mukherkee
North West Deanery, United Kingdom; l.edwards@doctors.org.uk

Introduction: A three-year-old male presented to a hospital in the North West of England with a left femoral spiral fracture and a bowing fracture of left fibula. He had a history of multiple previous fractures. It was established that the fractures had occurred at different times and whilst in the care of at least three different family members.
Case Report: In view of history and concern of non-accidental injury, the patient was admitted and underwent a skeletal survey which revealed a posterior rib fracture dated between two to three weeks old, further raising the suspicion for non-accidental injury. The survey also revealed concerns about low bone density. Bloods taken at the time revealed normal full blood count, urea and

electrolytes, liver function tests and bone profile. The case and results were discussed with the local and tertiary paediatric radiology team who advised in absence of no concerning features of bone density and in view of the rib fractures being posterior, this was highly suspicious for non-accidental injury. On the contrary, the regional metabolic bone disorders team stated their concerns about the history of multiple fractures and were convinced that there were features of low bone density and query underlying metabolic bone disease influencing the occurrence of the multiple fractures. This left the general paediatric team in a unique position as we were confronted with a conflict of professional opinion between two specialities. Further investigations were undertaken and whilst results were awaited the child was placed in the care of paternal grandmother, the only close relative with whom no fractures had occurred. Three months later, results revealed a diagnosis of osteogenesis imperfecta type four.
Conclusion: We have reflected upon the effect of the double-edged sword in such cases: the hope that the results would not indicate NAI, balanced with the knowledge that an alternative medical diagnosis with long term health problems would otherwise be implicated. Paediatricians should always put the safety of patients first and we often aware of the stress placed on the family when a child undergoes a safeguarding assessment. We should also acknowledge additional stress when a medical diagnosis is made with long-term health sequelae.

ID: 241 / PO2: 35
Poster Presentation Topics: Child Mental Health, Adolescent Wellbeing
The Association Between Physical Activity and General Life Satisfaction in Lower Secondary School Students: The Role of Individual and Family Factors

Dorota Wiktoria Kleszczewska[1], Anna Dzielska[2], Agnieszka Małkowska-Szkutnik[3], Joanna Mazur[2]
[1]Institute of Mother and Child, Warsaw, Poland; [2]Institute of Mother and Child, Department of Child and Adolescent, Poland; [3]Warsaw University, Faculty of Pedagogy, Department of Biomedical Foundations of Development and Sexology; dorota.kleszczewska@imid.med.pl

Background: The relationship between physical activity and psychosocial health is widely discussed. The effect of demographic factors is taken into account in research on the health effects of physical activity. Only a few studies have considered the impact of family affluence.
Purpose: The objective of the paper was to investigate the association between physical activity and general life satisfaction in adolescents, taking into account individual assets and family factors.
Material and Methods: The survey conducted in the 2015 involved 4,085 lower secondary school Polish students. Life satisfaction was measured with the Students' Life Satisfaction Scale (SLSS) – shortened version. Hierarchical linear models were estimated by introducing demographic factors, Vigorous Physical Activity (VPA), self-esteem, family affluence, family relations and the perception of the school environment as independent variables.
Results: On average, life satisfaction among adolescents was M=4.66 (SD=2.23) which is 52% of the maximum score. In a comparison of young people who do not engage in VPA and those who exercise every day, the mean SLSS index increases from 4.23 to 4.90 ($p<0.001$) (Table). A final model explained 36.9% of the SLSS variability. Self-esteem is the main predictor of SLSS and a mediator of the association between VPA and SLSS. As family affluence decreases, the impact of physical activity on self-esteem becomes stronger.
Conclusion: Family material status may modify the impact of physical activity on the variability of the SLSS scores in school-aged children. Engaging adolescents from the poorest families in physical activity may contribute to an improvement of their self-efficacy and enhance their social inclusion.

ID: 271 / PO2: 36
Poster Presentation Topics: General Pediatrics, Child Mental Health
The Fear of Eating - A Case Report

Pedro Marinho, Francisco Ribeiro-Mourão, Ana de Carvalho Vaz, Vera Gonçalves, Mariana Costa, Hugo Rodrigues

Pediatrics Department, Unidade de Saúde Local do Alto Minho, Hospital de Santa Luzia, Portugal; a.pedro.marinho@gmail.com

Introduction: Choking Phobia defines a specific intense fear of choking on food, beverages, or pills, without any organic abnormalities being present. It is usually traced back to a past traumatic event involving choking, that happened to, or was witnessed by, the patient; however, this identifiable trigger may be absent. It appears to be more frequent in early adolescence, and some authors estimate the period between onset and detection ranges from 2 to 45 years.
Case report: The authors report the case of a previously healthy 6-year-old female, admitted to the Pediatric Emergency Department with acute-onset periumbilical pain, and a maternal perception of an excess of saliva, which the patient avoided swallowing. The parents also described that for the previous 3 weeks the patient's diet had been comprised of mostly yogurt, refusing to eat solid food elements, with accompanying intermittent bouts of abdominal pain. This was later associated with a choking episode with a piece of steak, that occurred during school lunch. The physical examination of the patient did not unveil any abnormalities. Using the available records, it was established a drop in WHO weight percentile curves, from 50-85th to 15-50th percentile. Blood tests did not present any pathological findings and an abdominal ultrasound was reported as normal. During the inpatient stay, it was possible to assess the behavior of the patient during meal time, with prolonged chewing on small bites, careful inspection of each food element, and avoidance of solid elements. Given this information, the hypothesis of Choking Phobia was considered, and efforts were concentrated on behavioral therapy, which were successful - the patient gradually accepting increasing amounts of solid foods, and decreasing anxious behavior at mealtime. In a follow-up outpatient evaluation, 20 days post-discharge, the patient had increased 1,4 Kg in weight, and the parents described normal diet patterns.
Conclusion: There is in literature a lack of descriptions of Choking Phobia, perhaps due to a wide variety of terms used for this condition, probably underestimating its prevalence. It is also commonly misdiagnosed as an eating disorder or a conversion disorder. In this case, the age of the patient represented an increased challenge regarding biopsychosocial assessment. In literature, both pharmacological (p.e. SSRI's) and cognitive-behavioral therapy, or their combination, have been used as treatment strategies. Increased awareness of Choking Phobia is necessary to prevent the deleterious long-term consequences, since it appears to have a good prognosis, given early detection.

ID: 110 / PO2: 37
Poster Presentation Topics: Child Mental Health
The Impact of Parental Involvement On the Psychomotor Development of Children with Disabilities

Sanda Kadiric-Kasap[1], Mirna Mlaco Hrkic[2]
[1]Health Center Zenica, Bosnia and Herzegovina; [2]Assotiacion "World in Pictures", Bosnia and Herzegovina; sandakadiric@hotmail.com

Introduction: This is a comparative case presentation between two boys who had the same symptoms, passed same diagnostic procedures and had same treatment during two years.
Methods and Results: Both boys have young and healthy parents. Family history - negative on neurological diseases. Psychomotor development seemed normal until the age of 12 months, able to sit, smile, pronounces few words. At the physical examination in the age of 18 months they had no progress in development of speech and was noticed a reduce of attention, the parents were meet and explained about possibilities of diagnostic and therapeutic treatments. The first boy had to visit a doctor more often because he has an bronchial asthma, fluticasone propionate inhaler in therapy but the parents couldn't accept this diagnose and therapy. He also has a phimosis but they don't want a surgical treatment so this boy had an recurring urinary infections. In the age of 32 month he was diagnosed an disharmonious development, undeveloped speech. The second boy was not coming to a doctor until the age of 4,5 years and then he was diagnosed an disharmonious development,

undeveloped speech. Neuropediatric examination: no clear neurological deficit. Laboratory analysis - normal, MRI -no abnormalities for second boy, first one didn't do it, ABR test - normal hearing for second boy, first one didn't do it, ocular examination- no disturbance. EEG – no disturbance.
Treatment: Occupational speech and physical therapy for two years in assotiacion "world in Pictures" with child psychologist, logoped and social educator.
Conclusion: The first boy has no progress in psychomotor development but the second boy has a very good progress and he is going in preschool education now. The difference, during these two years, was in parental involvement in work with their sons. Even the first boy was earlier started with the treatment he has weaker success.

ID: 214 / PO2: 38
Poster Presentation Topics: Adolescent Wellbeing
The Involvement of Young People in Programmes to Secure Health - Systematic Review Findings

Anna Gavine[2], Aixa Y. Alemán-Díaz[1], Candace Currie[1], Irene García-Moya[3], Gerald Humphris[1], Antony Morgan[4]
[1]University of St Andrews, WHO Collaborative Centre for International Child and Adolescent Health Policy, UK; [2]University of Dundee, School of Nursing and Health Sciences, Dundee Centre for Health and Related Research, UK; [3]University of Hertfordshire, School of Health and Social Work, CRIPACC, UK; [4]Glasgow Caledonian University London, UK; ayad@st-andrews.ac.uk

Introduction: This systematic review summarises the scientific evidence base on the benefits of involving young people in the development, implementation and evaluation of programmes aiming to secure health and its related outcomes.
Purpose: The objectives were to: (1) describe the range of theoretical perspectives to develop appropriate logic models that can help to make explicit pathways to health and wellbeing; (2) assess the evidence of the impact that involving young people can have on programme effectiveness; (3) synthesize the accumulated knowledge on the views that young people have of being involved; and, (4) understand the barriers and facilitators associated with the meaningful, appropriate and effective involvement of young people.
Results: The search identified 42 unique studies that involved young people in one or more of: issue identification, needs assessment, development of the intervention, delivery of the intervention and evaluation of the intervention. The majority of studies were conducted in high-income countries. Programmes were exclusively targeted at adolescents (i.e. 10-19 year olds) and focused on a range of health topics with sexual health being the most common. Analysis indicates that participatory approaches with young people are being used in a range of programmes related to the development of health behaviours. Such programmes have demonstrated the capacity to engage and empower young people, for example we found consistent effects for knowledge across a wide range of behaviours. These programmes have also demonstrated some positive effects in health behaviours, especially tobacco use and healthy eating where consistent significant positive effects were identified. However, we found limited effect on behaviour for most other outcomes. Evaluation in the existing studies failed to separately examine the specific contribution of young people's involvement to programme effectiveness, an aspect that warrants further attention in the future.
Conclusion: Involving young people in programmes enables them to actively participate in matters that affect them. This review draws a striking picture signalling a lack of high-quality research to inform policies and programmes aiming to do just that. This is a critical weakness in the evidence that affects research, policy and programme design and its effectiveness in this area. More high quality studies in which young people are involved in multiple components of participation and also compare the effects between young people actually involved in the implementation and/or delivery are necessary. Additionally, we encourage better scientific reporting that allows others to replicate high quality interventions. We support the development of reporting standards to improve transparency and research practices, as well as tools that enable the implementation, evaluation and replication of effective programmes.

ID: 257 / PO2: 39
Poster Presentation Topics: General Pediatrics
Tinu Syndrome - Two Cases Reports

Sofia Helena Ferreira, Ana Teixeira, Helena Pinto
Centro Hospitalar de São João, Portugal; sofiahferreira@gmail.com

Introduction: Tubulointerstitial nephritis and uveitis syndrome (TINU) is a rare disease and it affects more commonly young adult females. It is characterized by both acute tubulointerstitial nephritis (TIN) and uveitis, although they are not always present at the same time. We report two cases of TINU, with different presentation and clinical course, but still both illustrative of this disorder.
Case Report: Twelve-year-old-boy admitted to our department because of elevation of serum creatinine level. Two weeks before, he presented vomiting, nausea and anorexia and he reported common asthenia and one episode of foamy urine. He consumed tea plants frequently. Physical examination was normal. Laboratory tests revealed elevation of serum creatinine, BUN and cistatin C, glycosuria, proteinuria, microalbuminuria and β2-microglobulinuria. Acute EBV, CMV, parvovirus B19, herpes simplex 1 and 2, mycoplasma and clamydea pneumonia infections and auto-immune diseases were excluded. Ultrasonographic (US) examination of the abdomen and pelvis showed increased kidney echogenecity and scintigraphy revealed bilateral cortical lesions. He presented anterior uveitis two months later and topic corticosteroids were started. Kidney histology showed TIN. Because he presented impairment of renal function associated to histological abnormalities, we decided to use oral corticosteroids. Eleven-year-old-boy, with history of anterior uveitis with initial good improvement after treatment with topic corticosterois, but, because of recurrence, methotrexate was associated, admitted to our department because of glycosuria and β2-microglobulinuria. He was asymptomatic and his physical examination was normal. Three months later, he repeated laboratory tests, revealing normal renal function, normal serological and immunological study and regression of the abnormal urinary findings previously described and a normal abdominal and pelvic US examination.
Conclusion: In conclusion, the cases described regard a rare disease, highlighting the necessity to consider this diagnosis when TIN and uveitis are associated. Despite frequent recurrences of uveitis, complete resolution of renal changes is common. Systemic corticosteroids may be considered in progressive or significant renal disease.

ID: 207 / PO2: 40
Poster Presentation Topics: General Pediatrics, Epidemiology
What is Causing Acute Interstitial Nephritis in the Pediatric Age Group? – the Experience of a Third Level Hospital

Inês Maio[1], Liane Correia-Costa[1,2], Teresa Costa[1,2], Conceição Mota[1,2]
[1]Pediatrics Department, Centro Materno Infantil do Norte, Centro Hospitalar do Porto and Instituto de Ciência Biomédicas Abel Salazar, University of Porto; [2]Pediatric Nephrology Unit, Centro Materno Infantil do Norte, Centro Hospitalar do Porto and Instituto de Ciências Biomédicas Abel Salazar, University of Porto; inesmaiogoncalves@gmail.com

Introduction: Acute Interstitial nephritis (AIN) is an increasingly important cause of acute kidney injury and is classically divided into drug-related and non-drug related types. The most common cause of AIN, in all age groups, is related to the use of non-steroidal anti-inflammatory drugs (NSAIDs), but other causal factors, such as infections and tubulointerstitial nephritis with uveitis (TINU) should also be considered.
Purpose: To describe the epidemiological and clinical characteristics, as well as the risks factors for poor outcome, in pediatric patients diagnosed with AIN.
Materials and Methods: Retrospective analysis of all children and adolescents aged <18 years, admitted as inpatients from 2001 to 2016 in a tertiary hospital, with the diagnosis of AIN. Clinical records were reviewed. Statistical analysis was performed in SPSS.

Results: Thirteen patients were included in the present analysis, 7 boys and 6 girl, with a median (25th percentile-75th percentile, P25-P75) age of 15 years (12-16.5yr). NSAID-associated NIA was the most common cause among cases with a predisposing factor identified (n=5/10) and ibuprofen was the most commonly implied drug. One case was associated with a rotavirus infection. Acute kidney injury manifested with oliguria only in 3 cases. On admission, leukocyturia was present in 12 (92%) cases and erythrocyturia in 9 (69%). None presented eosinophiluria. Eight (62%) patients were treated with corticosteroids and only 1 case needed peritoneal dialysis. The median (P25-P75) time until recovery was 8 (5-10) days and all patients experienced full renal function recovery. The number of days until full recovery was correlated with the maximum serum creatinine values (ρ =0.22; p=0.019) but no association was found with the use of corticosteroids.
Conclusion: As described in the literature, NSAIDs were found to be the most common causative agent of AIN in our series. We report an interesting association between maximum serum creatinine and a lengthier recovery. Our results do not support the empiric suspicion that corticotherapy might accelerate recovery in AIN patients but larger prospective studies are needed to allow further conclusion on this.

ID: 107 / PO2: 41
Poster Presentation Topics: General Pediatrics
Effects of a School-Based Asthma Intervention On Child and Parental Illness Beliefs About Asthma and Exercise.

Marina Reznik, Philip O. Ozuah
Montefiore Medical Center, Albert Einstein College of Medicine, United States of America; mreznik@montefiore.org

Introduction: Physical activity (PA) is important for asthma management. However, child and parental illness beliefs such as fear about asthma attacks with exercise may preclude child PA participation. We developed a multifaceted school-based intervention to address this and other barriers to PA.
Purpose: Our objective was to assess intervention effects on asthma and exercise risk perception, self-efficacy and outcome expectancy in urban schoolchildren with asthma and their parents.
Materials and Methods: We conducted a pilot cluster RCT in children (7-10 years) with asthma attending 4 Bronx, New York schools (2 intervention, 2 control). Intervention consisted of a school-wide asthma awareness event, collaboration with child's physician to assure optimal treatment, classroom-based PA, and asthma education for families and school personnel. Parents and children completed surveys at baseline and 6-months post-intervention to assess asthma and exercise risk perception, self-efficacy and outcome expectancy. ANOVA was used to compare scores between two groups controlling for baseline.
Results: We recruited 109 child-parent dyads (mean age 8.6 (SD .99) years, 53% male, 80% Hispanic). Post-intervention, parents were significantly less likely to believe that exercise is harmful to asthma and were less worried about stigma than controls. Children tended to feel more competent in overcoming barriers to PA, had a greater intention to participate in PA, were less likely to feel that exercise would have negative consequences on asthma, and were less worried overall and about asthma-related stigma (Table).
Conclusion: Our intervention improved child and parental illness beliefs about asthma and exercise. These results may have implications for policy change to incorporate intervention components in urban schools.

Table. Comparison of intervention and control groups on child and parental illness beliefs about asthma and exercise

Outcome Measures	*Intervention (n=58)*	*Control (n=47)*	*P value*
PARENTS			
Outcome Expectancy – Asthma[b]	0.80 (0.65; 0.95)	1.06 (0.90;1.22)	0.020
Risk Perception – Stigma[b]	1.01 (0.74; 1.27)	1.49 (1.21;1.78)	0.014
CHILD			
Self-Efficacy – Barriers to PA Participation[c]	2.22 (2.09; 2.34)	2.04 (1.90; 2.18)	0.063
Intent to Participate in PA[c]	8.27 (7.84; 8.71)	7.73 (7.25; 8.21)	0.098
Outcome Expectancy – Negative Effects of PA[b]	0.76 (0.61; 0.91)	1.01 (0.84; 1.17)	0.035
Risk Perception – Overall Scale[b]	1.92 (1.80; 2.05)	2.14 (2.00; 2.28)	0.024
Risk Perception – Stigma[b]	1.55 (1.35; 1.76)	1.90 (1.68; 2.13)	0.024

[a]presented as mean (95% CI); PA=physical activity. ANOVA was used to control for baseline scores.

[b]lower score = desired.

[c]higher score= desired.

ID: 219 / PO2: 42

Poster Presentation Topics: Endocrinology & Growth

Patient Support Programs: Global Footprint and Best Practice for Patients and Healthcare Professionals

Daniel Richter, Annett-Helen Schoennagel, Ekaterina Koledova
Merck KGaA, Darmstadt, Germany; ekaterina.koledova@merckgroup.com

Introduction: Patient Support Programs (PSPs) delivered via a variety of channels are important to educate, support, assist with access/management, and provide care for patients and healthcare professionals on the use of medicinal products.

Purpose: To show how the application of a best-practice governance model, including Performance Mapping, can optimize the benefit to patients from PSPs, using the specific example of the PSPs available to patients taking recombinant human growth hormone (r-hGH; somatropin).

Materials and Methods: The main tenets of the PSPs are in place to support sound principles that are consistent with applicable laws and codes and to avoid improper incentives. The PSPs meet all ethical, legal and regulatory obligations, including pharmacovigilance requirements, and the design and execution are fully documented. The PSPs are run under medical-governance processes, and the accountability and responsibility for each PSP is assigned to a lead person in each country. In addition, all newly planned PSPs have to be approved by a cross-functional governance board. A global policy and supportive training for PSPs, with the mapping and tracking of all ongoing PSPs though a central database, ensures the high quality of each PSP is maintained. In the event a certain defined risk threshold is exceeded by a PSP, a mitigation plan is initiated.

Results: Through the application of our model, we have achieved efficient and holistic PSP governance, from the planning to reporting stages, with clear responsibilities and structures leading to accountability and synergies. As of June, 2017, there were more than 150 planned or ongoing PSPs worldwide. Of these, more than 40 related to endocrinology (four in North America, nine in Latin America, 18 in Europe, the Middle East and Africa, and ten in Asia–Pacific), including >48,000 patients and >64,000 patient interactions. The overall ratio of patient interactions to active-patients, measured as a part of performance mapping, was 1.31 in the second quarter of 2017. The PSPs interacted with patients through nurses (12), call centres (10), or both (14); three PSPs combined these channels with a website or app, and two used only the digital channels.

Conclusion: The application of collaborative cross-functional activities (governance, implementation, standardization, quality and safety) is an integral part of all Merck PSPs worldwide.

ID: 236 / PO2: 43
Poster 3 Topics: Autoimmunes, Adolescent Wellbeing
Quality of Life in Children and Adolescents with Juvenile Idiopathic Rheumatoid Arthritis in Western Providence of Saudi Arabia

Shatha M Albokhari, Mohammed A Muzaffer
King Abdull-Aziz University Hospital, Saudi Arabia; halbokhari@kau.edu.sa

Objectives: Juvenile Idiopathic Rheumatoid Arthritis (JIA) is a disabling disease that associates a challenging life style and exposes to impaired quality of life (QOL). This study aimed to evaluate the QOL of children with JIA using the childhood health assessment questionnaire modified for Arab children (CHAQ-MAC).
Methods: A cross-sectional study carried out among children aged≤18 years and following for JIA at the Pediatric Rheumatology outpatient clinic, inpatient ward and daycare unit in King Abdulaziz University Hospital, Jeddah, Saudi Arabia,in the period February 2017-July 2017.Children or their parents were invited for face-to-face interview, and a phone interview was done for patients who missed their appointments.The CHAQ.MAC investigates 34 activities of daily life(ADL) classified into 8 life domains. A statistical model was used to calculate a total CHAQ.MAC score (range=0 - 33; Cronbach's alpha=0.966); with higher values indicating poorer QOL.
Results: Forty-four children with JIA were included; male ratio=0.63; mean±SD age=9.95±5.44. Systemic-onset JIA was the most frequent type (27.3%), followed by polyarticular (15.9%) and oligoarticular (13.6%); and 47.7% of the patients were on treatment. Pain was reported among 43.2%, with knee being the most frequent localization (27.3%); where as morning stiffness was reported in 20.5%. Assessment of QOL showed mean CHAQ.CAM score=2.89 (75th centile=3.00).With respect of ADLs, up to 22.7% of the children complained of difficulty; and 31.8% reported a difficulty in at least one of the 34 investigated ADLs. With respect of the life domain, the percentage of children who reported difficulties varied between 6.82% for eating and 27.3% for activities; while both dressing & grooming and hygiene was subject of difficulty for 13.6%. Further, 4.5% to 13.6% of the children needed help to execute the related ADLs, depending on the life domain, and up to 9.1% used aids or devices. Poor QOL, as indicated by higher CHAQ.CAM scores, was associated with articular pain (p=0.003) and specific medication (p=0.043).
Conclusion: Approximately one-third children with JIA encounter varying levels of difficulty in ADLs, requiring assistance in 13.6% of the cases. Children with arthralgia and those on specific treatment are at higher risk of impaired QOL, which emphasizes the need for systematic screening for treatment adverse effects and joint pain and implementation of efficient management to improve QOL.

ID: 238 / PO2: 44
Poster Presentation Topics: NICU
Congenital Cmv – Approach to Screening Neonates

Maria Chiara De Nardo, Nilüfer Güzoğlu, Prakash Desai
Chelsea and Westminster hospital, United Kingdom; mariachiaradenardo@libero.it

Introduction: Congenital Cytomeglovirus (cCMV) is the most common congenital infection that is associated with a wide spectrum of clinical symptoms. Early detection and treatment of affected infants may improve outcomes. However, there is no consensus on the prospect of CMV screening in neonates.
Purpose: The screening criteria for Congenital CMV are not uniform across Neonatal Units in United Kingdom. Many units screen for cCMV if they are born Small for Gestational Age (SGA) or with Intra uterine growth restriction (IUGR) (Symmetrical or Asymmetrical). The criteria for SGA is also not uniform with some units consider birth weight less than 2nd centile or less than 9th centile. Babies are also screened for cCMV after detecting changes in intracranial calcification, cysts, lenticulostriate vasculopathy, ventriculomegaly on cranial ultrasound (CrUSS). In this observational study, we

Table 1. Demographic characteristics, symptoms and outcome of cCMV infants

cCMV infant	Gestational age (weeks)	Birthweight (gr)	Centile	Symptoms	Outcome
Baby 1	26+4	1008	50th °-75th	Prematurity	Died
				Intracranial cyst	
				Thrombocytopenia	
Baby 2	35+4	2423	25th -50th	Exomphalos	Died
				Heart disease	
				Gram positive sepsis	
Baby 3	36+3	1825	< 2nd	Hypoglycaemia	No treatmentFol-low-up
				Symmetrical IUGR	

Table 2. The reason of CMV screening test of infants

Reason	cCMV
IUGR/SGA (n=132)	2
IUGR and Cranial cyst/calcification (n=4)	1
Microcephaly (n=7)	0
Cranial cyst/calcification (n=27)	0

aimed to see if our screening of well babies mostly done for IUGR/SGA or CrUSS abnormalities pick up cCMV.

Methods: Between January 2014 and August 2017, all blood or urine samples sent for testing CMV from infants within the first 21 days were included. Reason of request, and birth weight were documented. CMV was established by detection of CMV DNA by real-time polymerase chain reaction testing in body fluids.

Results: During the study period, CMV testing was performed in 170 infants. 132 infants were IUGR/SGA, 27 infants had intracranial calcification/cyst on CrUSS, 4 infants were IUGR with Cr USS changes and 7 infants had microcephaly. Congenital CMV infection was detected in 3 of 170 (1.8%) infants tested.

Conclusion: In the study, all the 3 babies identified were admitted to the neonatal unit and none of the well babies in postnatal ward who were investigated for cCMV were positive. Babies who had isolated CrUSS findings were negative. This would indicate for us to screen only symptomatic or symmetrical IUGR babies rather than all IUGR/SGA babies and based on antenatal history.

ID: 234 / PO2: 45

Poster Presentation Topics: General Pediatrics, Epidemiology

Smoking During Pregnancy: Impact On the Newborn?

Marta Isabel Pinheiro[1], Cristina Ferreras[1], Hernâni Brito[2], Paulo Ferreira[2], Carlos Sistelo[2], Célia Madalena[2]

[1]Department of Pediatrics. Centro Hospitalar São João, Porto-Portugal; [2]Department of Pediatrics. Centro Hospitalar da Póvoa de Varzim/Vila do Conde, Portugal; marta_isa_pinheiro@hotmail.com

Introduction: Smoking during pregnancy increases the risk of infertility; maternal and fetal adverse outcomes and postnatal problems have also been described. All pregnant women should be screened for the use of tobacco and it is a special occasion to promote smoking cessation; it is an important modifiable risk factor with maximum benefit in the first trimester.

Purpose: This study aims to discover the prevalence and the habits of mothers who smoked during pregnancy at Centro Hospitalar da Póvoa do Varzim/Vila do Conde-Portugal and the characteristics of pregnancies and newborns.
Materials and Methods: Prospective analysis of medical questionnaires made to new mothers who smoked during pregnancy, whose children were born at our hospital between July 2014 and July 2017. It is possible that some pregnant women hide their true smoking status. The confidentiality of the data was ensured.
Results: The group included 132 postpartum women with a 30 years-old median age (corresponding to a prevalence of 5.1% of smoking mothers in this period), predominantly healthy; 95.5% of the pregnancies were well monitored and 4.5% were poorly monitored; 49.2% were primiparous, 19% had a previous abortion. On average, women started smoking at the age 16 (on average, 10 cigarettes/day) and there were 79.5% of fathers who smoked (15 cigarettes/day). According to Fagerstrom's test, 80.3% of mothers had a low degree of tobacco dependence, 18.9% moderate and 0.8% high. During pregnancy, 66% reduced smoking to half and 19% stopped it; 57.6% said they were advised to stop smoking (13% preconception), 2.3% had a specific medical appointment and 2.3% did pharmacotherapy. The mean gestational age was 39 weeks (min 32; max 41) with an average weight at birth of 3147g (min 2090g; max 4690g; 5.3% of low weight); 17.4% of pregnancies had some complications and 3% of newborns required neonatology care.
Conclusion: Smoking prevalence during pregnancy, in our center, was lower than other studies (11-27%). Although there was no control group in this study, there seems to be no relation between smoking and lower gestational age or low birth weight, as described. However, pregnancy was associated with a change in smoking habits. This study brings to light the need for professionals to improve their knowledge on prevention of smoking during pregnancy and the postnatal period, with specific data, appointment and, if necessary, suggest pharmacotherapy.

Conference organisers
Excellence in Pediatrics[1]
E-mail: secretariat@ineip.org
[1] Rue des Vignerons 1A, Case Postale 359, 1110 Morges 1 (VD), Switzerland.

Citation information
Cite this article as: 9th Excellence in Pediatrics Conference - 2017 Book of Abstracts, *Cogent Medicine* (2017), 4: 1408251.

Cogent Medicine **(ISSN: 2331-205X) is published by Cogent OA, part of Taylor & Francis Group.**