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HBSC, Belgium

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George A. Syrogiannopoulos
Professor of Pediatrics, EIP, Greece
**OP1-RD-CC: Oral Presentations on Rare Diseases and Chronic Conditions**

### Abstracts

**ID:** 265 / **OP1-RD-CC:** Presentation 1  
**ORAL**  
**Topics:** Chronic Conditions, School  
**Keywords:** goal orientation, adolescents, chronic conditions, school, family

#### SCHOOL AND FAMILY AS PREDICTORS OF GOAL ORIENTATION AMONG ADOLESCENTS WITH AND WITHOUT CHRONIC CONDITIONS

**Agnieszka Malkowska-Szkutnik,** Joanna Mazur  
Institute of Mother and Child, Poland

**Introduction:** Goal orientation (GO) is one of the most important psychological skills. Especially in adolescence GO helps young people make decisions and plans associated with the developmental tasks realization.

**Purpose:** The aim of this study was to assess whether perception of school and family predicts goal orientation among Polish adolescents with and without chronic condition (ChC). The following research problem was defined: Are there any differences between goal orientation predictors in two groups - healthy and unhealthy adolescents?

**Material and Methods:** This study was a part of the Health Behaviour in School-aged Children survey, a WHO Collaborative Cross-national Study (HBSC). This research was supported with Grant funded by National Science Centre (Grant No. 2013/09/B/HS6/03438). Data were collected in Poland in 2014 on the sample of 4085 13-15 year-olds. The HBSC standard questionnaire was used. GO was measured by Goal Orientation Scale for Teenagers. The following scales and items were used: student’s autonomy during lessons, teacher’s support, peer support, school related parents’ support, academic rewards, teacher’s praise, school effort, academic achievement (self perception and teachers perception), school performance (social position in peer school group), family social position. Mean indexes of scales were measured. The one-way analysis of variance (ANOVA) and linear regression model were used. Regression models were estimated separately for healthy adolescents and adolescents with chronic conditions.

**Results:** One fifth of the students indicated the occurrence of chronic conditions. There was no difference in GO index between healthy and unhealthy adolescents. Mean Go score was 17.83 (SD=4.696) for students without ChC and 17.52 (SD=5.071) for students with ChC. Regarding to adolescents without ChC, 6 out of 13 variables were included in the final model, which explains 19.2% of the GO variability. There were: academic achievement (self perception), parents support, school performance (social position in peer school group), teacher praise, family social position and academic achievement (teacher opinion). Regarding to the adolescents with ChC 7 variables were included in the final model which explains 24.7% of the GO variability. The most important were: parents support and academic achievement (self perception). For adolescents with ChC also school effort and grade were predictors of the GO.

**Conclusion:** Predictors of goal orientation among healthy and unhealthy adolescents were different. The goal orientation may be reinforced by parents support and reducing of school stress among adolescents with chronic conditions and by high level of academic achievement among healthy adolescents.

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**ID:** 182 / **OP1-RD-CC:** Presentation 2  
**ORAL**  
**Topics:** Chronic Conditions  
**Keywords:** adolescent health, chronic condition, health-related quality of life, life satisfaction, psychological symptoms.

#### HEALTH-RELATED QUALITY OF LIFE IN ADOLESCENTS WITH CHRONIC CONDITIONS: HIGHLIGHTS FROM THE PORTUGUESE HBSC-2014

**Teresa Cristina Santos**1,2, Margarida Gaspar Matos1,2, Tânia Gaspar1,2, Celeste Simões1,2, Isabel Leal2, Maria Céu Machado3  
1Projecto Aventura Social-Social Adventure Team/FMH, Faculdade de Motricidade Humana Universidade de Lisboa, Portugal; 2ISAMB, Instituto de Saúde Ambiental, Faculdade de Medicina, Universidade de Lisboa, Portugal; 3William James Center for Research, ISPA - Instituto Universitário, Lisboa, Portugal; 4Lisbon Lusíada University, Portugal; 5Departamento de Pediatria do Hospital de Santa Maria, CAML, Centro Académico de Medicina de Lisboa, Portugal.

**Introduction:** Living with a chronic condition during adolescence, where several changes occur (biological, psychological and social), is a major challenge for adolescents, that can, therefore, be at higher risk for vulnerable health outcomes.

**Purpose:** The main aim is to assess the impact of living with a chronic condition on health-related quality of life (HRQoL), psychological symptoms (depression-“feeling low”; anxiety-“feeling nervous”) and life satisfaction, comparing with healthy peers.

**Materials and Methods:** Using the HBSC 2014 database (cross-sectional survey), a representative sample of 6026 Portuguese adolescents (52.3% girls; average age: 14±1.7 years old), attending the 6th, 8th and 10th grades, and, randomly selected from 36 clusters of mainstream schools (473 classes) were included. From these, 1022 adolescents reported to have a chronic condition (17.8%). The above study variables were respectively measured with KIDSCREEN-10, HBSC Symptom Checklist and Cantril’s Ladder of Life Scale. Chronic condition was defined as a long-term disability, illness or medical condition that has been diagnosed by a doctor. Descriptive statistics and ANOVA was performed for
the total sample, and a linear regression (controlling for age, gender, and FAS-Family Affluence Scale, an alternative measure for Socioeconomic Status) was conducted only for the group of adolescents with chronic condition. The significance level was set at p<0.05.

Results: Adolescents with a chronic condition were more likely to have a poor HRQoL (75.63±14.0 vs. 78.23±13.3; F(1,5754)=31.60, p<0.001), higher frequency of reported symptoms of depression (4.40±1.1 vs. 4.16±1.3; F(1,5755)=37.66, p<0.001) and anxiety (3.96±1.3 vs. 3.56±1.4; F(1, 5755)=75.58, p<0.001), and worse life satisfaction (7.26±2.1 vs. 7.47±1.9; F(1,5755)=8.90, p=0.003), when compared with their healthy peers. The final adjusted regression model was statistically significant [F(6, 934)=133.53, p<0.001] and accounted for approximately 46% of the explained variance (R²=0.46). A higher health-related quality of life was significantly associated with all the study variables: psychological symptoms, namely depression (β=3.61, p<0.001), and anxiety (β=1.32, p<0.001), and also with life satisfaction (β=2.21, p<0.001), being depression the most important one.

Conclusions: These findings highlight that the adolescents living with a chronic condition can be more vulnerable and may present a higher risk for poor HRQoL, psychological symptoms and life satisfaction, thus, more likely to need support and opportunities for a healthy youth development. Interventions should implement a “health assets” approach and take into account a more multifactorial understanding of the impact of a chronic health condition in adolescents, including the assessment of these variables and the promotion of a healthy psychological well-being.
A sixteen year old male presented to the emergency department with a one week history of daily copious vomiting and intermittent diarrhea. Prior to this, he had multiple medical visits to his family physician and subsequently to an adult gastroenterologist. Initial investigations included stool examination which revealed positive Clostridium difficile toxin. Treatment with oral metronidazole was commenced. However his symptoms worsened, which resulted in multiple emergency department visits and subsequent admission for intravenous hydration and ongoing metronidazole therapy. An endoscopic examination was normal. Despite multiple intravenous antiemetics, his vomiting did not abate and he developed Mallory Weiss syndrome as well as coffee ground emesis. On further history, he had one past episode of severe intractable vomiting seven months previously at which time, he was diagnosed with gastroesophageal reflux and placed on proton pump inhibitor (PPI) since. A Paediatrician was eventually consulted and further careful history revealed the diagnosis.

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On further history, he had one past episode of severe intractable vomiting seven months previously at which time, he was diagnosed with gastroesophageal reflux and placed on proton pump inhibitor (PPI) since. A Paediatrician was eventually consulted and further careful history revealed the diagnosis.
INTRODUCTION: X-linked lymphoproliferative disease (XLP) is a rare primary immunodeficiency characterized by susceptibility to severe Epstein-Barr virus (EBV) infection. XLP-1 is caused by a mutation in SH2D1A which encodes the intracellular adaptor molecular SAP, expressed mainly in T cells and NK cells. It regulates signal transduction pathways downstream of the SLAM family of surface receptors to control CD4+ T cell (and B cells), CD8+ T cell and NK cell function. It can present as fulminant hemophagocytic lymphohistiocytosis (HLH), hypogammaglobulinemia, auto-immunity or lymphoproliferation.

CLINICAL REPORT: We describe a case of a 14-year-old male with a 4-months history of abdominal pain, weight loss and asthenia. He presented tenderness in the right lower quadrant and the CT scan and colonoscopy revealed the presence of a vegetant mass in the ileocaecal transition. He was submitted to a 20 cm intestinal resection due to intestinal perforation. The histological examination led to the diagnosis of an EBV-positive Burkitt lymphoma. His family history was remarkable for the presence of an older brother who had died in 1995 at the age of 2 with fulminant EBV-HLH. This prompted the investigation of underlying XLP: he had severe hypogammaglobulinemia, his serology for EBV was positive for VCA IgG but negative for EBNA, he had no switched memory B-cells and no NKT cells, thus allowing a presumptive diagnosis of SAP deficiency (XLP-1). The patient presented normal SAP expression but the genetic analysis of SH2D1A revealed a hemizygous mutation which alters splicing, but does not affect amino acid sequence, confirming the diagnosis of XLP-1. One older sister is carrier of the same mutation. The patient received CHOP therapy directed to Burkitt lymphoma as well as IGIV substitution, while he waits for hematopoietic stem cell transplantation.

DISCUSSION: Although the patient had a typical presentation of an intestinal lymphoma, the familiar history of an early death in a boy following EBV infection raised the hypothesis of XLP, which was confirmed promptly, thus allowing proper management and counselling. The recognition by the Paediatricians of the different phenotypes of XLP is extremely important to allow an early multidisciplinary management of the disease, which is often fatal.

CHRONIC ACETAMINOPHEN TOXICITY: LACK OF CONSENSUS

Ana Lia Mano, António Pedro Campos, Flora Candeias, Maria João Brito Hospital Dona Estefânia, Lisboa, Portugal

INTRODUCTION: Acetaminophen is one of the most frequently used analgesics and antipyretic agents. However, the easy access to this medication and the population’s unawareness of its toxic effects have contributed to a rise in the number of intoxications. While acute toxicity occurs mostly from intentional overdose, chronic acetaminophen toxicity is attributable to unintended inappropriate dosing. There is lack of consensus on the management of paracetamol chronic overdose.

CASE: A 8-year-old girl with chickenpox, was medicated with desloratadine, Caladryl® and acetaminophen in supratherapeutic dosis - 120 mg/kg/day in the previous 24h and 80 mg/kg/day in the 4 days before, with a median diary dosis in the 72 hours preceding the internment, superior to 100 mg/kg/day. On the sixth day of illness she presented multiple infected vesicular lesions with impetigo and was treated with fluocoxacin. Analysis revealed 3800 leucocytes/ml, neutrophils 62.3% and 130000 platelets; PCR 27.2±g/L, PT 12.9 seconds and aPTT 34 seconds, AST 84 UI; ALT 102UI and GGT50UI. urea, creatinine and ionogram were normal. Acetaminophen in the blood was 14 ug/ml. accordingly to the protocol of our hospital, the different phenotypes of XLP is extremely important to allow an early multidisciplinary management of the disease, which is often fatal.

CONCLUSIONS: Acetaminophen toxicity in levels superior to 100 mg/kg/day for 72 hours preceding the internment resulted in asymptomatic elevation of transaminases in our patient, without any complications reported during her evolution. Since several protocols are approved for chronic acetaminophen toxicity in children, a better optimization is needed with elaboration of consensus.
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did not respond to Tranexamic acid and Desmopressin. This was discovered three weeks prior to her preoperative assessment for an adeno-tonsillectomy. Routine pre op checks, which do not always involve clotting and the above misconception, could have affected her severely perioperatively. This case highlights the importance of detailed history taking including family history and remembering that Haemophilia can, and does affect females.

Case report AG was born without complication, at term by forceps delivery. Mother had heavy postpartum bleeding. She developed obstructive sleep apnoea, and adeno-tonsillectomy was planned. Three weeks before her pre-operative assessment she fell, tearing her frenulum. Persistent bleeding led to a paediatric assessment. Initial investigation revealed her haemoglobin was 88, APTT 1.5 and APTT ratio 45 and rest normal. Further investigation revealed low Factor VIIIc levels (36), 72% of expected. Other factors were normal. Detailed history taking revealed a family history of Factor VIII deficiency (maternal grandmother: carrier, maternal aunt: affected). AG received Tranexamic Acid and a Desmopressin infusion, followed by a Factor VIII infusion at the Haematology unit due to persistent bleeding. Communications between ENT a haematologist is ongoing to carry out a safe surgery.

Conclusion: This was a near miss event which will require ongoing care from a consultant haematologist. Clinicians need to be aware that Haemophilia can, and does, affect females. 28% of female carriers of Haemophilia A are known to have Factor VIII levels consistent with mild Haemophilia. This case should raise our awareness about thorough history taking, and updating our knowledge about Haemophilia, to avoid future catastrophes. There are also important implications for her mother. We recommend checking Factor VIII activity levels in all haemophilia carriers before haemostatic challenge, such as pregnancy.

OP2-TX-CUR-MU-SX: Oral Presentations on Addictive Behavior, Current Health conditions, Medicine Use and Sexual Health

ID: 258 / OP2-TX-CUR-MU-SX: Presentation 1
ORAL
Topics: Addictive Behaviours (including: Alcohol, Tobacco and Cannabis use)
Keywords: illicit drug use, Romanian youth, health promotion

INCREASING TRENDS OF ILLICIT DRUG USE AMONG ROMANIAN UNIVERSITY STUDENTS FROM 1999 TO 2011

Lucia Maria Lotrean1, Edna Arillo Santillan2, James Thrasher3, Valeria Laza1
1University of Medicine and Pharmacy, Cluj-Napoca, Romania; 2National Institute of Public Health, Cuernavaca, Mexico; 3University of South Carolina, USA

Introduction: After the fall of the communist regime in 1989, Romania started a process of political, economic and socio-cultural changes, which led in 2007 to the admission of Romania into the European Union. Along with these socio-economic changes, the health risk behaviours of Romanian young people, such as illicit drug use, also suffered several changes.

Purpose: The present study investigates the evolution of illicit drug use among Romanian university students from 1999 to 2011, giving a special attention to possible gender differences. Factors associated with illicit drug use will be also investigated.

Material and Methods: The study was performed in Cluj-Napoca, Romania, during three waves: the first one in 1999 (T1), the second one in 2003 (T2) and the last one in 2011 (T3). The study was carried out by means of anonymous questionnaires among university students aged 19-24. The study included 240 students in 1999, while 320 students were included in each of the last two waves.

Results: The results show that among girls the lifetime illicit drugs use increased statistically significant from 2.5% in 1999 to 7.5% in 2003, respectively 15% in 2011. Among boys the trend was also increasing, the prevalence of illicit drug use was 14.2% at T1, 18.1% at T2 and it increased dramatically to 30.6% at T3. The percentages of students reporting cannabis use was almost identical with the total prevalence of illicit drug use. Ecstasy was the second most frequent drug used by the students; its consumption had also an increasing trend during the examined period (from 0 to 5.6% among girls and from 0.8% to 11.2% among boys). The results of the bivariate correlation analyses show that illicit drug use at least once during lifetime was more likely to try illicit drugs, while among boys illicit drug use was associated with poorer academic performance and depression episodes were more likely to try illicit drugs, while among girls who declared stress management problems.

Conclusions: The data pointed out by our study call for comprehensive actions regarding prevention of illicit drug use among Romanian young people.

SELF-REPORTED EXPOSURE TO CIGARETTE PACK WARNINGS IN SCHOOL AGED CHILDREN AND PERCEPTIONS OF SMOKING RELATED HARM

Eimear Keane1, Michal Molcho1, Colette Kelly1, Fenton Howell2, Sacirse Nic Gabhainn1
1Health Promotion Research Centre, National University of Ireland, Galway, Ireland; 2Department of Health, Government of Ireland, Dublin, Ireland

Introduction: Tobacco use is a leading preventable cause of death and ill-health globally. The prevalence of cigarette smoking has decreased in many developed countries, but rates remain unacceptably high among children. Efforts made to communicate the negative consequences of smoking have included the placement of health warnings on cigarette packs. Such warnings aim to prevent initiation and encourage cessation through the education of consumers.

Purpose: This paper describes the current prevalence of smoking in 14-17 year olds and self-reported levels of exposure to cigarette packs
and warnings. Second, the extent to which exposure to cigarette packs and warnings is associated with perceptions of smoking related harm are examined whilst controlling for demographic factors and smoking status.

**Materials and Methods:** The sample was drawn from the nationally representative 2014 Irish Health Behaviour in School-aged Children (HBSC) study. Children were recruited from schools (59% response rate) and eligible children invited to participate (response rate 84.5%). Participants aged 14-17 years (n=5069) completed self-report questions including smoking behaviour, exposure to cigarette packs and warnings, and perceptions of ten potential consequences of smoking. Prevalence rates and 95% confidence intervals were estimated. Logistic regression analyses assessed relationships between exposure to cigarette packs and warnings in the last 6 months and perceptions of smoking related harm.

**Results:** The prevalence of current smokers was 12.2% (95% CI, 11.3-13.1%), comprising 12.8% of boys and 11.8% of girls (p=0.3). Over one quarter (26.6%, 95% CI, 25.3-27.8%) of children had not seen a cigarette pack in the last 6 months while 20.5% (95% CI, 19.4-21.6%) had seen a cigarette pack and frequently read the warnings. A higher proportion of smokers reported infrequently/frequently reading warnings on cigarette packs compared non-smokers (79.3% vs. 54.0%, p=0.000). Between 66.0% and 97.7% of children agreed with each risk perception statement. Children who reported lower levels of exposure to cigarette packs and warnings were less like to agree with perceptions that tobacco smoke is toxic, smoking causes wrinkling and early aging, and smoking can cause a slow painful death. Non-smokers were 73% more likely to agree to all ten statement than smokers (1.73, 95% CI 1.30-2.30).

**Conclusions:** Children were not fully informed about the risks of smoking, especially current smokers. However, health warnings on cigarette packs may be reinforcing of non-smoking behaviour among existing non-smokers. To reduce prevalence rates we need to target social norms associated with smoking and provide further education on the harms of smoking.

**ID:** 109 / OP2-TX-CUR-MU-SX: Presentation 3
**ORAL**
**Topics:** Addictive Behaviours (including: Alcohol, Tobacco and Cannabis use), General Pediatrics
**Keywords:** alcohol, adolescent

**ALCOHOL INTOXICATIONS IN ADOLESCENTS OVER THE YEARS 2007 TO 2014, A LONGITUDINAL STUDY IN ALL DUTCH HOSPITALS**

Nicolaas van der Lely¹, Frouktje de Klerk¹, Joris van Hoof²
¹Reinier de Graaf Gasthuis, Netherlands, The; ²Behavioral Sciences Faculty, University of Twente, The Netherlands

**Purpose:** alcohol intoxication in children and adolescents is a severe health concern in current pediatrics. In this longitudinal study we monitored intake and treatment of 4,378 adolescents in Departments of Pediatrics in all Dutch hospitals over the years 2007 to 2014.

**Methods:** from 2007 till 2014 we collected data on all adolescents (inclusion criteria: aged younger than 18 and with a positive BAC), treated by a pediatrician in a hospital. Within the Dutch Pediatric Surveillance System (NSCK), pediatricians report adolescents and fill in a questionnaire, making use of a patient interview.

**Results:** in total 4,378 adolescents were treated, mainly (3,376; 77%) related to severe alcohol intoxication; main age was 15.3 years, and 51% were boys. BAC level is 1.87 on average, and reduced consciousness last almost three hours. Almost 11.8% of the adolescents with alcohol intoxication had simultaneous drug usage.

**Conclusions:** alcohol intoxication treatment remains an issue of importance. This dataset enables us to conduct longitudinal and interesting analyses on alcohol intoxication characteristics in youngsters, medical treatment, and events leading up to the intoxication.

**ID:** 171 / OP2-TX-CUR-MU-SX: Presentation 4
**ORAL**
**Topics:** Addictive Behaviours (including: Alcohol, Tobacco and Cannabis use)
**Keywords:** Binge Drinking, Acute pancreatitis, Adolescence

**BINGE DRINKING AS CAUSE OF ACUTE PANCREATITIS IN ADOLESCENCE**

Teresa Penha, Sara Soares, Ana Lúcia Cardoso, Catarina Liz, Sandra Mota Pereira, Ana Reis
Centro Hospitalar Tamega e Sousa, Penafiel, Portugal

**Introduction and Purpose:** Binge Drinking (BD) is usually characterized by the use of at least 4 doses of alcohol on a single occasion for women and 5 doses for men. BD occurs mostly in recreational settings with the intention of becoming intoxicated by heavy consumption of alcohol over a short period of time. This behaviour is associated with increased risk of psychiatric disorders and multiple adverse effects on organ systems.

**Materials and Methods:** Case report of acute pancreatitis after BD.

**Results:** A healthy 16 years old male went to the Emergency Department with diffuse abdominal pain mainly in left quadrants and periumbilical area in the last 48 hours and also vomiting and anorexia. There was no fever, change of bowel habits or any other symptom. He was prescribed with proton pump inhibitor with no improvement. Physical examination revealed pallor skin and abdominal tenderness on the left hypochondria and epigastric region. Blood test revealed elevation of AST/ALT and pancreatic enzymes (amylase and lipase). Other causes such as drugs, medication intake or EBV and CMV infections were excluded. He reported heavy alcoholic intake (13 beers and a bottle of vodka) through one night, 2 days before. Ultrasound showed a small amount of intra-abdominal free fluid and mild splenomegaly with no signs of biliary obstruction. CT scan showed a normal-sized globular pancreas with densification of peripancreatic fat suggestive of acute pancreatitis. He was admitted for acute pancreatitis of alcoholic etiology and kept NPO with intravenous fluids and pain control.
There was resolution of symptoms and improvement of biochemical parameters. He was discharged within a week. After one month, he remained asymptomatic with normal blood tests. No late complications were stated.

**Conclusions:** Alcohol consumption is a rare cause of acute pancreatitis in pediatric age. However, with the increase trend of BD amongst teenagers, this etiology should always be considered so that early treatment and counselling can be provided.

**ADOLESCENT HEALTH IN TIMES OF ECONOMIC RECESSION: THE PORTUGAL AND SPAIN CASES**

**Concepción Moreno-Maldonado**\(^1\), Inês Camacho\(^2,3\), Antonia Jiménez-Iglesias\(^1\), Marta Reis\(^2,3\), Diego Gómez\(^4\), Carmen Moreno\(^1\), Margarida Gaspar de Matos\(^2,3,5\)

\(^1\)University of Seville, Spain; \(^2\)Aventura Social Team / FMH/ University of Lisbon; \(^3\)ISAMB / University of Lisbon; \(^4\)Loyola University Andalusia; \(^5\)WJCR / ISPA Higher Institute of Applied Psychology

**Introduction:** In 2008 a global economic recession affected the prosperity and living conditions in some European countries. Specifically, the economic recession has had a strong impact on Portugal and Spain, countries in which the financial crisis involves an increase of social inequalities, unemployment rates and a growth in the risk of poverty. Despite evidence of the effect of all those factors on health, studies focused on the impact of the economic crisis on adolescents' health are still scarce.

**Purpose:** The aims of this study were to analyse the development of macroeconomic factors in Portugal and Spain from 2002 to 2014, and to explore the trends in Spanish and Portuguese adolescents' health across the same period, paying special attention to the changes produced since the beginning of the economical recession.

**Materials and Methods:** The sample was composed of more than 50,000 adolescents aged 11, 13 and 15 who participated since 2002 in the Health Behaviour in School-aged Children (HBSC). The sample included adolescents corresponding to four editions (2002, 2006, 2010 or 2014) of the study and two countries: Portugal and Spain. The instrument used was the HBSC questionnaire, which includes a variety of measures common to both Spain and Portugal, as is the case of the variables regarding the impact of the economic recession, health (life satisfaction, health complaints, etc.) and lifestyles (eating habits, substance use, etc.).

**Results:** The analysis of macroeconomic factors in both countries showed a decrease of GDP and birth rate, an increase of unemployment rate and risk of poverty, and a slightly increase of mortality rates. In addition, descriptive analysis of adolescents’ health and lifestyles showed some negative trends from 2002 to 2014. Similarities and differences in both countries are examined.

**Conclusions:** This research shows some results that underline the changes suffered in Portugal and Spain as a consequence of the economic crisis, and the possible impact of the economic recession on adolescent health and lifestyles. These results have some implications for intervention, emphasizing the importance for public policy to design strategies and increase efforts that promote adolescent health and healthy lifestyles in periods of economic downturn.

**NEBULIZERS’ EFFECT ON THE DRAINAGE OF PURULENT PLEURAL EFFUSIONS POST ACQUIRED PNEUMONIA IN CHILDREN**

Sylvana Antoine Zoghbi, Hala Camil Feghali Abiad, Georges Abi Fares, Marie Claude Joseph Fadous Khalife
Holy Spirit University of Kaslik, Lebanon (Lebanese Republic), University hospital Notre Dame Des Secours

**Introduction:** Asthmatic patients’ ongoing inhaled steroid treatment that develop community acquired pneumonia have lower incidence and severity of parapneumonic effusion (ATS 2012, San Francisco). Our Study: Does nebulization reduce the percentage of pleural drainage following purulent pleural effusion post community acquired pneumonia in children?

**Method and design:** It's a themed cohort study conducted in the pediatric department of Notre Dame Des Secours university hospital from January 2013 to June 2015. 12 children aged from 1 to 12 years were included upon the documented criteria of presenting pneumonia with purulent pleural effusion without previous treatment. Patients received upon admission nebulizers (salbutamol with budesonide) associated to adapted antibiotics.

A comparison is done with previous study results of a similar group of 23 children (at the same department) who didn’t receive nebulizers but had the adapted antibiotics treatment.

**Results:** Out of the 12 children who received nebulizers 0 needed chest tube insertion (p=0,000). Out of the previous group of 23 children who didn’t receive nebulizers 14 needed chest tube insertion. Nebulizers didn’t prolong children hospitalization (p=0,075).

**Conclusion:** Nebulizers (salbutamol with budesonide) can prevent chest tube placement in purulent pleural effusions, without increasing the risk of a prolonged hospital stay. Further study should be conducted; a multicentric double blind randomized controlled trial is to be introduced in order to establish the existence or not of the relationship.
BARRIERS TO SPERM BANKING IN MALE ADOLESCENTS WITH CANCER: A REVIEW OF THE LITERATURE

Courtney Lynn Willis
Royal Hospital for Children, Glasgow United Kingdom

Introduction: Over the last 30 years, survival rates for teenagers and young adults (TYA’s) with cancer have significantly improved with an estimated 5-year survival of 80%. 1 Temporary or permanent infertility / subfertility are recognised risks associated with cancer therapies. For sexually mature adolescent males, sperm banking via masturbation is an effective method of attempting to preserve fertility. Despite the recognition amongst healthcare professionals that fertility preservation methods should be discussed with patients, a study by Schover et al reported that it was only offered in 10% of cases.2 There is great variation in success rates from sperm banking, ranging from 19-67%. 8,27

Purpose: What are the barriers to sperm banking amongst male adolescents with cancer?

Methods: MEDLINE, TRIP, DYNAMED, NHS Evidence, Cochrane Library, EMBASE and PSYCinfo were searched using the terms “adolescent” or “teenager,” and “cancer” or “neoplasm,” and “fertility preservation” or “sperm banking” or “semen preservation” or “cryopreservation.” only studies published in English between 2004 – 2015 were included. The search retrieved 138 results, of which 32 were included. Seventy were excluded based on title, and 36 after reading the abstract as they were irrelevant.

Results: This literature review identified recurrent barriers to sperm banking in male adolescents with cancer. These have been categorised into patient, healthcare and parent associated factors, and are summarised in table 1. The studies included are qualitative, narrative interviews dependent on personal recall of events and/or emotions during a stressful period.

Table 1: Overview of the perceived, and actual, barriers to sperm banking amongst adolescents with cancer

<table>
<thead>
<tr>
<th>Patient specific barriers</th>
<th>Healthcare barriers</th>
<th>Parent associated factors</th>
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<tbody>
<tr>
<td>Patient understanding and choice</td>
<td>Communication</td>
<td>Parental involvement in fertility discussions</td>
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<td>Emotional well being</td>
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<td>Health status of patient</td>
<td>Sperm banking facilities</td>
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<td>Timing</td>
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<td>Additional (religious / cultural/cost)</td>
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</table>

Conclusions: Discussing fertility issues at time of initial cancer diagnosis can be challenging for everyone involved. Sensitive discussions and decision making regarding fertility preservation requires knowledge, training, patience and acknowledgement of the barriers addressed in this review. By having an appreciation of the multiple factors that can influence the adolescent’s decision to partake in fertility preservation, healthcare professionals may be able to attempt to address and understand some of the difficulties that the patients, and their parents, may face.

ADOLESCENTS CONSUMING ENERGY DRINKS REGULARLY ARE MORE LIKELY TO REPORT DAILY HEALTH COMPLAINTS THAN THEIR PEERS

Jana Holubcikova1,2, Peter Kolarcik1,2,3, Andrea Madarasova Geckova1,2,3, Siijmen Reijneveld1,4, Lilte van Dijk1,3,4
1Graduate School Kosice Institute for Society and Health, Faculty of Medicine, Kosice, P. J. Safarik University, Slovak Republic; 2Department of Health Psychology, Faculty of Medicine, Kosice, P. J. Safarik University, Slovak Republic; 3Olomouc University Society and Health Institute, Palacký University Olomouc, Czech Republic; 4Department of Community and Occupational Medicine, University Medical Center, University of Groningen, the Netherlands

Introduction: Adolescents’ energy drink consumption is becoming a major public health problem as the prevalence of regular adolescent consumers increases steeply. There is a growing body of research dealing with the effects of consumption of these drinks. The adverse health effects of sugar and of caffeine have been documented, but evidence of other, stimulating, components lacks.
OP3-NU-OB-PA: Oral Presentations on Nutrition, Diet, Obesity and Physical Activity

**Purpose:** The aim of the study was to explore the prevalence of energy drinks consumption among adolescents, the specific risk-groups for regular energy drinks consumption and the association between regular energy drinks consumption and daily health complaints among adolescents.

**Materials and Methods:** We analysed data from the Health Behaviour in School-aged Children (HBSC) study conducted in 2014 in Slovakia. The final sample comprised 9,250 adolescents (mean age 13.5; 50.3 % boys). Self-reported measures of energy drinks consumption and daily health complaints (headache, stomach-ache, backache, feeling low, irritability or bad temper, feeling nervous, difficulties with sleeping, feeling dizzy) were used to assess the prevalence of regular energy drinks consumption and its associations with daily health complaints among adolescents.

**Results:** Over 20% of the adolescents reported that they consumed energy drinks at least on weekly basis. This regular energy drinks consumption was higher among boys, and older adolescents, independent of family affluence. Regular energy drinks consumption among adolescents was related to all studied daily health complaints with no gender differences; odds ratios varied from 1.59 for irritability or bad temper, to 1.91 for feeling dizzy.

**Conclusions:** The present study revealed a significant prevalence of adolescents consuming energy drinks on regular basis. Boys and older adolescents were at higher risk to consume these drinks. Adolescent energy drinks consumers were more likely to report daily health complaints. This relationship, be it causal or not, provides a reason to monitor and prevent consumption of energy drinks among adolescents. Regulations of adolescents’ energy drinks consumption may be warranted. Moreover, research is needed to explore the causes of the relationship.

**Challenges of Exclusive Breastfeeding Amongst Mothers in Enugu, Southeast Nigeria**

**Adaoib, Ijeoma Bisi-Onyemaechi,** Ugo Chikani, Ikechukwu, Frank Ogbonna, Henrietta Okafor
Department of Paediatrics, University of Nigeria Teaching Hospital, Enugu, Nigeria

**Introduction:** The feeding of infants with breast milk only for the first six months of life has so many advantages more so in developing countries where infant formula is not readily accessible to the general population. Despite the very high levels of awareness, exclusive breastfeeding rates have been on the decline in Nigeria.

**Purpose:** This study aims to find out challenges mothers encounter while breastfeeding exclusively as they may be contributory to the declining rates of exclusive breastfeeding in Nigeria.

**Materials and Methods:** This was a cross sectional descriptive study of 304 mothers in Enugu. Data was collected using interviewer-administered questionnaires. The demographics, knowledge and practice of exclusive breastfeeding and challenges encountered were obtained.

**Results:** The mean age of the mothers was 26.6 years with an age range of 19 to 50 years. About 90% of the respondents had secondary and above education while 97.3% were married. Awareness of exclusive breastfeeding was 98% while exclusive breastfeeding rate was 26%. Mothers who had never been visited by lactation experts (79%) were 3.8 times less likely to breastfeed exclusively. (P=0.006) Those who lacked crèches in their workplace were 2 times less likely to practice exclusive breastfeeding (P=0.02). The belief that breast milk alone was not sufficient food for a baby was reported by 26.6% of mothers. Mothers with this belief were 5.9 times less likely to breastfeed exclusively (P=0.001). The report of continuous crying of babies even after breastfeeding as opposed to formula feeding was also a significant challenge (P=0.03, OR=2.58). Lack of support from mother/mother-in-law and partners was also found to be a significant challenge (p=0.001) and such mothers were 2-3 times less likely to breastfeed exclusively. Maternal level of education, occupation, return to work, fear of weight gain and caesarean delivery were not significant challenges to the practice of exclusive breastfeeding.

**Conclusion:** Despite the high level of awareness, the exclusive breastfeeding rate was low. Some of the identified challenges were the belief that breast milk is not sufficient for a baby, lack of support from the family and lack of crèches in the workplace.

**Determinants of Exclusive Breastfeeding in Sub-Saharan Africa: An Analysis of Population Data Using a Multilevel Approach**

Siddika Songul Yalcın1, Anselm S Berde2, Suzan Yalcınc
1Department of Social Paediatrics Hacettepe University, Ankara, Turkey; 2Institute of Public Health Hacettepe University, Ankara, Turkey; 3Department of Food Hygiene and Technology, Faculty of Veterinary Medicine, Selcuk University, Konya, Turkey

**Introduction:** Exclusive breastfeeding (EBF) in infants under 6 months of age is a simple and cost-effective intervention to improve child health and survival. However, only one out of three infants less than six months old is exclusively breastfed in Africa.

**Purpose:** The study aims to estimate the prevalence of exclusive breastfeeding (EBF) for the first six months in Sub-Saharan Africa (SSA) and to examine maternal demographic, socioeconomic and childhood factors, in addition, to explore countries variations associated with EBF.
**Materials and methods:** This study uses cross-sectional data from the Demographic and Health Surveys in 27 SSA countries. The key outcome variable was EBF status in the last 24 hours before the interview. The multivariate analysis involves application of multilevel logistic regression models to explore individual and contextual regional/country-level factors associated with EBF in sub-Saharan Africa. In the multilevel analysis, countries constitute the highest (third) level (n=27), while regions (i.e. province) within country constitute the second level.

**Results:** The overall EBF prevalence in SSA was 36.0% and the prevalence of EBF was highest in Rwanda (84.9%) and lowest in Gabon (6.3%). Of the total variation in EBF, 23.2% could be attributed to country and region level factors when background demographic, socio-economic, as well as maternal and childhood factors were controlled for. In the multilevel regression model, factors that were significantly associated with increased likelihood of EBF were: mothers with secondary and above educational status, aged 25-34 years, rural residence, richer household wealth index, 4+ ANC visit, delivering in a health facility, single births, female infants, early initiation of breastfeeding and children belonging to the younger age groups.

**Conclusions:** Information, Education and Communication programmes and interventions aimed at “mothers with no education, in urban area, in poor/poorer group, poor antenatal care” and “infants with late initiation of breastfeeding”, infants with older age” should be formulated, implemented, and monitored to achieve substantial increase in EBF rate in SSA. SSA countries should disseminate and implement the Baby-Friendly hospital practices and create mother-support groups.
weight, may also have altered physical activity levels. One meta-analysis described a U-shaped association between birth weight and leisure time physical activity.

**Purpose:** Considering the controversial data regarding birth weight and sedentarism levels, in this study we aimed at further exploring this possible association among school-aged children.

**Materials and methods:** 616 families were recruited in the Montreal Metropolitan Area for household demographic information, children’s anthropometrics (height and weight), and questionnaires on sedentary time and physical activity level. Birth weight ratio (BWR) was calculated (observed birth weight/mean population birth weight, sex and gestational age-specific), and the sample was classified in three groups: Small for Gestational Age (SGA) if BWR<0.85, Adequate (AGA) if BWR 0.85-1.2 and Large (LGA) if BWR>1.2.

**Results:** There were 420 AGA, 76 SGA and 66 LGA children on the cohort. There were no differences between the groups regarding income, gestational age, body mass index or ethnicity. A Two-way ANOVA using sex and birth weight group as variables shows that both SGA and LGA children have significantly higher screen time when compared to AGA children (p<0.001, pos hoc Student Newman Kuel's). Boys in general have increased screen time compared to girls, but there was no interaction between sex and birth weight group. The total amount of physical activity was not different between the groups.

**Conclusions:** The study reveals that both low and high birth weight are associated with increased screen time. Although physical activity levels were not different among the groups, screen time may be an indirect marker of a sedentary lifestyle that cannot be properly accounted in a physical activity level questionnaire. A sedentary lifestyle contributes to the development of overweight and associated diseases in the long term, and as both SGA and LGA have increased risk for developing adulthood obesity, this finding may describe an important point for counseling for these specific vulnerable groups.

<table>
<thead>
<tr>
<th>Participation</th>
<th>Excellent self-rate health</th>
<th>Health complaints less than once a week</th>
<th>High life satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>none activity</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>at least one activity</td>
<td>2.1(1.63-2.61)</td>
<td>1.4(1.08-1.75)</td>
<td>1.1(0.91-1.37)</td>
</tr>
<tr>
<td>none activity</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>other than sport</td>
<td>1.1(0.82-1.54)</td>
<td>1.1(0.83-1.54)</td>
<td>1.2(0.88-1.51)</td>
</tr>
<tr>
<td>combination</td>
<td>2.9(2.10-3.71)</td>
<td>1.4(1.06-1.87)</td>
<td>1.2(0.96-1.56)</td>
</tr>
<tr>
<td>only sport</td>
<td>2.0(1.54-2.60)</td>
<td>1.5(1.62-2.01)</td>
<td>1.0(0.79-1.27)</td>
</tr>
</tbody>
</table>

**Results:** Twenty per cent of adolescents do not participate in any OLTA, while 31.0% reported participation in combination of sport and other type of OLTA, 31.8% reported participation only in sport activity (individual and/or team sport), and 17.2% reported participation in other than sport activity (art school, youth organizations, recreation/leisure centres, church meeting/singing). Adolescents participating in at least one OLTA reported excellent health, being satisfied with life, and having health complaints less than once a week significantly more frequently than their passive counterparts. Odds ratios varied from 1.28 for feeling low to 2.06 for self-rated health. Being involved in sport activity exclusively or in combination of sport and other type of OLTA was significantly associated with better health outcomes, while being involved exclusively in other type of OLTA was not.

**Conclusions:** Participating in at least one type of OLTA was significantly associated with better health outcomes. However, participating in OLTA, but not being involved in a sport activity was not sufficient to bring this benefit of OLTA.
ASSOCIATION OF MYELOPEROXIDASE LEVELS WITH CARDIOMETABOLIC FACTORS AND RENAL FUNCTION IN PREPUBERTAL CHILDREN

Liane Correia-Costa1, Teresa Sousa2, Manuela Morato2, Dina Cosme2, Joana Afonso2, Cláudia Mota2, Cláudia Mota2, José Carlos Areias3, António Guerra4, Franz Schaefer5, Alberto Caldas Afonso5, Henrique Barros5, António Albino-Teixeira5, Ana Azevedo6

1Division of Pediatric Nephrology, Integrated Pediatric Hospital, Centro Hospitalar São João, Porto, Portugal; 2Department of Pharmacology and Therapeutics, Faculty of Medicine of University of Porto, Porto, Portugal; 3Division of Pediatric Cardiology, Integrated Pediatric Hospital, Centro Hospitalar São João, Porto, Portugal; 4Department of Clinical Epidemiology, Predictive Medicine and Public Health, Faculty of Medicine of University of Porto, Porto, Portugal; 5Division of Pediatric Nephrology, Center for Pediatrics and Adolescent Medicine, University of Heidelberg, Heidelberg, Germany; 6EPIUnit - Institute of Public Health, University of Porto, Porto, Portugal

Introduction: Myeloperoxidase (MPO), an enzyme linking obesity and CV risk in adults, has rarely been studied in young children and no studies assessed its association with renal function.

Purpose: We sought to explore a possible association between serum MPO levels, obesity and other CV risk factors in prepubertal children. We also assessed the association between MPO and renal function.

Materials and methods: Cross-sectional evaluation of 309 children aged 8-9 years (161 normal weight and 148 overweight/obese), members of the birth cohort Generation XXI (Portugal). Anthropometrics (body mass index (BMI), waist-to-height ratio (WHtR) and % body fat mass (%bFM) by foot-to-foot bioelectrical impedance analysis), 24-hour ambulatory blood pressure monitoring and pulse wave velocity (PWV) were measured. Insulin resistance was estimated by the HOMA index (considering serum fasting glucose and insulin determinations). Serum MPO levels were assessed by immunoenzymatic assay.

Results: MPO levels were associated with obesity indices (BMI z-score, WHR and % body fat mass). Higher MPO levels were associated with higher 24-hour and nighttime mean arterial pressure, with non-dipping and with higher values of insulin resistance. In normal weight children the endothelial function, as evaluated indirectly by the PWV, was an independent predictor of the levels of MPO. In overweight/obese children, estimated glomerular filtration rate increased significantly across tertiles of MPO (p (trend)=0.031) and this association held after adjustment for age, sex, neutrophil and monocyte counts and CV risk factors.

Conclusions: Our results reinforce the role of MPO as a risk marker in obesity and related CV morbidities in young children. MPO levels associate with the dipping pattern and PWV measurements and, among overweight/obese children, an association exists between MPO and renal function.

CORRELATIONS BETWEEN THE PREVALENCE OF PHYSICAL FIGHTING AND TV WATCHING HABITS AMONG ARMENIAN ADOLESCENTS

Marina Melikumova, Sergey Sargsyan, Yeva Movsesyan, Ara Babloyan
Arabkir Medical Centre-Institute of Child and Adolescent Health, Armenia

Introduction: Violence among school children and adolescents is a concern in many countries of the world. Adolescents involved in physical fighting are often experience lower psychological well-being as well as engaged in other health-compromising behavior. Studies have shown that exposure to violence through TV watching may influence children's potential involvement in interpersonal violence, including physical fighting. The survey on Health Behavior in School-aged Children (HBSC) conducted in 2009 / 2010 revealed that both rates of fighting and prevalence of TV watching among Armenian adolescents are of the highest in Europe, especially among 15-year-olds.

Purpose: The purpose of the study is to examine the relationship between the frequency of watching television and engaging in physical fighting among Armenian adolescents.

Materials and methods: Data of regular Armenian HBSC survey 2013 / 2014 has been used. The sample consisted of 3679 adolescents (48% of boys, n=1759, and 52% of girls, n=1920). In addition, pilot survey among 17-year-old students of high schools and colleges has been conducted in 2014.

Results: Analysis showed that 50% of boys and 6 % of girls aged 11-15 have been involved in a physical fight 2 times and more. Among them 27% of respondent boys reported being involved in 4 and more episodes of fighting. Higher prevalence has been observed among 15-year old boys. Television watching rate arises with age: among 11-year-olds 23% of boys and 21% of girls watch TV for 3 and more hours, while for 15-year old boys and girls these rates are 54% and 36% respectively. Analysis showed that about 32% of boys who watch TV for 3, 4 and 5 hours a day are engaged in 4 and more episodes of physical fighting. The same figures are found among 17-year-old boys. Television watching among girls correlates with the prevalence of fighting non-significantly.

Conclusion: Data of surveys lets to assume, that exposure to excessive TV watching and media violence increases the likelihood of physical
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fighting and aggressive behavior for Armenian boys. The results of HBSC survey should be considered while revising national policies and strategies on violence prevention. Health promotion activities and conflict resolving skills should be applied to reducing excessive television watching and fighting prevalence.

OP4-VA-ID-GP: Oral Presentations on Vaccines, Infectious Diseases and General Pediatrics

ID: 294 / OP4-VA-ID-GP: Presentation 1
ORAL
Topics: Vaccines, Neonatology
Keywords: Malaria, Neonate, Preterm, Blood smear, peripheral blood film, Artesunate.

MALARIA IN NEONATES CASES REPORT

Jocelyne Bukeyeneza
University Teaching Hospital of Rwanda, Rwanda

Malaria is a major problem worldwide and especially in Sub-Saharan Africa with significant health risks for infants and pregnant women 1, 2,3,13. Despite interventions policies and malaria control strategies in Rwanda 14, some cases are still seen in hyper endemic areas.

Newborns rarely become ill with malaria: they are protected by passive maternal antibodies, high levels of fetal hemoglobin (which is resistant to P. falciparum) and the placenta barrier 1, 2. Its occurrence in neonates is unusual and though it can be acquired from the mother perinatally or perinatally following a breach in the placental barrier; from mosquito bites, or also by transfusions 1,2

Three cases of neonatal malaria were reported from the CHUB NEONATOLOGY department in a short period of time from July to September 2014:

1. Preterm infant of 31 weeks with Extremely Low Birth Weight (ELBW) of 700gr had received a long course of antibiotics for neonatal sepsis, as well as several blood transfusions due to recurrent anemia and thrombocytopenia. At 41 days of life, he developed fever and grade II splenomegaly. Blood smear for malaria was negative but peripheral blood film revealed RBCs morphology suggestive of hemolysis, likely caused by malaria.

2. Preterm twin A with estimated gestational age of 29 weeks, weighing 1.098 kg, had high risk of infection due to maternal fever 2 days prior delivery. On day eight after course of antibiotics, the infant presented with mild jaundice and respiratory distress. Blood smear for malaria was positive with 640/µl of P. falciparum parasites.

3. Term baby with history of treated maternal vaginal infection (without fever) and no other risk factor, presented on day 8 of life with fever. Blood smear for malaria was positive with 120/µl trophozoites of P. falciparum.

The treatment of choice, based on the Rwanda National Protocol, is IV Artesunate. All babies responded well to the treatment.

The above reported cases illustrate several important reminders for neonatal care in malaria-endemic regions: a) neonatal malaria infection should be included in the differential diagnosis of neonatal sepsis 4,5,6; b) A single negative blood smear does not exclude malaria 1,2; c) Transfusion centers should test blood for malaria parasites7,8,9; d) Pregnant mothers should also be tested 11,13,e) Antenatal and during pregnancy screening and prophylactic treatment should be advised 10,12.14 Further research is needed to better understand the transmission and the treatment for malaria in neonate.

ID: 203 / OP4-VA-ID-GP: Presentation 2
ORAL
Topics: Meningitis Vaccines
Keywords: Neisseria meningitides; primary arthritis; child; serogroup C

NEISSERIA MENINGITIDIS SEROGROUP C CAUSING PRIMARY ARTHRITIS IN A CHILD – CASE REPORT

Vasile Valeriu Lupu1, Sergiu Straticiuc2, Ancuta Ignat1, Roxana Cretu2, Ilieana Ioniciuc1, Marin Burlea1
1Pediatics Department, University of Medicine and Pharmacy “Gr. T. Popa”, Iasi, Romania; 2Pediatric Ortopaedic Department, “St. Mary” Children Emergency Hospital, Iasi, Romania

Introduction: Neisseria meningitidis is associated with severe invasive infections such as meningitis and fulminant septicaemia. Septic arthritis due to N. meningitidis is rare and bone infections have been reported exceptionally. We report the case of a 1-year old girl who presented with a painful, swollen right knee, accompanied by fever and agitation. Arthrocentesis of the right knee, while patient was under anaesthesia, yielded grossly purulent fluid, so we made arthroscopy and drainage. The culture from synovial fluid revealed N. meningitidis, sensitive to Ceftriaxone. The patient received antibiotic therapy IV with Ceftriaxone. The status of the patient improved after surgical drainage and IV antibiotic therapy. She recovered completely after 1 month.

Conclusion: This observation illustrates an unusual presentation of invasive meningococcal infection and the early identification of the bacteria, combined with the correct treatment, prevent the complications and even death. Vaccination remains the best control strategy to prevent invasive meningococcal disease.
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ID: 134 / OP4-VA-ID-GP: Presentation 3
ORAL
Topics: General Pediatrics
Keywords: home-based, malaria, management, morbidty, mortality, severity, parasitaemia

IMPACT OF HOME-BASED MANAGEMENT ON MALARIA OUTCOME IN UNDER-FIVES PRESENTING IN A TERTIARY HEALTH INSTITUTION IN NIGERIA

Damian Uchechukwu Nwaneri, Ayebo Evawere Sadoh, Micheal Okoeguale Ibadin
University of Benin Teaching Hospital, Benin City Nigeria, Nigeria

Introduction: To reduce the malaria burden in under-fives, early use of effective antimalarial drugs for home-based treatment has been recommended. The success of this interventional strategy depends largely on the appropriateness of knowledge and practices of primary caregivers of these children in the community.

Purpose: To document home-based management of children (6 – 59 months) with suspected malaria by non-medical caregivers and to identify the impact of these practices on malaria outcome.

Materials and methods: A descriptive cross-sectional study carried out from July 2012 – June 2013. Data was obtained by researcher-administered questionnaire and malaria was confirmed in each child by microscopy. Malaria outcome included morbidity (malaria severity, level of malaria parasitaemia) and mortality. Analysis was by Statistical Package for Scientific Solutions version 16.

Results: Of the 290 caregiver (31.2 ± 6.1 years) /child (21.3 ± 14.4 months) pairs recruited, 222 (76.6%) caregivers managed malaria at home before presenting to hospital. Only three (1.4%) of these caregivers practiced appropriate home-based malaria treatment. Most of the caregivers used paracetamol either solely or in combination with a monotherapy [153 (68.9%)] and only 35 (15.8%) used the recommended artemisinin-based combination therapy. Nearly half of the children presented late to health facility and 112/124 (90.3%) of them received inappropriate malaria treatment at home (χ² = 22.9, OR = 4.75, p < 0.00). Prevalence of severe malaria was 111 (38.3%), of which 90.1% received home-based malaria treatment (χ² = 18.4, OR = 0.2, p < 0.00). There was no significant difference in mean (±) parasites count (2350.2 ± 1869.4 /µL) of children who received home treatment and those who did not (1878.7 ± 1566.5/µL) (t = 1.89, p = 0.06). The mortality rate in this study was 62 per 1000 and all the death received home-based treatment (p = 0.2). Predictors of severe malaria in this study was inappropriately home-based treatment of malaria (β = 1.25, OR = 3.5, p < 0.00, 95%CI = 1.67, 7.34) while that of mortality was late presentation to the health facility for prompt care (β = 2.23, OR = 9.0, p < 0.00, 95%CI = 1.94, 43.38).

Conclusion: The expected benefits of home management of malaria in under-fives were undermined by inappropriate treatment practices by the caregiver leading to high prevalence of severe malaria and increased mortality.

ID: 263 / OP4-VA-ID-GP: Presentation 4
ORAL
Topics: General Pediatrics
Keywords: Antibiotics, Prescription, Paediatric emergency department

OUTPATIENT ANTIBIOTICS USE IN A PORTUGUESE PAEDIATRIC EMERGENCY DEPARTMENT

Ana Lúcia Cardoso, Ana Catarina Carvalho, Catarina Liz, Teresa Pena, Sara Soares, Cláudia Monteiro, Eunice Moreira
Centro Hospitalar do Tâmega e Sousa, Portugal

Introduction: Infectious diseases are an important reason for care demand in Paediatric Emergency Departments (PED) and frequently motivate antibiotic prescription, many times in an inadequate way. Resistance to antibiotics is a major public health problem and antibiotic use is increasingly suggested as one of its main causes.

Purpose: The purpose of this study was to characterize antibiotics use in a Portuguese PED.

Materials and Methods: A descriptive and observational retrospective study was conducted. Data was collected from medical records of all emergency department visits (excluding trauma admissions) from one single random day in every month from September of 2014 to August of 2015. Patients that were admitted to the hospital or transferred to different hospitals were excluded from the sample. Information related to antibiotics prescription (diagnosis and antibiotic prescribed), age and gender of the patients was collected and analysed.

Results: From 1st September 2014 to 31st August 2015, 41299 patients were observed in the PED, from which 1137 medical records were analysed. The final sample was constituted of 52.8% male patients, with ages between zero and 17 years old. Systemic antibiotics were prescribed in 285 cases (25.1%): amoxicillin was the most frequently prescribed antibiotic (55%), followed by amoxicillin/clavulanate (22.5%), macrolides (13.7%) and second and third generation cephalosporins (5.6%). Amoxicillin was mostly prescribed for acute otitis media (AOM) (36.9%), acute tonsillitis (31.8%) and pneumonia (19.7%); amoxicillin/clavulanate mostly for AOM (29.7%) and urinary tract infection (UTI) (28.1%); macrolides mostly for pneumonia (94.9%) and cephalosporins mostly for UTI (56.3%). Systemic antibiotic prescription was significantly more frequent in the autumn/winter months (p<0.014) and in the school-aged group (p<0.001). For the diseases for which antibiotic use is controversial, antibiotic prescription (PO or topical) occurred in all of the AOM and all of the conjunctivitis; there was no antibiotic prescription in all cases of asthma, acute bronchitis and acute nasopharyngitis.

Conclusions: The results were comparable to those obtained in similar Portuguese and international studies. Generally, antibiotic prescription was adequate to currently used guidelines, although for AOM, prescription may be excessive.
TOPICAL OILS FOR BABY DRY SKIN OR MASSAGE? NEW EVIDENCE FROM THE OBSERVE STUDY

Alison Cooke1, Michael J Cork2, Suresh Victor2, Malcolm Campbell3, Simon Danby2, John Chittock2, Tina Lavender1
1The University of Manchester, United Kingdom; 2The University of Sheffield, United Kingdom; 3Sidra Medical and Research Center, Doha Qatar

Introduction: The use of certain topical oils for the prevention or treatment of baby dry skin or massage may affect skin barrier function. Adverse effects may contribute to the development of childhood atopic eczema. Prevalence of atopic eczema has increased substantially since the 1940s, which could be linked to environmental factors, including increased use of oils and other baby skincare products.

Purpose: Maternity service health professionals commonly recommend topical olive oil or sunflower oil to new parents for their newborn baby’s skin. Study aims included providing proof of concept that topical oils have some effect on baby skin barrier function, and data to inform optimal trial design.

Materials and Methods: A pilot, assessor-blinded, RCT was conducted. 115 healthy, full-term babies aged <72 hours were recruited at a large hospital in North West England between September 2013 and June 2014. Babies were randomly assigned to using topical olive oil, topical sunflower oil or no oil, twice a day for 4 weeks, stratified by family history of atopic eczema. Change in spectral profile of lipid lamellae, transepidermal water loss, stratum corneum hydration, skin surface pH and clinical observations were measured on the forearm, abdomen and thigh, within 72 hours, and at 4 weeks post-birth. Mothers completed weekly questionnaires to record skincare practices and medical treatments.

Results: Recruitment rate was 11.1%, with completion of 80%. Protocol adherence was 79-93%, 83-94% and 100% for olive oil, sunflower oil and no oil groups respectively. At 4 weeks lipid lamellae in both oil groups was significantly less ordered compared to the no oil group, suggesting that both oils impede development of lipid lamellae structures of the skin barrier from birth. Both oil groups had significantly improved hydration, with no significant differences for other parameters across groups.

Conclusions: Proof of concept was achieved. Novel baseline data and information on trial parameters and processes to guide future study design were obtained. Observational and mechanistic studies are recommended to examine the link between using topical oils from birth and the development of atopic eczema, prior to conducting a definitive RCT. This pilot study was not powered to detect clinical significance, but, findings suggest caution when recommending topical oils for term newborn skin.

HELICOBACTER PYLORI INFECTION IN A PEDIATRIC GASTROENTEROLOGY REGIONAL CENTER IN NORTHEAST ROMANIA

Anca Ignat1, Marin Burlea1, Gabriela Paduraru1, Ileana Ioniuc1, Anamaria Ciubara2, Vasile Valeriu Lupu1
1Pediatrics, University of Medicine and Pharmacy “Gr. T. Popa”, Iasi, Romania; 2Psychiatry, University of Medicine and Pharmacy “Gr. T. Popa”, Iasi, Romania

Introduction: Helicobacter pylori (H. pylori) infection is a common problem in pediatric practice. In general, the prevalence is high in developing countries and the infection is acquired at a young age.

Purpose: The aim of this study was to establish the prevalence of H. pylori infection in children and presenting the cases according to the gastritis type by performing upper digestive endoscopies.

Materials and Methods: 1269 children diagnosed with gastritis through upper endoscopy in a pediatric gastroenterology regional center in Northeast Romania were studied for establishing the H. pylori infection rate.

Results: The frequency of H. pylori in the case of acute gastritis was significantly more reduced (34.78%) than in the case of chronic gastritis (54.94%). The most frequent types of gastritis were purpuric (43.66%), nodular purpuric (25.93%) and nodular antral (15.64%).

Conclusions: The H. pylori infection is the most frequent etiologic factor for chronic gastritis (54.94%). The early identification of the infection is essential in destroying the bacteria and preventing the development of various types of gastritis that are later on identified by upper endoscopy.
EXTRAHEPATIC BILIARY ATRESIA; KOTB DISEASE IS POTENTIALLY PREVENTABLE

Magd Ahmed Kotb
Cairo University, Egypt

Extrahepatic biliary atresia (EHBA) is the leading cause of pediatric liver transplantation. EHBA consumes resources reaching $58.5 million annually in USA. The child with EHBA suffers 1-15 (average = 3.6) episodes of cholangitis, each costs about $US 7369.02.

Recently we provided evidence that all EHBA infants had loads of aflatoxin B1 and some had B2 but none had M1 or M2 in their blood or in their post-portoenterostomy liver cores. Yet, all their mothers’ expressed M1 in their milk. As aflatoxin M1 and M2 are GST-detoxification products of aflatoxin B1 and B2 respectively, the lack of aflatoxin M1 or M2 in infants suggested failure of aflatoxin-GST detoxification. This failure of GST detoxification was not dictated by ontogeny (programmed development and expression of function according to chronological or maturational order). All studied infants with EHBA had null GSTM1 genotype, and all their mothers were heterozygous for GSTM1; thus, failure of aflatoxin-GST detoxification was "pathologic". All EHBA infants demonstrated specific aflatoxin-induced hepatic damage i.e. centrilobular scarring, hepatic ductular proliferation, cholestasis, focal syncytial giant cell transformation of hepatocytes, and pericellular fibrosis. All demonstrated aflatoxin-lipopolysaccharide augmented raid against hepatocytes and cholangiocytes; and some had hepatic ischaemia as well. The aflatoxicosis induced inflammation of extrahepatic bile ducts that ended in fibrosis and their obliteration.

In EHBA, control of aflatoxicosis damage was immune-dependent followed by initiation of regeneration. Damaged cells were removed by typical involvement of T cells; CD4+, CD8+ macrophages; CD68+, CD14+ and neutrophil degranulation product, i.e. elastase. Yet, during regeneration "fidelity" to "normal" ontogeny was lost, and regeneration in these children typically ushered "cirrhosis" due to disruption of both p53 and GSTP1 in EHBA.

Aetiology of EHBA is complex. This aetiology rings different bells, (1) our biological system is closed with actual entrapment of the "invader toxin" within the system. (2) EHBA is not only a "structural" defect but originates from a "functional" molecular defect. (3) Disease expression needs to overcome multiple "system" barriers. (4) Immune involvement is for "damage control" and not the "body damages itself". Any damage incurred is "simply" collateral. (5) Future management would include chelation therapy, and (6) EHBA is a potentially preventable disease.

Aetiology of EHBA mandates improvising novel screening and preventive strategies, yet, strict monitoring of aflatoxins in consumed foods remains the gold standard against aflatoxin consumption by pregnant women, and lactating mothers, hence reducing EHBA incidence and subsequent aflatoxin M1-associated attacks of cholangitis.

BACTERIAL AGENTS CAUSING MENINGITIS AND SEROPREVALENCE OF DIFFERENT SEROGROUPS OF NEISSERIA MENINGITIDIS, HAEMOPHILUS INFLUENZAE TYPE B AND STREPTOCOCCUS PNEUMONIAE DURING 2013–2014 IN TURKEY: A MULTICENTER PROSPECTIVE SURVEILLANCE STUDY

Mehmet Ceyhan1, Nezahat Gürlert1, Yasemin Ozsurekci2, Turkish Meningitis Surveillance Team2
1Hacettepe University Faculty of Medicine, Turkey; 2Istanbul University Faculty of Medicine, Turkey; 3Turkish Meningitis Surveillance Team

Background: This will be an observational epidemiological study to describe causes of bacterial meningitis among persons under aged between 1 month - 18 years of age who are hospitalized with suspected bacterial meningitis in all of the 7 different geographical regions that are giving health service to 32 % of the population of Turkey. We present here the results from 2013 to 2014.

Methods: Single tube multiplex PCR assay was performed for the simultaneous identification of bacterial agents. The specific gene targets were catA, bex, and ply for N. meningitidis, Hib, and S. pneumoniae, respectively. PCR positive samples were recorded as laboratory-confirmed acute bacterial meningitis.

Results: During 2013-2014 a total of 665 children were hospitalized with a clinical diagnosis of meningitis. Of the 94 diagnosed cases of bacterial meningitis by PCR, 85 (90.4%) were meningococcal and 9 (9.6%) were pneumococcal. Hib was not detected in none of the patient. Among meningococcal meningitis, cases of serogroup Y, A, B and W-135 were 2.4% (n=2), 3.5 % (n=3), 32.9 % (n=28), and 42.4 % (n=36). No serogroup C was detected among meningococcal cases. Among meningococcal meningitis, cases in subjects ≤1 year, 1-4 years, 5-9 years, 10-14 years, and 15-18 years old were 16.5 %, 41.2 %, 22.4 %, 15.3 %, and 4.6 %, respectively. Pneumococcal meningitis cases were reported in subjects 1-4 years, 5-9 years, and 10-14 years old as 55.5 %, 33.3 %, and 12.2 %, respectively.

Conclusion: Successful vaccination policies for protection from bacterial meningitis are dependent on determination of the etiology of bacterial meningitis. These results highlight the need for broad based protection against meningococcal disease in Turkey.
OP5-SC-VIO-FL: Oral Presentations on School, Violence, Injury and Family Life

ID: 125 / OP5-SC-VIO-FL: Presentation 1
ORAL
Topics: School
Keywords: Epworth; depression; self-esteem; school performance; adolescent's learning

LOOKING FOR FACTORS THAT WOULD OPTIMIZE LEARNING AMONG ADOLESCENT LEBANESE STUDENTS

Marie Claude Joseph Fadous Khalife1, Youssef Feghali1, Maud Ojaimi1, Georges Abi Fares1, Michel Soufia1
1Holy Spirit University of Kaslik, Lebanon (Lebanese Republic), University Hospital Notre Dame Des Secours; 2Balamand University, Koura, Lebanon

Introduction: Factors hindering the learning process are serious problems in the heart of the debate. Adolescence is a very critical and difficult developmental period that has a huge influence on the learning potential of students in this age group.

Purpose: The purpose of this study is to look for the major factors that may have a positive or negative impact on adolescents’ academic performance.

Materials and Methods: It’s a uni-regional, multicentral and epidemiological stratified sampling collected from four schools with more than 200 students each during the academic year 2014-2015. Data was collected through questionnaires distributed to 455 adolescents aged between 10-18 years old away from their exams period; all adolescent students preparing their official exams during the study period were excluded. Internationally validated scores were used such as Epworth score, adolescent depression score and self-esteem score. School performance was evaluated by subjective and objective criteria. Objective factors include: failure in 2 or more main school subjects and general school average. Subjective factors include an estimate of the absence diary from school and feeling stressed at school. Results were analyzed using SPSS program version 22.00 (crosstabs, independent T-test).

Results: Epworth score, depression score and self-esteem score were found very significant factors negatively influencing failure in 2 or more main school subjects with a p value=0.000 each. Only the depression score had a negative significant effect on the general school average (p value=0.024). Absence diary was significantly affected by the self-esteem score (p value=0.024). Epworth, depression and self-esteem scores were directly proportional to the subjective feeling of stress.

Conclusion: This is a pilot study in the field of adolescents’ education. Adolescents’ depression, self-esteem and day sleeping are important problems that should be addressed and handled professionally in all schools hoping to optimize adolescent’s performance in school. Further studies should be conducted on a multinational level in order to assess the effect of these factors on adolescents learning in all nations.

ID: 209 / OP5-SC-VIO-FL: Presentation in Main Conference Program
ORAL
Topics: Violence and Injury (including: bullying)
Keywords: Immigrant school composition, bullying, fighting, classmate support

THE IMPACT OF IMMIGRANT SCHOOL COMPOSITION AND SCHOOL SUPPORT ON INVOLVEMENT IN PHYSICAL FIGHTING AND BULLYING AMONG IMMIGRANT AND NONIMMIGRANT ADOLESCENTS IN 11 COUNTRIES

Sophie D. Walsh1, Bart De Clercq1, Michal Molcho1, Yossi Harel-Fisch1, Colleen Davison1, Katrine Rich Madsen1, Gonneke. W.J.M Stevens1
1Department of Chronology, Bar Ilan University, Israel; 2Department of Public Health, Ghent University, Belgium; 3Health Promotion Research Centre, NUI Galway, Galway, Ireland; 4The International Research Program on Adolescent Well-Being and Health, School of Education Faculty of Social Sciences, Bar-Ilan University, Ramat Gan Israel; 5Department of Public Health Sciences, Queen’s University, Kingston, Ontario, Canada; 6National Institute of Public Health, University of Southern Denmark, Copenhagen, Denmark; 7Utrecht Centre for Child and Adolescent Studies, Utrecht University, The Netherlands

Introduction: Increasing numbers of immigrant youth around the world mean growing numbers of heterogeneous school environments. Contradictory findings regarding the relationship between immigrant school composition (percentage of immigrants in school) and physical fighting and bullying necessitate examination of possible contextual variables.

Purpose: The current study examined the relationship between immigrant school composition and peer violence (physical fighting, bullying perpetration and victimization) with classmate support as a potential moderator. The research questions were: 1) To what extent does immigrant school composition impact on levels of bullying and fighting among immigrant and nonimmigrant adolescents? 2) To what extent does classmate support moderate that relationship.

Materials and Methods: The study involved survey data from among 51,636 adolescents (50.1% female) from 11 countries using the 2009/10 Health Behaviors of School Aged Children (HBSC-WHO) study. Individual level variables included immigrant status (non-immigrant, first and second generation immigrant), classmate support, gender, age, family affluence, physical fighting, bullying perpetration and bullying victimization. School level variables included immigrant school composition and classmate support, both aggregate variables from the individual level variables immigrant status and classmate support of all participating adolescents in the school.

Results: Using multilevel modelling, findings showed that higher numbers of immigrant adolescents in a school were related to higher levels of physical fighting and bullying perpetration for both immigrant and nonimmigrant adolescents and to lower levels of bullying victimization for immigrant adolescents. However the contribution of immigrant school composition was very modest in comparison to the effect of classmate support (both directly and as a moderator of the immigrant school composition and school violence relationship). Greater classmate support was related to lower levels of all violence outcomes. In schools with high levels of classmate support there was no significant relationship between immigrant school composition and peer violence and, in general, levels of peer violence were low. In schools with low levels of classmate support immigrant school composition was positively related to greater fighting for nonimmigrant adolescents yet to lower levels of bullying victimization for immigrant adolescents. Findings were comparable across countries

Conclusions: Results highlight the complexity of ethnically diverse classrooms in the current multicultural reality. They pinpoint the need for school intervention programs addressing relations in schools with immigrant populations that can stress positive intergroup relations and encourage classmate support. Findings emphasize that it is not the number of immigrants in a class per se but rather the environment in the classroom which influences levels of peer violence.
CHANGING FAMILY STRUCTURE, PARENTAL COMMUNICATION AND CHILDREN’S LIFE SATISFACTION IN IRELAND BETWEEN 1998 AND 2010

Aoife Gavin, Colette Kelly, Saoirse Nic Gabhainn, Michal Molcho
Health Promotion Research Centre, National University of Ireland, Galway, Ireland

Introduction: Young people whose parents are either separated or divorced form an increasing portion of society. There has been a continuing shift in the composition of families in recent years, with one in six children in Ireland living in lone parent families (SONC, 2010). Previous studies have highlighted the importance of family structure to health and well-being of young people. The quality of communication with parents during adolescence has been shown to be a strong determinant of health and well-being. Life satisfaction is an indicator of well-being as well as future well-being and has been found to have a strong association with a variety of health-related outcomes.

Purpose: The overall aim of this paper is to examine the changes in family structure between 1998, 2002, 2006 and 2010 while examining the association between family structure, parental communication and life satisfaction among children aged 10 to 17 within the Republic of Ireland.

Materials and Methods: The Health Behaviour in School-aged Children (HBSC) study is a cross-national research study conducted in collaboration with the WHO Regional Office for Europe. The study has been conducted every four years in the Republic of Ireland since 1998. A nationally representative sample of school-aged children across all four survey cycles was achieved with a total sample size of 38,493. Self-completion questionnaires were used to collect the data from young people in a classroom setting under an exam-like setting. The questionnaire contained measures of life satisfaction (Cail Ladder, 1965), family structure (determined by a series of binary variables) and communication with parents. Hierarchical binary logistic regression models were conducted with HBSC survey year as a predictor using the repeat measure contrast function which allows for comment on significant changes over time. Age, gender and social class variables were included as controls across all models. Analysis was carried out in IBM SPSS v20.

Results: Overall, there has been a significant decrease in the proportion of young people who report living with both parents (91.5% in 1998 and 78.4% in 2010). There has been a significant increase in the proportion of young people reporting high life satisfaction between 2002 and 2010. Across all regression models, family structure remains a strong predictor of life satisfaction as well as the quality of communication with parents.

Conclusions: The quality of communication with parents has a strong association with reported life satisfaction, regardless of family structure. This highlights the need to focus resources and education on positive parenting programmes. There are notable socioeconomic differences in reported life satisfaction that require further investigation.

DOES FAMILY STRUCTURE MATTER? REFLECTIONS FROM POLISH STUDIES ON SOCIAL DETERMINANTS OF ADOLESCENT HEALTH

Joanna Mazur, Izabela Tabak, Agnieszka Malkowska-Szkutnik, Anna Dzielska
Institute of Mother and Child, Poland

Introduction: In the previous Polish HBSC (Health Behaviour in School-aged Children) reports we presented health outcomes by age, gender, place of living and family affluence. In HBSC 2014 national report for the first time we introduced family structure as essential sociodemographic characteristics.

Purpose: The aim of the paper is to compare children living in two-parent versus single-parent and stepparent families as well as those left behind by one or both parents who have undertaken job migration.

Material and Methods: The survey conducted in the 2013-14 school year comprised 4,545 students in three groups; the average age 11.6; 13.6 and 15.6 years, respectively. The student response rate was estimated to 86.1%. Overall, 15 positive and 22 negative outcomes belonging to three groups were presented: subjective health, health-related behaviours and the social context of growing up (family, school, peers). To define family structure children were asked about the people living in their main home. Multivariate logistic regression was applied with age, gender, place of living (big cities, small towns, rural areas), family affluence and family structure as independent variables. Results were presented as odds ratios (OR) with 95% confidence interval (CI).

Results: According to HBSC 2014 data, 76.8% of schoolchildren live with both biological parents, 14.0% with one parent, 6.1% in stepfamilies and 3.1% in another type of family. Comparing to HBSC 2010 data, the percent of intact families decreased by 2%. In the univariate analysis, the significant association with family structure was confirmed in case of 29/37 indicators. Children from non-intact families are especially at lower chance of very good school performance (OR=0.697; CI: 0.60-0.82) and high life satisfaction (OR=0.689; CI:0.57-0.83). They are also at significantly higher risk of recurrent subjective health complaints (OR=1.502; CI=1.28-1.76); weekly smoking (OR=2.152; CI:1.68-2.76) and repeated episodes of drunkenness in the life time (OR=1.874; CI: 1.49-2.35). A lot of differences between single-parent and stepfamilies were also indicated. The impact of family structure is often much stronger than the impact of family affluence.
### OP5-SC-VIO-FL: Oral Presentations on School, Violence, Injury and Family Life

**Abstracts**

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Single-parent family</th>
<th>Step-parent family</th>
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<tbody>
<tr>
<td>Very good school performance</td>
<td>0.706 0.59-0.85</td>
<td>0.678 0.52-0.88</td>
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<tr>
<td>High life satisfaction</td>
<td>0.706 0.57-0.87</td>
<td>0.654 0.49-0.88</td>
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<tr>
<td>Recurrent subjective complaints</td>
<td>1.478 1.23-1.77</td>
<td>1.554 1.20-2.01</td>
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<tr>
<td>Weekly smoking</td>
<td>2.239 1.69-2.96</td>
<td>1.962 1.32-2.92</td>
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<tr>
<td>Repeated drunkenness in the lifetime</td>
<td>1.809 1.39-2.35</td>
<td>2.023 1.42-2.89</td>
</tr>
</tbody>
</table>

*two biological parents as reference category

**Conclusions:** The study confirmed that children not living with both biological parents report worse subjective health and are more susceptible for negative problem behaviours in comparison to peers from intact families. There is a need to pay particular attention to children raised in non-intact families, out of concern for their health and development. This is even more important to support such families considering that the percentage of intact families is still decreasing. In the further studies the interaction with school-related factors will be considered under just started associated project funded by National Science Centre (Grant no. 2013/09/B/HS6/03438). The information on family structure is also recommended to trend analyses.

**Adriana Smaranda Baban**, Robert Balazsi, Alina Cosma, Delia Cristescu

1Babes-Bolyai University, Romania; 2Child and Adolescent Health Research Unit, University of St Andrews, Scotland

**Introduction:** The exposure to abuse and maltreatment during childhood and adolescence represents an important problem due to its long lasting effects on victims' development and health. Abuse can have many facets: emotional, physical or sexual. Several studies indicate that children exposed to one or more types of abuse or maltreatment have higher probability of presenting somatic and mental health problems.

**Purpose:** This study aims to investigate the co-occurrence of exposure to several forms of abuse (psychological, physical and sexual) with involvement in health-harming behaviors (smoking, alcohol and cannabis use, bullying and physical fighting, early sexual debut) and with the presence of psychosomatic complaints.

**Materials and Methods:** Using a representative data for the Romanian school children population (n=1442, age m=15.1, SD=0.3), the present study is based on the HbSC/WHO Collaborative Study Survey (Health behaviour in School aged Children). Children were asked the frequency with which they have experienced psychological, physical and sexual abuse; involvement in the above mentioned risk behaviours, and somatic and mental health symptoms. Odds ratio were computed in order to estimate the association between health-harming behaviors, psycho-somatic symptoms and abuse variables.

**Results:** Our results indicate that the prevalence of exposure to childhood maltreatment ranges from 7% for sexual abuse, 17% for physical abuse to 25% for psychological abuse. No significant gender differences emerged. All the association were found to be statistically significant (p<0.01), showing that psychological, physical and sexual abuse increase the probability of risk behavior, and of the frequency of psychosomatic symptoms.

**Conclusions:** Considering the high short and long burden of childhood maltreatment on their health and development, several recommendations for intervention and policy makers are presented.

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**CHILDCOHOD MALTREATMENT IN FAMILY AND ASSOCIATIONS WITH HEALTH-HARMING BEHAVIOUR AND PSYCHOSOMATIC COMPLAINS: RESULTS FROM HBSC ROMANIAN STUDY**

**Adriana Smaranda Baban**, Robert Balazsi, Alina Cosma, Delia Cristescu

1Babes-Bolyai University, Romania; 2Child and Adolescent Health Research Unit, University of St Andrews, Scotland

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**PARENTAL EMPLOYMENT STATUS AND ADOLESCENTS’ WELL-BEING: FINDINGS FROM THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) PORTUGUESE SURVEY**

**Diana Frasquilho**, Margarida Gaspar de Matos, Tânia Gaspar, José Miguel Caldas de Almeida

1Medical School Nova University Lisbon, Portugal; 2Aventura Social, Faculty of Human Kinetics, University of Lisbon, Portugal; 3Lusíada University, Lisbon, Portugal; 4William James Center for Research, ISPA, Lisbon

**Introduction:** The negative effect of job loss on subjective well-being has been demonstrated in many studies of adult populations. In Portugal, the economic recession has increased the unemployment rate and many families are now jobless. There are strong reasons to believe that unemployment in the family influences both the parents' well-being and their children’s.

**Purpose:** The purpose of this study was to examine the associations between parental employment status and adolescents’ self-reported health and life-satisfaction.

**Materials and Methods:** The analyses were based on data from the Portuguese Health Behaviour in School-aged Children survey (HBSC/WHO). The study included a representative sample of 4734 Portuguese students aged 10-19 year-old (52.3% girls). Logistic regression analyses were
conducted (95% confidence intervals, p < 0.05) to test the associations between parental employment status and low self-reported health and low life satisfaction. Parental employment status was coded as follows: both parents employed, both parents jobless, jobless father and jobless mother.

**Results:** The regression analyses showed that after adjusting for socioeconomic status and age, low self-rated health was associated with the father being jobless. Among boys, however, the odds ratios (ORs) were not statistically significant. Girls with jobless fathers were 1.62 times more likely to report low self-rated health than girls whose parents are both employed. Low life satisfaction was associated with having both parents jobless. Among boys with both parents jobless, odds ratios (ORs) for low satisfaction with life were 1.84 (1.13-2.99). Among girls, the corresponding ORs were 1.79 (1.11-2.87). Associations between mother’s joblessness and low self-rated health or low life satisfaction were not found.

**Conclusions:** This study shows that parental employment status affects adolescent’s self-reported health and life satisfaction. Girls with jobless fathers are of higher odds of low self-rated health than girls with both parents employed. Boys and girls with both parents jobless are more likely to report low life satisfaction than those with both parents employed. Unemployment in the family may bring costs on future generations as youth in these families report worse well-being outcomes.

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**OP6-GP-MH: Oral Presentations on General Pediatrics and Child Mental Health**

ID: 139 / OP6-GP-MH: Presentation 1

**ORAL**

**Topics:** Medicine use, General Pediatrics, Neonatology

**Keywords:** respiratory syncytial virus, caffeine citrate, apnea, bronchiolitis

**CAFFEINE FOR THE TREATMENT OF APNEA IN BRONCHIOLITIS: A RANDOMIZED TRIAL**

**Khalid Mohamed Alanazi**1,2,3, Fahith Hassan Toaimah1, Hany Mohamed Khalafla1, Lamiaa Awny El Tatawy1, Bruce L Davidson4, Wessam Ahmed1

1Hamad Medical Corporation, Qatar; 2Department of Pediatrics, Division of Pediatric Emergency Medicine, Sidra Medical and Research Centre; 3Weill Cornell Medical College, all Doha, Qatar; 4Pulmonary-Critical Care Medicine Division, University of Washington School of Medicine, Seattle, Washington

**Introduction:** Caffeine is commonly used in the treatment of apnea in bronchiolitis but all published studies are observational.

**Purpose:** To evaluate the efficacy and safety of caffeine citrate in the treatment of apnea in bronchiolitis.
Methods: Consecutive infants < 4 months of age presenting to the main pediatric emergency service with apnea associated bronchiolitis were stratified by gestational age (<34 weeks or longer) and randomized to receive 25 mg/kg caffeine citrate or saline placebo. The primary efficacy outcome was time until resolution of apnea symptoms for both groups. Secondary outcomes were frequency and duration of apnea by 24, 48 and 72 hours after study medication, need for noninvasive/invasive ventilation, and length of stay in hospital's PICU/step-down unit.

Results: 90 infants diagnosed with viral bronchiolitis associated with apnea, median age 38 days, were enrolled. Over 60% had apnea observed both at home and before treatment in the emergency department. Respiratory virus positivity was similar in each group (mean, 81%). Time until resolution of apnea was similar in both groups, geometric mean duration until resolution of apnea was 37.9 hours (95% CI, 25.7 to 55.8 hours) and 42.2 hours (95% CI, 29.8 to 59.8 hours) for caffeine and placebo respectively. PICU and length of stay in PICU/step-down was shorter for the placebo group.

Conclusions: A single dose of caffeine citrate is not effective in the treatment of apnea associated with bronchiolitis.
Comparison of the performance of the Rochester criteria between febrile males and females

<table>
<thead>
<tr>
<th></th>
<th>All infants</th>
<th>Males</th>
<th>Females</th>
<th>P</th>
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<tbody>
<tr>
<td><strong>Sensitivity</strong></td>
<td>87.2%</td>
<td>91.5%</td>
<td>73.4%</td>
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<tr>
<td>(95% CI 81.6-91.3%)</td>
<td>95% CI 85-95.3%</td>
<td>95% CI 67.8-87.5%</td>
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</tr>
<tr>
<td><strong>Specificity</strong></td>
<td>64.4%</td>
<td>65.4%</td>
<td>63%</td>
<td>NS</td>
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<tr>
<td>(95% CI 62.1-66.6%)</td>
<td>95% CI 62.4-68.3%</td>
<td>95% CI 59.4-66.4%</td>
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<tr>
<td><strong>PPV</strong></td>
<td>20.4%</td>
<td>23.8%</td>
<td>15.7%</td>
<td>&lt;0.001</td>
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<td>(95% CI 19.1-21.9%)</td>
<td>95% CI 22-25.7%</td>
<td>95% CI 13.7-17.9%</td>
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<tr>
<td><strong>NPV</strong></td>
<td>98.0%</td>
<td>98.5%</td>
<td>97.2%</td>
<td>NS</td>
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<tr>
<td>(95% CI 97.2-98.6%)</td>
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*Fleiss-Levin-Paik method; CO, confidence interval, PPV, positive predictive value; NPV, negative predictive value

**Conclusions:** The risk criteria had a significantly higher sensitivity and PPV in males compared to females. Our findings should alert clinicians to a higher index of suspicion when evaluating male high-risk infants.

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### CLINICOPATHOLOGICAL STUDY OF ENTERIC FEVER: A PROSPECTIVE HOSPITAL BASED 18 MONTH ANALYSIS OF 54 PAEDIATRIC CASES IN A TERTIARY CARE TEACHING HOSPITAL

**Pranab Kanti Mallick**

BGC Trust Medical College, Bangladesh

**Introduction:** Childhood Enteric Fever still a common health problem in many developing countries & its diagnosis on clinical ground is also difficult WHO estimates about 21 million cases of enteric fever with > 600,000 deaths annual. The cases are more likely to be seen in India, Bangladesh, South America & Africa, the regions with rapid population growth, limited safe water, infrastructure & health system. With this background, Enteric Fever is endemic in Bangladesh, thus this prospective analysis was undertaken.

**Purpose:** To evaluate clinical features, investigation sensitivity, response to therapy, incidence of antimicrobial resistance and outcome of childhood enteric fever.

**Materials and Methods:** Hospital based prospective study. Patient and setting: Inpatient of Paediatric ward of BGC Trust Medical college, a 650 bedded tertiary teaching hospital located in Chittagong, Bangladesh. Study Period: Jan/13 to June/14. Inclusion criteria: a) Admitted children of >12 month up to 15 years b) Documented fever >38 degree centigrade. c) History of Fever<2 week. Exclusion criteria: Not met all inclusion criteria. Associated second illness.

**Results:** Among the 324 cases of suspected enteric fever, 54 (1 in 6) cases were diagnosed as confirmed Enteric Fever, out of them 34 (63%) were male and 20 (37%) female. Majority cases >5 years age group (39%). Leading clinical features were fever (96%), coated tongue (78%), G.I. symptoms (74%), hepatomegaly (50%), splenomegaly (46%). Lab reports revealed leucocytosis 45%, leucopenia 39%. Widal test, blood culture, RDT (SD-CTK) were positive in 59%, 41%, 30% respectively, bone marrow culture was done in 6 cases of which 4 (68%) culture positive. Regarding treatment 30 cases (56%) treated with ceftriaxone and 16 cases 30% with ciprofloxacin, 5 (9%) with Azithromycin. Best response was observed with ceftriaxone and Azithromycin (100%). Resistance observed in 38% in Ciprofloxacin and 100% in Cefuroxime & Cotrimoxazole. MDR cases found in 2 patients (4%). Amicacin was highly sensitive in MDR cases (100%) out 54 cases 5 expired (9%) mortality was high in <2 years age group.

**Conclusions:** Proportion of febrile children suffering from enteric Fever was 1 in 6, it important to include enteric fever in D/D of febrile patient with GI symptoms, though blood culture is the definitive test widaltest and RDT, plays supportive role in the diagnosis of enteric fever. Based on analysis now Ciprofloxacin not a good drug for enteric fever. Ceftriaxone and Azithromycin considered as first line treatment. MDR enteric fever causes high mortality (100%) & Amikacin 100% sensitive in MDR.

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### FEVER IN INFANTS UNDER 3 MONTHS: IS OUR APPROACH CONSISTENT?

**Lucinda C Winckworth**1,2, Saji Alexander2

1St Mary’s Hospital, United Kingdom; 2Chelsea and Westminster Hospital, United Kingdom

**Introduction:** Young babies are vulnerable to infection. Sepsis in infants under 3 months can present in a very non-specific manner, so any pyrexia over 38°C should lead to a thorough assessment. Despite national guidance from NICE (“Feverish illness in children”) there is often wide variation in clinical practice regarding both investigations performed and treatments given.

**Purpose:** To investigate the approach to febrile infants under 3 months old presenting to the Emergency Department, including assessing the yield of all investigations done and the range of treatments given.

**Materials and Methods:** All infants under 3 months old with a temperature over 38°C documented in hospital were identified. A combination of the medical notes, discharge letter and pathology records were used to collect demographic information and details of all investigations performed and treatments given.

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<td>15.7%</td>
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<tr>
<td>(95% CI 19.1-21.9%)</td>
<td></td>
<td>95% CI 22-25.7%</td>
<td>95% CI 13.7-17.9%</td>
</tr>
<tr>
<td><strong>NPV</strong></td>
<td>98.0%</td>
<td>98.5%</td>
<td>97.2%</td>
</tr>
<tr>
<td>(95% CI 97.2-98.6%)</td>
<td></td>
<td>95% CI 97.4-99.2%</td>
<td>95% CI 95.6-99.3%</td>
</tr>
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*Fleiss-Levin-Paik method; CO, confidence interval, PPV, positive predictive value; NPV, negative predictive value

**Conclusions:** The risk criteria had a significantly higher sensitivity and PPV in males compared to females. Our findings should alert clinicians to a higher index of suspicion when evaluating male high-risk infants.
Results: 123 infants had a documented temperature over 38°C in hospital during the 12 month period, with a mean age of 6 weeks. All were admitted. Investigations were performed with differing frequencies (blood cultures in 92%, urine culture in 74% and CSF microscopy and culture in 67%) and yielded positive results in 11, 74 and 16% respectively. Over half the infants needed nasogastric feeds or intravenous fluids with 27% receiving a fluid bolus on initial assessment in the ED. Overall 12 different antibiotic regimes were used and 10% received no antibiotics. Nearly all (99%) of those treated with antibiotics received at least 48 hours via the intravenous route.

Conclusions: There is wide variation in both investigations and treatment of febrile illnesses in young infants. Despite a clear national guideline only 26% received and amoxicillin as advised. Individualised care plans should not compromise clinical care and risk causing confusion to both parents and healthcare professionals.

ID: 239 / OP6-GP-MH: Presentation 6
ORAL
Topics: Mental Health
Keywords: Adolescents, HBSC, Mental health, Rasch, Trend analyses

DIFFERENTIAL ITEM FUNCTIONING IN TREND ANALYSES OF ADOLESCENT MENTAL HEALTH – ILLUSTRATIVE EXAMPLES USING HBSC-DATA FROM FINLAND

Curt Hagquist1, Raijil Välimaa2, Sakari Suominen1, Nina Simonsen1
1Karlstad University, Sweden; 2University of Jyväskylä, Finland; 3University of Turku, Finland, University of Skövde, Sweden; 4Folkhälsan Research Center, University of Helsinki, Finland

Introduction: Although there is an increasing focus on trend analyses of adolescent mental health, yet little attention is paid to the methodological challenges and pitfalls inherent in this type of analyses.

Purpose: The purpose of the study is to analyse the psychometric properties of the HBSC-instrument on psychosomatic problems used in Finland, with a major focus on Differential Item Functioning (DIF) across time.

Materials and Methods: Data collected in 1994, 1998, 2006 and 2014 among Finnish schoolchildren in grade 9 are used, comprising a total of 8481 students. Data were collected with questionnaires which were completed anonymously in school classrooms. Participation was voluntary. The questionnaire contained nine items with five response categories on psychosomatic problems: headache, stomach ache, backache, feeling depressed, irritability or bad tempered, feeling nervous, difficulties in getting to sleep, feeling dizzy and feeling low. The response categories are ordered in terms of implied frequency and the higher frequency, the more the psychosomatic problems. The responses to these items were summed to a composite measure. The items were analysed using the polytomous Rasch model. Two-way analysis of variance of standardised residuals was used to examine DIF.

Results: The results clearly indicate that the scale on the psychosomatic problems does not work invariantly over time. In particular the item Depressed shows DIF across years of investigations. This item works quite different at the first year of investigation compared to the last year showing higher expected values 2014 (=less frequent problems) than 1994. This pattern holds for all subgroups but is most pronounced for students in Finnish speaking schools, in particular girls. This DIF does affect the measure of change between 1994 and 2014. Resolving item Depressed for year of investigation DIF changes (increases) the difference in person mean values between the two years.

Conclusions: Since the DIF affects the trend results, different options to address the problems need to be considered. Evidence that the perceived meaning of the item Depressed has changed over the years may justify a removal of this item. Removing the item Depressed from the scale but retaining the item Feeling low would also bring the Finnish data in better accordance with the content of the questions on psychosomatic problems in the international HBSC protocol.

ID: 216 / OP6-GP-MH: Presentation 7
ORAL
Topics: School, Mental Health
Keywords: ADHD, Comorbidity, school children, Risk factors

CO-MORBIDITY AND RISK FACTORS OF ADHD AMONG SCHOOL AGED CHILDREN IN CAIRO, EGYPT

Maiza Farid1, Sahar Sabour2, Mona Othman2
1Egyptian Academy of Childhood Disability, Institute of Postgraduate Childhood studies, Ain Shams University, Egypt; 2Faculty of Medicine Ain Shams University; maiza_farid@yahoo.com

Introduction: Attention deficit hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder which interferes with social and educational development. Purpose: to determine comorbid disorders and risk factors of ADHD in school aged children.

Material and Methods: A cross sectional study was done in two primary schools 3174 in number aged 4 - 12 years old in Helioptolis, Cairo, Egypt. Teachers screened children for ADHD by the DuPaul ADHD rating scale followed by diagnosis ADHD using DSM V for children who screened positive. All (251) ADHD children and 363 healthy control children were enrolled in the study.

Results: 251 (7.9%) of children had ADHD from both schools, 3 times more in boys than girls (11.2%, 3.7%). Hyperactivity and combined types of ADHD were significantly higher among boys p<0.05, while inattention was significantly higher among girls p<0.05. Comorbid disorders present were Oppositional Defiant Disorder 34.7%, conduct disorder 16.3%, anxiety 15.1%, nocturnal enuresis 33.0% and learning difficulties 45.8%. ADHD children had positive family history of ADHD than controls (14.9%, 5% OR 3.34), were living apart from parents (12.9%, 5%), had working mothers (52.1%, 35% OR 2.02), their parents of low educational levels (28%,18.2%), consume soda drinks or canned juices daily (50.3%, 38.9% OR 1.59), eat chocolate daily (47.7%, 36.9%), and suffered visual disturbances (15.5%, 7.9%) p<0.05. Computer games were more used by controls than cases (82.9%, 66.7%) p<0.05. Maternal age, birth order, pregnancy or labour hazards, TV watching, consumption of packed snacks, sweets were not risk factors.

Conclusions: Comorbid disorders are prevalent with ADHD. Family history is the most important risk factor followed living apart from both parents, having working mothers and having low educational levels of their parents.
ANTESOCIAL BEHAVIOR IN SPAIN: RELATIONSHIP WITH EMOTION REGULATION AND HEALTH.
Ana Villafuerte-Díaz1, Pilar Ramos1, Concepción Moreno-Maldonado1, Inmaculada Sánchez-Queija1, Antony Morgan2, Irene García-Moya1
1University of Seville, Spain; 2University of Huelva, Spain

Introduction: Antisocial behavior is a problem that generates social concern in our society. It is understood that antisocial behaviors are actions that violate the social norms. As a rule, antisocial behaviors are more prevalent in adolescence in comparison with other moments in the life-course due to during adolescence there isn’t enough connections between the prefrontal cortex and the limbic system. This anatomical change is important too for emotion regulation, that isn’t fully mature until late adolescence or adulthood.

Purpose: Given the importance of emotional regulation in adolescence and its strong relationship with antisocial behavior, this study aims to investigate the relationship between antisocial behavior, emotion regulation and adolescent health in Spain.

Materials and Methods: The data pertains to the Spanish Health Behavior in School-aged Children (HBSC) study enacted in 2014. Our sample includes 4062 students between the 15 and 16.

Results: The analyses show many significant results. In particular we find negative correlations between antisocial behavior and emotion regulation, mainly between high prevalence antisocial behavior or less serious antisocial acts and emotion regulation (r = -.275, p < .01). Also, the analysis show that there is a negative correlation between disobedience to authority antisocial behavior and the global health score (r = -.217, p < .01). Finally, we investigated the gender differences in antisocial behavior, and the results show that boys are more involved in this type of behavior.

Conclusions: The data show that there are significant relationships between antisocial behavior, emotion regulation and global health, and reveal the importance of preventing antisocial behavior in this developmental stage.

IDENTIFYING AND CHARACTERISING RESILIENCE IN SPANISH ADOLESCENTS
Carmen Moreno1, Irene García-Moya1, Francisco Rivera2, Inmaculada Sánchez-Queija1, Antonio Jiménez-Iglesias1, Pilar Ramos1
1University of Seville, Spain; 2University of Huelva, Spain

Introduction: Collecting scientific evidence on the factors involved in mitigating risk and promoting successful adaptation in adolescence is one important priority in current international agendas on health and well-being, which makes resilience studies fundamental. Resilience is broadly defined as good adaptation in the context of adversity but adversity in adolescence has been defined in a wide variety of ways. Nevertheless, family functioning is considered to be a key element in the human adaptation system and consequently it tends to be part of the definition of adversity in resilience studies.

Purpose: The aim of this study was to identify and characterise the group of resilient adolescents in a representative sample of Spanish school-aged children. In order to define resilience, we used a combination of the quality of parent-child relationships and adolescents’ global health level. More specifically, comparisons were made between resilient adolescents (low-quality parent-child relationships and good global health) and maladaptive adolescents (low-quality parent-child relationships and low global health). The predictive power of a wide range of variables, namely demographic factors, school context, peer relationships, lifestyles and psychological and socioeconomic aspects, were analyzed.

Materials and Methods: The 2014 HBSC (Health Behaviour in School-aged Children) study questionnaire was administered to a representative sample of adolescents aged 13 to 16 living in Spain and studying secondary education. For the purpose of the present study, 898 adolescents (172 classified as resilient and 726 as maladaptive) were selected and further studied. Statistical analysis included bivariate analyses (Chi-square and Student t) and binary logistic regression analyses using adolescent status (resilient vs maladaptive) as the dependent variable and the aforementioned demographic, contextual and individual variables as predictors.

Results: In the global logistic regression model, perceived school performance, teacher support, satisfaction with peer relationships, breakfast frequency, moderate-to-vigorous physical activity, sense of coherence, curiosity, satisfaction with body image and perceived family wealth made a significant contribution to the prediction of adolescents’ status. The obtained model showed a high predictive power (it explained 51.8% of the variability) and was able to correctly classify a high percentage of adolescents (51.5% of resilient and 89.3% of maladaptive adolescents).

Conclusions: This work provides valuable information on the resilience phenomenon and shows empirical evidence of resilience studies’ utility for the design of interventions in adversity contexts and its evaluation.
**Poster session 1**

**ID: 240 / POST1: Presentation 3**
**POSTER**
**Topics:** Family Life and Health
**Keywords:** adolescence, adoption, menarche, early adversity, development

**CONSEQUENCES OF EARLY ADVERSITY ON PHYSICAL DEVELOPMENT: MENARCHE IN ADOLESCENTS ADOPTED. HBSC-SPAIN RESULTS**

Carmen Paniagua¹, Carmen Moreno¹, Maite Román¹, Concepción Moreno-Maldonado¹, Rivera Francisco², Jesús Palacios¹
¹University of Seville, Spain; ²University of Huelva, Spain

**Introduction:** Early adversity has an impact on child development. Physical development is one of the most affected areas. Beyond studies focused on the children’s physical condition at the beginning of adoption, research about the evolution after childhood are increasing. However, there are still few studies that analyze development in adolescence. Many studies have shown the resilience of the physical development in adopted children. Nevertheless some research, mostly with small samples, have warned about the advance of menarche that occurs in many adopted girls.

**Purpose:** The aim of this study is to analyze when menarche appears in a representative sample of adolescents adopted compared with non-adopted. This is discussed with related variables: 1) birth country for international adoption; 2) the age at which they were adopted.

**Materials and Methods:** The data pertains to the Spanish HBSC study enacted in 2014. Specifically, it deals with 15,252 adolescent girls enrolled in school between the ages of 11 and 18. Of this sample, 209 are adopted. 62.2% of them are from international adoption, China (50.04%) and Russia (14.5%) being the most common birth countries.

**Results:** The results confirm the existence of statistically significant differences between the age of menarche in adopted girls compared to non-adopted, being earlier in the first group. Especially the age group who answered the questionnaire at 13-14 years old, where the differences reach a Cohen’s d of 0.698. These differences have also been analyzed according the birth country and the age at which they were adopted.

**Conclusions:** The data show clearly how the development trajectory marked by the early adversity and the subsequent change of context that involves the adoption affects the age at which menarche occurs in many girls. The results will be discussed in line with variables related to this advance.

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**ID: 200 / POST1: Presentation 4**
**POSTER**
**Topics:** Family Life and Health
**Keywords:** parental accuracy, developmental disability diagnosis

**PARENTAL ACCURACY OF REPORTING DIAGNOSES OF DEVELOPMENTAL DISABILITIES**

Kalyani Vilaykumar Mulay, Evelyn Law
Kho Teck Puat – National University Children’s Medical Institute, National University Health System, Singapore

**Introduction:** Parents are reliable sources of information on their child’s developmental status. However, information is not available on how accurate parents are in reporting developmental disabilities in different domains.

**Purpose:** Our aim was to investigate the accuracy of parental reporting of their child’s developmental disability in a tertiary developmental paediatric unit.

**Materials and Methods:** Consecutive children aged 2 to 16 years of age were recruited from a tertiary developmental paediatric clinic from Dec 2014 to Apr 2015. Parents of 93% of these children consented and completed the study. Of the 265 children, 159 returned for follow-up visits, had a multidisciplinary team (MDT) assessment, and were diagnosed with a developmental disability. Caregivers were asked to complete demographic data and select the developmental diagnosis that they understood their child had from a comprehensive list based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). This was compared with results from the child’s MDT assessments. Descriptive statistics were completed. In addition, t-tests and chi-square tests were conducted to compare child and parent characteristics between parents who were accurate in reporting the diagnoses and those who were not accurate.

**Results:** Descriptive statistics showed that 21.4% (28/131) of parents were inaccurate in reporting developmental disability diagnosis of their child. We found that the most inaccurately reported disability diagnosis was that of intellectual disability (42.8%), followed by specific language impairment (27.8%), learning disability (17.4%), ASD (15.9%) and ADHD (10%). T-tests showed that the age of diagnosis (68.5 months vs 77.4 months, p=0.287) and current age of the child (100.2 months vs 101.9 months, p=0.837) were not different between the 2 groups. Chi-square tests showed that parents who have financial difficulty in paying for housing and food were significantly more accurate in reporting developmental diagnosis than those who did not have such difficulty (100.0% vs 80.8%, p=0.022). All other demographic factors, including education level of the caregiver, number of children in the family, gender, and ethnic background of the child, were not significant in determining parent accuracy.

**Conclusions:** Parents’ understanding of their child’s disability diagnosis in the cognitive and language domains was limited. It is likely that parents with financial difficulties are more accepting of developmental diagnoses in order to access financial resources. We recommend that the parents of children with developmental disabilities are educated with regards to the child’s disability diagnosis particularly in cognitive and language domain.
**DO FOREIGN DOMESTIC WORKERS DECREASE STRESS IN PARENTS CARING FOR CHILDREN WITH DEVELOPMENTAL DISABILITIES?**

Kalyani Vijaykumar Mulay, Ying Qi Kang, Evelyn Law
Khoo Teck Puat – National University Children’s Medical Institute, National University Health System, Singapore

**Introduction:** Parents of children with disabilities report higher levels of stress. High parental stress has a negative influence on the child’s socio-emotional and behavioural development. There is a correlation between availability of parental social and/or family support and lower parental stress levels. To date, there are no studies that have explored the effect of foreign domestic workers (FDWs) on reducing parental stress in children with developmental disabilities.

**Purpose:** To examine whether the presence of foreign domestic workers (FDW) and the quality of these workers are associated with parental stress.

**Materials and Methods:** Parents of consecutive children aged 2-12 with developmental disabilities from our developmental clinics were recruited from December 2014 to April 2015. Of those recruited, 93% of parents gave consent and completed the Parenting Stress Index, Short Form (PSI) as well as questionnaire on demographics and FDW. Information on FDW included the number of hours each FDW spent per day with the child and the rating of the FDW using a Likert scale from 1 (poor) to 5 (excellent). The main outcome of the study was the PSI Total Parental Stress. We utilised linear regression to examine whether the presence of a highly rated FDW was associated with decreased parental stress.

**Results:** Parents of 265 children with developmental disabilities completed the study; 47.3% of the families had at least one FDW. The mean hour FDWs spent directly with the children per day was 2.3 hours (SD 4.874) and the mean rating for the FDW quality was 2.77 (SD 0.865). After controlling for family factors (i.e. household income, the need for parents to change work hours, and enrolment of the child in school or childcare), linear regression showed that the quality of the helper (β=-7.689, p=0.037) was associated with less parental stress.

**Conclusions:** This study suggests that the presence of a highly capable FDW is associated with lower parental stress, especially for parents caring for children with developmental disabilities.

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**SEVERE HYPERCALCAEMIA SECONDARY TO USE OF COMPLEMENTARY AND ALTERNATIVE MEDICINE**

Catriona Ann Boyd, Abdul Moodambail
Newham University Hospital, Barts Health NHS Trust, United Kingdom

We describe a case of a four year old boy who presented with acute vomiting, weight loss, anorexia, constipation, polyuria and polydipsia. Initial investigations revealed a very elevated corrected calcium level which peaked at 4.46 mmol/l (normal range 2.20-2.60 mmol/l) and a toxic Vitamin D level of 2130 nmol/l (normal range 50-150 nmol/l). He was previously fit and well but had a prior diagnosis of autism spectrum disorder and his mother had consulted a naturopath who had recommended twelve different holistic supplements including calcium and Vitamin D, to help with his autism. He required treatment with hyperhydration, calcitonin, furosemide and several doses of pamidronate before his calcium level returned to the normal range two weeks later.

Use of complementary and alternative medicine (CAM) is common within the paediatric population and probably greatly underestimated by most paediatricians. A UK study surveyed 500 children presenting to a tertiary paediatric unit and found that 41% had used CAM in the previous year. Many families view these therapies as safer ‘natural’ options however, there is significant potential for adverse effects. Another recent study evaluated reported adverse effects of CAM over a three year period and recorded 39 adverse events, including four deaths. Moreover, families often underreport use of complementary therapies to medical practitioners because they do not want to admit to use of non conventional options or because they do not consider this relevant information to disclose during the medical consultation.

Studies looking specifically at children with autism spectrum disorder report even higher use up to 74%. Another study reported that almost one third of children being referred with suspected ASD were already being treated with dietary therapies by their parents even before diagnosis. Although families often report that they use CAM because of fear of side effects with conventional medicine, there is limited data regarding side effects of CAM practices themselves.

The available literature suggests that CAM use is highly prevalent in the paediatric population particularly in children with chronic illnesses including autism spectrum disorder. Although families may report benefits with these treatments, there is no regulation of their use and, as our case demonstrates, there can be significant adverse effects. The parents of our patient did not disclose the use of CAM until a few days into the admission and this is in keeping with studies which show that the majority of parents will not spontaneously disclose this information to medical practitioners. It therefore needs to become routine practice to gather this information as part of the history taking process in all patients, as it may explain symptoms they are experiencing or affect the treatment decisions made.
THE PARENTS’ AND HEALTH CARE PROVIDERS’ PERCEPTIONS OF PARENTAL NEEDS IN A PEDIATRIC INTENSIVE CARE UNIT

Neslihan Çiftlik1, Figen İskı Esenay2
1Mersin Obstetrics Gynecology and Pediatrics Hospital, Mersin, Turkey; 2Ankara University, Faculty of Health Sciences, Pediatric Nursing dept. Ankara, Turkey

Introduction: The admission of a child into a critical care area in hospital can cause short- and long-term physical and psychosocial emotional distress for the child and family. The individual needs of the parent are varied and it should be understood and assumed accurately by health care providers.

Purpose: This study aims to compare parents’, physicians’ and nurses’ perceptions of parents needs in a Pediatric Intensive Care Unit (PICU).

Materials and Methods: The study was conducted in a Public Hospital and an University Hospital PICU’s. The sample consisted of 50 parents, 18 physicians and 28 nurses. Critical Care Family Needs Inventory (Molter, 1979), modified to pediatrics (Kirschbaum, 1990) was used for data collection. The instrument included five following subscales of family needs: proximity, information, assurance, support and comfort. Reliability of the scale was identified as 0.94 using Cronbach’s alpha. The parents’ needs perceived by both groups were compared within the subscales. Using rank ordering of needs, the relationship of individual needs identified by parent/doctor/nurse pairs were analyzed with the Wilcoxon (Mann-Whitney U) Matched-pairs Signed-Ranks Test.

Results: Health providers defines twenty scale item as important as, twenty-three scale items less important than, and three scale items more important than defined by the parents. Parents, if compared to nurses/doctors, assessed information and trust needs as more important, but there was no statistically significant difference in average scores.

Conclusions: Pediatric health providers should be cognizant of the parents’ need for information, assurance, proximity, support and comfort. By consistent identification, prioritization, and incorporation of parental needs into the plan of care, nurses can assist the parents in the recognition and fulfillment of needs that have less perceived importance.

ASSOCIATIONS BETWEEN PHYSICAL ACTIVITY AND ADOLESCENTS’ HEALTH AND WELLBEING IN TWO DIFFERENT CULTURAL CONTEXTS: ENGLAND AND RUSSIA

Ellen Klemmer1, Fiona Brooks2, Oleg Churganov2, Elena Gavrilova2, Nigel Smeeton1
1Hertfordshire University, United Kingdom; 2Mechnikov State Medical University, Saint Petersburg, Russia

Introduction: The benefits of physical activity for long term health, health related quality of life, psychological and social well-being of young people is widely recognised (Brooks et al, 2014). However recent research indicates (Brooks et al, 2014) that across Europe and North America, very few young people meet the recommended levels of physical activity of one hour of moderate to vigorous physical activity per day.

Purpose: Drawing on recent findings from the HBSC study for England and Russia, we aim to examine the association of the levels of Physical activity with the adolescents’ health and well-being in two different cultural contexts: England and Russia.

Materials and Methods: HBSC is a unique cross-sectional international study that is undertaken in 45 countries and has established itself as a major source of data on young people’s health in Europe (Currie, 2012). A mandatory set of questions covering aspects of health and well-being, including Physical activity of young people were included into the survey questionnaire. The class or school was used as a primary sampling unit. The selected population were young people aged 11, 13 and 15 attending school with the desired mean age for the three age groups being 11.5, 13.5 and 15.5. A total of 5679 students from England and 5127 from Russia who completed the last HBSC survey were included in the analysis. Each country sample consists of approximately 1500 respondents in each age group. The question used to assess Physical Activity was “Over the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day?” The vigorous level of exercise was measured using the HBSC question: “Outside school hours, how often do you normally exercise in your free time so much that you get out of breath or sweat”. Responses for both measures were categorised into Low, Medium, and High levels of physical activity.

Results: The results indicated that in both countries the level of doing physical activity affects young people’s self-rated health, life satisfaction and emotional well-being and young people who reported doing physical activity few times a week are more likely to report higher life satisfaction and self-rated health. The impact of physical activity on adolescents’ health was moderated by different aspects of their social life in England and Russia (family communication and friendship).

Conclusions: The comparison of international data provides an opportunity to gain a deeper understanding of the impact of physical education on adolescents’ health.
ID: 183 / POST1: Presentation 9
POSTER
Topics: School
Keywords: computer use, liking school, sleeping difficulties, skipping breakfast

TOO MUCH SCREEN, SLEEPING DIFFICULTIES, SKIPPING BREAKFAST AND DISLIKE SCHOOL

Daniela Brindova¹, Lukas Blinka², Andrea Madarasova Geckova¹, Jan Sirucek²
¹PJ Safarik University in Kosice, Slovak Republic; ²Masaryk University in Brno, Czech Republic

Introduction: Excessive time spent with computer is negatively associated with quantity and quality of sleep what may be an important factor in daily functioning of children. Morning tiredness also increases the chances of skipping breakfast. In terms of school performance, both insufficient sleep and skipping breakfast seriously affects learning ability and consequently academic performance what contribute to negative attitude towards school.

Purpose: Aim was to explore associations between excessive time spent with computer and sleeping difficulties, skipping breakfast in connection with attitude towards school among adolescents.

Materials and Methods: We used data from the cross-sectional Health Behaviour of School-aged Children study collected in 2014 among Slovak adolescents (aged 11 to 15 years old, N=9,250, 50.3% boys). A model of the inter-relation between time spent with computer work, sleeping difficulties, skipping breakfast and attitudes towards school was examined using path analysis.

Results: Time spent with computer work influence attitudes towards school directly as well as indirectly through sleeping difficulties and skipping breakfast. However the indirect paths were small compared to the direct one. The more time adolescents spent with computer the less they like school. With the increasing time adolescents spent with computer work increases also frequency of sleeping difficulties and number of days children skip the breakfast. More frequent sleeping difficulties and more days without breakfast was associated with less positive attitude towards school.

Conclusions: Although there are indirect paths through impact on daily functioning, the excessive time spent with computer directly influences the attitudes towards school in undesirable way.

ID: 254 / POST1: Presentation 10
POSTER
Topics: General Pediatrics
Keywords: primary hypertension, micronutrients

PRIMARY HYPERTENSION IN SCHOOL-AGE CHILDREN AND THE ESSENTIAL MICRONUTRIENTS ZN, CU, CR

Nadia Kolarova-Yaneva¹, Maria Angelova², Snejana Tisheva³, Margarita Tzonzarova⁴
¹Department of Pediatrics – Medical University – Pleven; ²Department of Chemistry and Biochemistry & Biophysics and Physics, Sector Chemistry - Medical University – Pleven; ³Department of Pulmonology, Cardiology and Endocrinology - Medical University – Pleven; ⁴National Cardiology Hospital – Sofia

Introduction: The role of the trace elements (zinc, copper and chromium) in the effective prevention of cardiovascular diseases and their application in the treatment of primary hypertension in childhood has not been thoroughly investigated yet.

Purpose: To investigate the serum levels of the trace elements zinc, copper and chromium in students aged 10 - 17 years with primary hypertension.

Material and Methods: We measured blood pressure is 1657 students aged 10-17 years in Pleven, Bulgaria, and compared the results of the students with high blood pressure to a control group of 20 normotensive students in the same age group.

Results: 4.53% of the investigated students had high blood pressure, 65.3% were boys. In 80% of the students with hypertension we found decreased levels of serum Zn (9.57 ± 0.96 μmol / L) which was significantly lower than the concentration of Zn in the control group (16.41 ± 3.63 μmol / L), p <0.001, and the zinc deficiency was more pronounced in the students with second degree hypertension. Reduced serum concentration of copper and chromium were found in more than 70% of the students with hypertension and overweight/obesity. The mean values of the lipid measurements in students with primary hypertension were within the normal range, however, they were still significantly higher than the values in the control group. HDL cholesterol levels were significantly reduced in students with second degree hypertension.

Conclusions: Serum concentrations of Zn, Cu, and Cr indicated deficiency in students with arterial hypertension. Given the role of these micronutrients in the cholesterol metabolism, their lower serum levels may be associated with early, preclinical vascular changes. Our results suggest that further in-depth study of the causes of hypertension is needed. The deficiency of trace element in children with high blood pressure requires the introduction of dietary supplements containing Zn, Cu, and Cr to the diet of these children.
ANALYSIS OF THE INCIDENCE OF ACUTE MYOCARDITIS IN INFANTS AND ADOLESCENTS

Vania Nedkova, Nadia Kolarova-Yaneva, Vasili Mihailov
Medical University Pleven, Paediatric clinic, Bulgaria

Introduction: Acute myocarditis, an inflammation of the heart muscle, is a rare disease in pediatrics, which still remains an important cause of sudden death, which may be the 1st detectable sign in infants. Adolescents may present with nonspecific respiratory or gastrointestinal complaints, making proper diagnosis difficult. Myocarditis is often misdiagnosed because its presentation has a broad differential diagnosis.

Purpose: We analyze the clinical manifestations and treatment of children with acute myocarditis in Pediatrics department, UMHAT “G. Stranski” - Pleven, during the first half of the year 2014.

Materials and method: Described are 16 infants and adolescents treated for pneumonia with respiratory failure and diagnosed acute myocarditis. Diagnostic methods: history, laboratory tests, radiological tests, ECG and echocardiography.

Results: Out of 510 children hospitalized with pneumonia, 3.14% were diagnosed with acute myocarditis. 93.8% of the children with acute myocarditis had complaints of dyspnoea, weakness - 81.2%, chest pain - 25% and 18.8% - gastrointestinal events. In all children we found typical ECG changes. 37.5% of children had radiological signs of cardiomegaly. Echocardiographic signs of impaired pump function was found in 75% of the children. 37.5% of the children required administration of diuretic and ACE-inhibitor, and 25% - treatment with digitalis, added to antibiotic and immunostimulatory therapy. Two infants (12.5%) were diagnosed with fulminant myocarditis, which presented in one with fatal arrhythmias and cardiogenic shock.

Conclusions: Myocarditis requires a high level of alertness and understanding of the clinical presentation of this disease, in order to prevent the development of dilated cardiomyopathy and the occurrence of sudden cardiac death in childhood.

EFFECT AND SIDE EFFECT OF STIMULANTS ON CHILDREN AND ADOLESCENT WITH ADHD

Madeeha Kamal1, Shabeena Khan1, Schahla Al-Shibli1, Samar Osman1, Mohamad AlKuwari1, Lori Bradshow2
1Hamad Medical corporation, Qatar; 2University of Arizona

Objectives: Attention Deficit Hyperactivity Disorder (ADHD) is the most common neurobiological disorder of childhood. The Diagnostic Statistical Manual of Mental Disorders describes ADHD as impairing symptoms of inattention, impulsivity and hyperactivity (DSM-V, 2013). ADHD has been associated with a broad range of negative outcomes for children including academic underachievement and social difficulties.

The objectives of this study were:
1. To quantify the change in behavior of students administered Methylphenidate
2. To understand the changes in quality of life for these students and families
3. To quantify the side effects of methylphenidate for these students
4. To quantify the changes in academic performance of these students

Materials and methods: 102 patients who fulfilled the diagnostic criteria for Attention Deficit Hyperactivity Disorder according to the DSM-V were randomly selected to participate in this study. The patients were seen in the Pediatrics Clinic at Hamad Medical Corporation and assessed by a Pediatrician. The SNAP-IV questionnaire was completed by parents and teachers, developed by Swanson (Swanson, Baler & Volkow, 2011). The SNAP-IV questionnaire was given to parents before and after a stimulant was prescribed. A questionnaire was devised by the researchers to gather additional information with regards to improvement in overall quality of life following medication and improvement in academic performance and behavior according to parents and teachers. Patients were then followed and assessed by the pediatrician at 2, 4, and 6 months for the effect and side effect of the medication.

Statistical analysis: Mean improvement in the score for quantitative variables (inattention score, hyperactivity-impulsivity score, and ADHD Combined score) between the pre medication SNAP-IV and post medication SNAP-IV were analyzed using paired ‘T’ tests and the results were presented with respective p value and associated 95% confidence interval. Associations between two or more categorical variables were examined using Chi-square test or Fisher exact test as appropriate. All p values presented were two-tailed, and p values <0.05 was considered as statistically significant.

Results: Our results showed 91% had marked improvement in overall academic performance after starting medication. 86 % reported improvement in overall quality of life and 88 % reported improvement in behavior. With regards to the side effects, 28% of the patient population reported no side effects. 72% reported at least one side effect with the most common being decreased appetite (43%) and trouble falling asleep (26%).

Conclusions: Our data revealed more than half of the patients experienced at least one side effect, however the majority of patients reported that intervention with medication had a positive impact, with marked improvement in academics, behavior and overall quality of life.
RELATIONSHIPS BETWEEN LIKING SCHOOL, SOCIAL LIFE AND FAMILY AFFLUENCE IN TURKISH STUDENTS: FINDINGS FROM THE HBSC STUDY

Oya Erkan¹, Ethem Erginoz², Mujgan Alikasifoglu¹, Omer Uysal¹, Eray Yurtseven¹, Deniz Albayrak Kaymak¹, Bernadette Fiscina²
¹Istanbul University, Cerrahpasa Medical Faculty, Turkey; ²NYU School of Medicine, USA

Introduction: In reviewing the findings of the International 2009/2010 Health Behavior in School-aged Children (HBSC) study (international report from the 2009/2010 survey), we noted with interest that Turkish students ranked near the top of the list of European countries for both liking school and feeling pressured by schoolwork. At the same time, fewer students in Turkey (less than the HBSC average) spent four evenings per week out with friends, and Turkey placed last or second to last in daily electronic media contact (EMC) with friends. We also noted that there was a significant inverse trend between family affluence and liking school. At the same time, family affluence was positively correlated with spending four or more evenings a week with friends and use of electronic communication. We hypothesized that, despite academic pressure, students liked school because for some of them, it was much more than a learning experience – it was a place for socialization, of meeting with friends during the period of life when peer relationships assume greater importance. For students with greater opportunities for peer contact, school might not have been so important and therefore, they liked school less.

Purpose: The purpose of our study was to investigate, in a population of Turkish students, the relationships between liking school and time spent with friends either in person or electronically, and to see if these relationships were affected by family affluence.

Materials and Methods: The present study analyzed data from a nationally representative group of 5574 (2699 males) 11,13 and 15-year-old schoolchildren who participated in the Turkish HBSC 2009/2010 survey. We performed a Spearman analysis to examine the relationships between liking school, and being pressured by schoolwork, spending evenings out with friends and EMC with friends according to family affluence scale (FAS) groups. A p value <.05 was considered significant.

Results: Those students who liked school more felt less pressured by school work in all FAS groups: low, medium and high, respectively (t=0,153 p<0,001; t=0,157 p<0,001; t=0,143 p=0,003).

In the low and medium affluence groups, those children who liked school less spent more evenings out with friends(r= 0.142 p<0.001; r=0.157 p<0.001; r=0.143 p=0.003). However, this finding was not statistically significant in the high affluence group (r=0.088 p=0.072). Those children who liked school less used electronic communication more in all FAS groups respectively (r=0.174 p<0.001; r=0.198 p<0.001; r=0.127 p<0.001, respectively). However, this finding was not statistically significant in the high affluence group (r=0.088 p=0.072). Those children who liked school less used electronic communication more in all FAS groups respectively (r=0.174 p<0.001; r=0.198 p<0.001; r=0.127 p<0.001).

Conclusions: Our study shows that, in Turkish students at least, liking school may be affected not only by the school environment, but by social life factors outside of the school. Further studies are necessary to determine if these findings hold true in other settings, with ensuing implications for support of adolescents.

FEEDING PATTERNS DURING INFANCY IN TODDLERS WITH NORMAL WEIGHT AND OVERWEIGHT TODDLERS

Ida Nađ, Lea Oletić, Duška Tjelilč-Drinkovic, Matija Bakoš
University of Zagreb, School of Medicine, Croatia; ida.8.nadj@gmail.com

Introduction: There is mounting evidence that early nutrition has long-lasting effect on health. Observational studies suggest that initial breastfeeding or the delayed introduction of complementary foods may reduce the prevalence of obesity in later life.

Purpose: The aim of this study was to identify possible differences in infant feeding patterns between toddlers with normal weight (15. –85. percentile) and overweight toddlers (weight >97. percentile) in two urban settings in Croatia.

Materials and Methods: 273 mothers of toddlers aged 13–48 months (median 26) attending day-care centers in two towns, Zagreb and Čakovec, were given questionnaires regarding the nutrition of their children during infancy. At the time of the study, 166 toddlers had normal weight (median 83.3 percentile, range 15.4–94.4) and 19 children were overweight (median 98.3 percentile, range 97.1–99.8). Descriptive and nonparametric statistics, χ² test and Mann-Whitney U test were used in data analysis.

Results: The study groups did not differ in regard to gender and age at the time of investigation. A difference in duration of exclusive breastfeeding was observed between normal and overweight children as follows: not breastfed 11.0% vs. 26.3%, breastfed up to 2 months 3,0% vs. 10.5%, 3–5 months 41.5% vs. 42.1% and 6 months or longer 44.5% vs. 21.1%, respectively. Results indicate that those weighing >97. percentile were breastfeed significantly shorter (χ² = 7.906, p < 0.05). Additionally, significantly more children in the overweight group were weaned before 6 months than in the normal weight group (89.47% vs. 63.64%, χ² = 5.091, p < 0.05).

Conclusions: In this study we observed that shorter breastfeeding (up to 2 months) and earlier complementary feeding (up to 6 months) were associated with overweight at toddler age. The lack of protective effect of breast milk and the higher protein intake due to early formula introduction and weaning could be contributing factors for accelerated weight gain.
ID: 281 / POST1: Presentation 15  
**POSTER**  
**Topics:** Nutrition and Diet  
**Keywords:** Diabetes, malabsorption, cholestasis, genetic.  

**MITCHELL-RILEY SYNDROME: A RARE CAUSE OF NEONATAL DIABETES**  
Inês Salva, Marta Amorim, Sara Carmo, Lurdes Lopes, Ana Pita, Luís Pereira-da-Silva  
Hospital de Dona Estefânia, Portugal  

**Introduction:** Diabetes mellitus is a rare cause of neonatal hyperglycemia (1:500,000 live-born). It is generally caused by mutations that affect insulinergic secretion from pancreatic beta cells and is generally not associated with malformations. The occurrence of malformations and intrauterine growth restriction in this setting generally points towards a polymalformative or genetic disorder.  

**Case Description:** Female neonate born at 35 weeks of gestational age with a birth weight of 1370 g and a history of intrauterine growth restriction and double bubble sign present in antenatal ultrasounds. On her second day of life, she presented with hyperglycemia consistent with diabetes mellitus and cholestasis (maximum bilirubin levels of 6.17 mg/dL). Other associated malformations included duodenal atresia, annular pancreas, intestinal malrotation, gallbladder hypoplasia and ectopic peri-jejunal pancreatic tissue. She was unsuccessfully treated with ursodesoxycholic acid and cholestasis resolved spontaneously during the first three months of life. Insulin treatment was initiated on the second day of life and required several adjustments until her weight allowed for insulin pump use. During the first month of life, after initiation of enteral feeding, she presented with malabsorption syndrome, requiring the use of several nutritional strategies. Aminoacid formula was reasonably tolerated and complementary feeding was initiated at 6 months of life. This particular set of characteristics was suggestive of Mitchell-Riley syndrome, that was later confirmed by RFX6 gene sequencing, revealing a mutation in exon 4 c.541C>T, p.R181W.  

**Conclusions:** Genetic disorders, such as Mitchell-Riley syndrome, are a rare cause of neonatal diabetes and require a multidisciplinary approach with a complex endocrinological and nutritional management.

ID: 208 / POST1: Presentation 16  
**POSTER**  
**Topics:** Nutrition and Diet  
**Keywords:** Vitamin D, deficiency, insufficiency, prenatal, pregnancy  

**MONITORING VITAMIN D LEVEL IN MOTHERS DURING PREGNANCY IS AN IMPORTANT MEASURE TO CORRECT DEFICIENCIES AND MAINTAIN FETAL HEALTH**  
Ali Nasehi1, Sormeh Nourbakhsh1, Ali Hafizi1, Sahar Ashrafolazadeh2, Sepehr Rassi3  
1Shahid-Beheshti Medical University, Iran, Islamic Republic of; 2Global Health and Health Policy Program, Harvard University, Cambridge, MA; 3Dalhousie University, Nova Scotia, Halifax, Canada  

**Introduction:** Prenatal care starts before birth of the baby. To make sure the future newborn will grow properly during the fetal period, the nutritional health of mother should be monitored during this important timeline in fetal life. This even continues to affect the breast-fed babies later on after birth. Vital nutrients such as vitamin D in mother’s serum should be evaluated and if needed, get corrected through providing mothers with proper diet and supplements to ensure deficiency will not develop.  

**Purpose:** 1) To identify if any expecting mother is deficient in serum vitamin D level. 2) To propose a corrective measure such as encouraging mothers to consume vitamin D enriched foods or vitamin D supplements to ensure proper baby’s growth.  

**Materials and Methods:** This observational study was carried out at Taleghani Hospital in Tehran, Iran in 2014. A cohort consisting of 149 pregnant women were followed with their consent until their delivery time as well as their term babies. Vitamin D level for mothers was assayed on the serum collected at the time of delivery by 25-Hydroxy Vitamin D IDS GmbH Immunodiagnostic Systems, Sunrise, Tecan Co. Salzburg, Austria. The method was Enzyme Immunoassay (EIA). Also, fasting serum glucose and insulin levels for both mothers and babies were measured at the time of delivery. Mothers’ weight before pregnancy and at the time of delivery and also babies’ birth weight were measured.  

**Results:** From the total sample population, 27% (40 mothers) were vitamin D deficient (7 to 24.9 nmol/L). Yet, 109 mothers (73%) had insufficient vitamin D levels (25.1 to 70.9 nmol/L). No mother in the sample population had sufficient serum vitamin D. Within the range of our data, we could not find any correlation between mother’s vitamin D level and infant’s birth weight. There was no correlation between mother’s weight before and after pregnancy and vitamin D level in mother’s serum. In pregnant mothers, there was a weak negative correlation between serum glucose levels and serum vitamin D levels (Pearson=-0.16, p=0.05, Y= -0.1x + 48, R2 =0.03).  

**Conclusions:** Exposure to natural sunlight is the major source of vitamin D. However, despite the availability of abundant sunshine in the region, the epidemic of vitamin D deficiency in Tehran may be caused by factors that need to be investigated in future researches.
Introduction: ADHD is the most common psychiatric disease of childhood, and its documented incidence in Indonesia is rapidly increasing. It has been hypothesized that consumption of chocolate may lead to the occurrence of hyperactivity in children, and elimination of it from the diet would result in a dramatic improvement in behaviour; however, research attempting to establish the link between chocolate consumption and ADHD have been very controversial and most studies have not shown this relationship.

Purpose: The purpose of this report is to determine whether consumption of chocolate has an effect on the occurrence or worsening of symptoms in children with ADHD.

Materials and Methods: On-line databases including PubMed, Medline, and The Cochrane Library were systematically searched for relevant clinical studies published in the last decade (2005 – 2015) that evaluated the relationship between chocolate consumption and ADHD. The abstracts and full text of the retrieved articles were scanned for potentially relevant studies that fulfilled the inclusion criteria. The methodological quality of included studies was assessed using a modified version of the Newcastle-Ottawa Quality Assessment Scale.

Results: Three studies met the inclusion criteria and were considered eligible for analysis, of which two were literature reviews, and one was a randomized controlled trial (RCT). In general, most of the articles included in the literature reviews exhibited that the ingestion of chocolate have no direct effect on the occurrence of the inappropriate degrees of hyperactivity, impulsiveness, and inattention that is seen in ADHD. Moreover, a majority of the studies investigating the effect of chocolate on ADHD found no significant evidence of its effects on patient behaviour. One review, however, recommends the attempt of trial elimination diet to complement pharmacologic treatment in unresponsive ADHD patients.

Conclusions: While chocolate is widely perceived by the public to potentially lead to hyperactive behaviour, this belief is yet to be scientifically substantiated. It is, however, recommended for those who do not respond to pharmacologic treatment to attempt a trial elimination diet.
ID: 274 / POST1: Presentation 20
POSTER
Topics: General Pediatrics
Keywords: asthma

ALLERGIC DISEASES AND ASTHMA IN ADOLESCENTS

M. Iashvili Children’s Central Hospital, Georgia, Tbilisi State Medical University, Tbilisi State University

Research Materials and Methods: Research was conducted on the basis of questioning of random and representative cohorts of Tbilisi children’s population, by cross-section method of epidemiological research. Special extended screening questionnaire was developed for epidemiological study of allergic diseases. Research was conducted in 2010-2014 period. Studied population included 1450 children from 2 to 17 years age representing Tbilisi general population (850 girls 600 boys). AR was confirmed, where more than one of the listed symptoms was present and children should not have caught cold, rhinorrhea, nasal obstruction or snore, combined or IgE with some inhalation allergen. AD was confirmed if the subject had AD at a time of interview or clinical study. Markers of asthma severity were based on number of asthma episodes and number of symptoms, or regular consumption of corticosteroids, number of missed days at school and answer of subjects to the question: for the past year what was the degree of discomfort attributable to asthma. Severity were based on number of asthma episodes and number of symptoms, or regular consumption of corticosteroids, number of missed days at school and answer of subjects to the question: for the past year what was the degree of discomfort attributable to asthma. Allergic sensitization was assessed based on the skin prick-test and test of specific IgE in serum and was deemed positive where the average diameter of blebs in skin prick tests was 3 mm larger than negative control and IgE>0,35k UI. Lung function was assessed by means of respirometers, by evaluating maximal forced expiration data and flow-volume curves. Population was divided into “active” and “ever” groups. Main finding is identification of correlation between airways inflammation and phenotype accompanying asthma in children of age from 2 to 16. Research showed than of 860 children (396 males and 462 females) of age from 2 to 8, 62 children had asthma (17 females and 45 males) with at least accompanying disease. Of 590 children (311 males and 279 females) of age from 9 to 17, 81 children had asthma with at least accompanying allergic disease. The most common asthma phenotype was only asthma, in 32.8%, further asthma and allergic rhinitis (27.9%), asthma with allergic rhinitis and atopic dermatitis (13%), asthma with atopic dermatitis (4.9%). Boys are more susceptible to A. and AR, compared with the girls (9.5% boys 4.9% girls) p=0.001. Lung function is significantly correlated with hyperresponsiveness of bronchi associated with asthma phenotype with the lowest FEV 2% data – in case of asthma, allergic rhinitis and atopic dermatitis.

Conclusions: Our research showed than A. in adults is accompanied with AR or AD (approximately 14.9%). In puberty, A. phenotypes with AR was mostly associated with non-specific hyperresponsiveness of bronchi and airways inflammation (p>0.05). In the combinations of allergic diseases the association of the phenotypes with gender was mostly found in males (p=0.001).
MATERIALS AND METHODS

Context: The results obtained may be explained by insufficient knowledge of the population about the importance of unhealthy habits.

CONCLUSIONS

...activities (p<0.001), juices (79.7% vs 70.6%) (p=0.044). In the population studied, only 28% boys and 11% girls are involved in some form of out of school sporting activities (three or more times a week), smoking, consumption of alcoholic beverages at least once a week (yes/no) and artificial juices every day (yes/no).

RESULTS

...was associated with sedentary behaviour among Slovak adolescents, not with accessibility of sport facilities or active recess at school. Children in either small or bigger towns are more prone for Sb and should be targeted as such. Information on accessibility explaining non-significant association with SB.

CONCLUSIONS

...association was found only between SB and urbanicity. Insufficient SB among adolescents was more often in small town (OR = 1.63, 95%CI 1.29–2.06), town (OR = 1.30, 95%CI 1.08–1.57), city (OR = 1.40, 95%CI 1.04–1.87) compared to village.

UNHEALTHY HABITS OF URBAN ADOLESCENTS: AN EXPERIENCE FROM CROATIA

INTRODUCTION

The study was conducted to analyze taking part in out-of-school sporting activities, smoking, alcoholic beverages and daily consumption of artificial juices among adolescent population.

MATERIALS AND METHODS

The subjects were healthy male (n=137) and female (n=322) adolescents (14-19 yrs) who were born and live permanently in Trogir, Croatia. They answered questions about: participation in out-of-school sport activities (yes/no three or more times a week), smoking, consumption of alcoholic beverages at least once a week (yes/no) and artificial juices every day (yes/no).

RESULTS

Male and female adolescents differed in alcohol drinks (48.2% vs 24.8%) (p<0.001), smoking (25.8 vs 19.8% (p=0.216) artificial juices (79.7% vs 70.6%) (0.044). In the population studied, only 28% boys and 11% girls are involved in some form of out of school sport activities (p<0.001).

CONCLUSIONS

The results obtained may be explained by insufficient knowledge of the population about the importance of unhealthy habits for current and future health. Although the results of this study are local in character, they indicate the need for additional involvement by experts in the form of education of adolescent and their parents in order to recognize the importance of forming a healthy lifestyle. Programs of intervention should especially be aimed at boys since they have more unhealthy habits than girls.
**Poster session 1**

**ID: 283 / POST1: Presentation 23**
**POSTER**  
**Topics:** Overweight Prevalence, General Pediatrics  
**Keywords:** sleep, obesity

**DOES SHORT SLEEP DURATION INCREASE THE RISK OF OBESITY IN CHILDREN? AN EVIDENCE-BASED CASE REPORT**

**Nadia Tita Indriastiti**, Nilish Basant Adnani2, Nora Sutarina2
1Faculty of Medicine, University of Indonesia, Jakarta, Indonesia; 2Kemayanor District Public Health Centre, Jakarta, Indonesia

**Introduction:** The prevalence of overweight and obese children has been growing globally in few decades. In adult population, it is generally accepted that insufficient sleep is linked with obesity. However, similar study conducted in pediatric population is limited.

**Objectives:** This paper was prepared based on a case found at the Senen District Public Health Centre, where a 10-year-old boy presenting with obesity was diagnosed. The patient’s mother was asking if lack of sleep may be the cause for his obesity. This paper aims to show evidence whether the short sleep duration increases the risk of obesity in children.

**Materials and Methods:** Systematic search was done in on-line databases including PubMed, Scopus, and The Cochrane Library. Relevant clinical studies published in the last 5 years (2010-2015) that investigated the relationship between insufficient sleep and pediatric obesity were scanned if they fulfilled the inclusion criteria.

**Results:** One cross-sectional population-based study and one longitudinal cohort study are found to be relevant to this report. Both studies show that short sleep duration increases the risk of obesity in children.

**Conclusions:** Consistent with previous research in other populations, these findings confirm the association of shorter sleep duration with the risk of obesity. While the mechanisms explaining relationship between sleep and obesity remain unclear, these findings suggest to inform parents the importance of adequate sleep.

**ID: 295 / POST1: Presentation 24**
**POSTER**  
**Topics:** Overweight Prevalence, Mental Health  
**Keywords:** child obesity, psycho-emotional disorders, cognitive disorders

**CLINICAL SIGNIFICANCE OF PSYCHO-EMOTIONAL DISORDERS AND THEIR CORRECTION WITH THE CHILD OBESITY**

**Iuliia Tsynchyk**  
Odessa National Medical University, Ukraine, Ukraine

The aim is to improve the results of treatment of obesity in children on the basis of studying nature of clinical, psycho-neurological, psycho-emotional and cognitive disorders and combined usage of medical support (diet + metformin) with individual psychological correction by art therapy methods. There are revealed psychosomatic diseases, psycho-neurological syndromes (attention and hyperactivity deficit syndrome, psycho-vegetative and astheno-neurotic syndromes) and social behavioral disorders.

It is established that the main psycho-emotional disorders in children with obesity are the following: self-depreciation, high anxiety level, as well as depression, impulsivity, introversion, self-doubt, irritability, petulance, negation, pessimism, and aggression.

Cognitive disorders in children with obesity are defective memory, impaired concentration, perceptual defect, poor processing of information, low efficiency.

The combined use of the diet + metformin and individual psychological correction methods (fairy tale and sand therapy) improve efficacy of psycho-emotional disorders and cognitive function disorders in obese children.

**ID: 181 / POST1: Presentation 25**
**POSTER**  
**Topics:** General Pediatrics  
**Keywords:** urine, reflux, infant, ultrasound

**THE DIAGNOSTIC VALUE OF CONDUCTING VOIDING CYSTOURETHROGRAM IN ALL INFANTS YOUNGER THAN TWO MONTHS AFTER THEIR FIRST URINARY TRACT INFECTION**

**Samar Osman**, Shabina Khan, Adiba Hamad, Mohamed Hendaus, Lukman Imam, Fayhha Ahmed Abdelgadir, Amal Haider, Eshraga Taha  
Hamad Medical Corporation, Qatar

**Introduction:** Urinary tract infection (UTI) may often be the first sign of an undiagnosed congenital anomaly of the urinary system especially in infants less than two months of age. The aim of radiological imaging after the first attack of UTI in this patient population is to therefore, detect any congenital renal anomalies, especially vesico-ureteral reflux (VUR), which increases the risk for permanent renal damage.

**Purpose:** To determine the need for conducting a Voiding Cystourethrogram (VCUG) in all infants less than 2 months after their first urinary tract infection, irrespective of the renal ultrasound result (RUS).
**Materials and Methods:** A retrospective cross-sectional study was conducted at Hamad Medical Corporation, the only tertiary medical institution in the State of Qatar. Patients under the age of 2 months hospitalized with a first episode of UTI from January 1, 2008 to December 31, 2013 were included in the study. One hundred and thirty six patients met the inclusion criteria.

**Results:** 136 patients (52% females, 48% males) under the age of two months were admitted to the general pediatric ward with a diagnosis of UTI at Hamad Medical Corporation between the periods of January 1, 2008 till December 31, 2013. RUS was conducted in all 136 patients. Of these 136 patients, 87 (63%) also had a VCUG done to screen for VUR. The VCUG results were divided into three categories: normal VCUG (n=56), VCUG with grade 1-2 reflux (n=11) and VCUG with grade 3-5 reflux (n=20). 72.7% of the 11 patients, who had a grade 1-2 VUR, had a normal RUS, which is often the case with low grade reflux. However, the RUS also failed to pick up any abnormalities in 13 out of the 20 babies (65%) with grade 3-5 reflux. Our study showed that RUS had a sensitivity of 32.2%, specificity of 75%, and negative predictive value of 66.7% with a positive predictive value of 41.7% to identify VUR, when compared to VCUG in these infants. The overall diagnostic accuracy for ultrasound to detect VUR in our patient population, aged less than 2 months, was less than 60% (59.8%).

**Conclusions:** More than two thirds of our patients with an abnormal VCUG (VUR grade 1-5) had a RUS that was reported as normal. RUS may often be normal in patients with grade 1-2 reflux. However our data demonstrates that RUS alone, without a VCUG, might fail to detect even clinically significant VUR i.e. grade 3-5 reflux. These results suggest that imaging after the first UTI should include RUS in combination with VCUG to prevent possible scarring in infants, particularly, those less than 2 months of age.
The aim of this study was the quantitative evaluation of cellular and humoral immunity indices in children with juvenile arthritis (JA). We examined 64 children with arthritis (aged from 1.5 to 15 years): with juvenile rheumatoid arthritis (JRA) – 49, with reactive arthritis (Rea)-15 children. The obtained data were compared with a control group of apparently healthy children (17 children) (Kustova, E. A., 2007). The diagnosis of juvenile arthritis was confirmed according to the classification criteria for juvenile idiopathic arthritis, adopted in 1997, Durban.

Systemic form of JRA was diagnosed in 6 examined patients, oligoarthritis in 21 patients, polyarthritis – 15 patients and juvenile spondylitis - 4 children. The content of mature CD3+ T-lymphocytes was statistically significantly increased both in relative and absolute figures in patients with JRA compared with the control group (75.3±2.4% vs. 61.5±1.5%). In patients with a reactive form of arthritis relative figures were decreased (55.4±1.7 vs. 61.5±1.5, correspondingly), but the absolute figures CD3+T lymphocytes were compared to the control group. Also in the group of patients with JRA unidirectional increase as CD4+ T-helper population (42.3±1.1) and CD8+eff/suppr.cells (34.2±1.3) were obtained compared with values in control group (35.2±1.2 and 25.4±1.4). The relative amount of both subpopulations in patients with reactive arthritis was significantly lower than the corresponding values in the control group, whereas significant changes have been identified in the absolute values. Also, it is necessary to point out the increase in the number of NK cells (24.3±0.9%), CD3+25+lymphocytes (15.1±0.7) compared with patients with reactive arthritis and the control group. Content of the antigenpresenting CD3+HLA-DR+ lymphocytes and CD3+HLA-DR+ was dramatically increased in the JURA (8.7±1.2% and 16.7±1.9 percent), significantly increased in the group with reactive arthritis (6.8±0.9 to 10.8±1.1) compared with the group of healthy children (4.1±0.5% and 6.5±0.9%).

Analysis of the humoral immunity parameters in patients with JRA has identified dysgammaglobulinemia: increased concentrations of IgG (P<0.01) and IgM (P<0.05) in the serum, while reducing the IgA (P<0.05). In the case of reactive arthritis increased level of Ig M was noted in 20% of cases, reduction of Ig A in 12.5%, significant changes in the level of Ig G in comparison with the control was not detected. According to obtained data regarding to cytokine production, statistically significant increase of TNF-α content in the children serum with JRA (P<0.01), and reactive arthritis (P<0.01) was revealed when compared with the control group. Enhance in the IL-6 level was detected only in the group of children with JRA. Summarizing all data, we may conclude that the monitoring of the cellular and humoral immunity indicators allow to draw up an predictive algorithm of relapse periods and further course of the disease.

Introduction: The incidence of developmental delay/intellectual disability (DD/ID) in the general populations is 1 - 3% and autism spectrum disorders (ASD) affects –1:150 individuals. Despite the availability of an extensive range of diagnostic exams, the underlying etiology remains unknown in 50 - 80% of patients. Chromosomal microarray (array-CGH) is now the first line genetic test for DD/ID, ASD and multiple congenital abnormalities.

Purpose: To determine the array-CGH contribution for the etiologic diagnosis of the patients with DD/ID and ASD followed at our center.

Materials and Methods: Retrospective study. We analyzed the clinical charts of all patients with unexplained DD/ID and/or ASD followed in a pediatrics Development department from January to July 2015 that had array-CGH performed.

Results: Array-CGH was performed in fifty-one patients, 65% male, with a median age of 10 years (2-18 years); 98 % had unexplained DD/ID and 19.6% had ASD. The average Global Developmental/Intelligence Quotient (IQ), tested accordingly to the age of the patient, was 56 (ranging from 17-83). Ninety percent of the patients had a normal karyotype, 75% a normal Fragile-X test, 55% a normal metabolic study and 41% had a normal brain MRI. Array-CGH was normal in 56% of cases and 16% cases had clinically significant variants; 19% had copy number variations (CNVs) of unclear significance and their investigation is still in progress.

Conclusions: The array-CGH diagnostic yield described in the literature is 15 - 20%, across all studies, about 12% more than G-banded karyotyping alone. Our results confirm the utility of array-CGH as a diagnostic tool in the studied patients.
Results: During the study period, 156 children were diagnosed as diabetes mellitus: 99 (63.4%) with T1DM, 43 (27.6%) T2DM, 2 (1.3%) with neonatal DM, and 12 (7.7%) with secondary DM. Dividing the cases into 5-year intervals, we found a significant increasing number of new patients in each period with both T1DM and T2DM: doubling in 2000-2004, tripling in 2005-2009, and more than tripling in 2009-2014, and also an increased proportion of T2DM from 10% in 1994-1999 to 25% in 2000-2004 and 2005-2009, and 30% 2010-2014.

Conclusions: The number of T1DM and T2DM pediatric patients has risen sharply in number over the last 20 years, and also the percentage of T2DM has increased from 10% in 1994 to 30% in 2014.

ID: 185 / POST1: Presentation 30
POSTER
Topics: General Pediatrics
Keywords: Child, polymerase chain reaction, cycle threshold value, respiratory infection, disease severity

PITFALLS IN INTERPRETATION OF CT-VALUES OF RT-PCR IN CHILDREN WITH ACUTE RESPIRATORY TRACT INFECTIONS

Jerome O. Wishaupt1, Tjeerd Van der Ploeg2, Leo C. Smeets3, Ronald De Groot4, Florens G.A. Versteegh5,6, Nico G. Hartwig7,8
1Reinier de Graaf Hospital, Delft, The Netherlands; 2Medisch Centrum Alkmaar, Alkmaar, The Netherlands; 3Reinier Haga Medisch Diagnostisch Centrum, Delft, The Netherlands; 4Radboud University Medical Centre, Nijmegen, The Netherlands; 5Groene Hart Ziekenhuis, Gouda, The Netherlands; 6Ghent University Hospital, Ghent, Belgium; 7Sint Franciscus Gasthuis, Rotterdam, The Netherlands; 8ErasmusMC–Sophia, Rotterdam, The Netherlands

Introduction: Cycle threshold (CT) value of real-time polymerase chain reaction (RT-PCR) is inversely correlated with viral load in respiratory samples. It is not clear whether the amount of virus in an individual patient plays a role in disease severity.

Purpose: To discuss the clinical relevance of the relation between CT value and disease severity in children with acute respiratory tract infection (ARI).

Materials and Methods: A cohort of 582 previously healthy children (<12 years) with respiratory symptoms was prospectively followed. Patients were sampled and tested for 15 viruses. Correlations were calculated between CT value and hospitalization rate, length of hospital stay, length of extra oxygen use and disease severity in children with mono-viral ARI and mixed viral ARI.

Results: In mono-viral ARI, there was a small, but statistically significant difference between median CT values of Respiratory syncytial virus (RSV) for hospitalized versus non-hospitalized children (23.17 versus 24.47, p 0.04). For Human Coronavirus (HCoV), there was a weak inverse correlation between CT value and disease severity (rho -0.548, p 0.006). For influenza virus, there was a moderate correlation between CT value and length of oxygen use (rho 0.55, p 0.027). In mixed viral infections with RSV-HCoV, RSV-rhinovirus and RSV-parainfluenza virus, RSV was the virus with the lowest CT value i.e. the highest viral load.

Conclusions: Positive correlations between CT values and clinical parameters in ARI are found. However, the clinical importance is limited. Rho values are low, indicating weak correlations without clinical importance. In mixed infections, CT values of different viruses cannot be compared among each other because technical specifications of RT-PCR assays differ between viruses. In mixed infections, It is extremely difficult to point at a major viral contributor of disease severity.

ID: 133 / POST1: Presentation 31
POSTER
Topics: General Pediatrics
Keywords: Dilated cardiomyopathy, myocarditis, heart failure, thromboembolic complications

DILATED CARDIOMYOPATHY: CLINICAL FEATURES, EVOLUTION AND PROGNOSTIC DATA IN CHILDHOOD (33 CASES REPORT)

Houda Ajmi1, Nesrine Ibn Hassine1, Minyar Tifilha1, Sameh Mabrouk1, Saidia Hassayoun1, Jalel Chemli1, Essia Boughzela2, Noura Zouari3, Saoussen Abroug1
1Pediatric department, Sahhlou hospital, Sousse, Tunisia; 2Cardiology department, Sahhlou hospital, Sousse, Tunisia

Introduction: The dilated cardiomyopathy (DCM) is the most frequent form of childhood cardiomyopathies. It is characterized by a dilation of the left ventricle (LV) associated with a systolic dysfunction (Ejection Fraction <45%). Its evolution can be dotted with several complications: heart failure, thrombosis, arrhythmia and sudden death.

Purpose: The aim of our study is to analyze the clinical and evolution features of childhood DCM.

Materials and Methods: Data of children affected by DCM and followed in the Pediatric department of Sahhlou hospital between January 1994 and May 2015 were retrospectively analyzed for the clinical features, evolution and complications.

Results: Thirty three cases of DCM were included. The average age of diagnosis was of 2.6 years. Etiologies were variable, dominated essentially by the viral acute myocarditis (23 cases). Seven children presented complications as a first manifestation of the DCM: Sudden death (1 case), arrhythmia (3 cases: 1 case of ventricular tachycardia and 2 cases of supraventricular tachycardia), ischemic cerebral stroke (3 cases) and cardiac left ventricular thrombus (1 case). These complications arose at six cases of acute myocarditis and a case of non-compaction of the left ventricular myocardium. They were observed at patients presenting an altered myocardium function with Ejection Fraction average = 28 % and Shortening Fraction average = 13 %, while patients who did not present complications had an Ejection Fraction averages = 29 % and Shortening Fraction averages =20 %. Among patients presenting complications: 3 got back a normal myocardium function, 3 died and only one kept an altered myocardium function with neurological sequelae. The other children kept a stable clinical state and an altered myocardial function in echocardiography with a death in one case by acute heart failure.
Conclusions: The DCM is a major cause of heart failure, arrhythmia and thromboembolic complications in children. These complications are correlated in an altered LV function and justify a regular monitoring (private hospital, echocardiography, holter-ECG) and appropriate preventive measures.

ID: 261 / POST1: Presentation 32
POSTER
Topics: General Pediatrics
Keywords: Myelodysplastic syndrome; children

MELODYPLASTIC SYNDROMES IN CHILDREN
Bechir Achour1, Haifa Regaieg1, Nesrine Ben Said1, Houda Aim2, Yosra Ben Youssef1, Abderrahmen Khli1
1Hematology department, Farhat Hached University hospital, Sousse, Tunisia; 2Pediatric department, University Sahloul hospital, Sousse Tunisia

Introduction: Myelodysplastic syndromes (MDS) are a heterogeneous group of hematopoietic clonal disorders largely of the elderly and exhibit a dramatic increase in incidence with age. However, in children, MDS is rare and often seen in association with genetic disorders and inherited bone marrow failure disorders, owing to a lack of consensus on criteria for diagnosing the disease we report 8 cases of MDS in children.

Materials and Methods: We report retrospectively the epidemiological, cytogenetic, therapeutic and prognostic factors of 8 cases of MDS in children among a review of the literature.

Results: Eight cases of pediatric MDS were diagnosed and treated between January 2005 and December 2013. The median age at presentation is 9 years [2 years-18 years] with 5 boy and 3 girls. The circumstances of discovery were hemorrhagic syndrome in 4 cases, the association: anemia and hemorrhagic syndrome in 2 cases and accidental in two cases. Biologically, normocytic anemia was isolated in two cases associated with thrombocytopenia in 3 cases and pancytopenia is found in 3 cases. 3 cases were classified as refractory anemia, refractory anemia with excess blasts type 1 in one case, 2 cases of refractory anemia with excess blasts type 2, refractory cytopenia with multilineage dysplasia in 2 cases. The karyotype was normal in 3 cases, monosomy 7 was found in two cases and complex abnormalities were found in 3 cases. According to the IPSS prognostic classification: three MDS were classified as low risk, two as intermediate risk 1 and three cases were high-risk. The treatment was only symptomatic in all cases, with red and platelet transfusions. The evolution was marked by the death in 5 cases; median overall survival was 14 months.

Conclusions: MDS of the child are a particular and rare type of MDS both in its clinical and cytogenetic presentation of its evolutionary mode.

APPARENT LIFE-THREATENING EVENTS IN INFANTS: REPORT OF 107 CASES
Oussama Mghirbi, Houda Aim, Saida Hassayoun, Sameh Mabrouk, Minyar Tfifha, Jalel Chemli, Noura Zouari, Saoussen Abroug
Pediatric department, University Sahloul hospital, Sousse, Tunisia

Introduction: An apparent life-threatening event (ALTE) is defined as an episode that is frightening to the observer and that is characterized by some combination of apnea, color change, marked change in muscle tone, choking or gagging. Because of their prevalence as well as their potential to hide serious diseases, ALTE remains a challenge for physicians caring for infants.

Purpose: The present study aims to review epidemiologic data, clinical manifestations, laboratory findings and evolution of children hospitalized with ALTE who referred to the Pediatric department of Sahloul hospital, during a twenty-two years period.

Materials and Methods: We conducted a retrospective study of all cases of ATLE hospitalized in the Pediatric department of SAHLOUL hospital on a period of 22 years (January 1993 - December 2014). We analyzed epidemiological, clinical and paraclinical data for each child. The therapeutic procedures and outcome were also registered.

Results: 107 patients were collected. They were aged 7.5 months on average [40 days - 30 months-old] with sex ratio male/female=1. The duration of ALTE varied between 1 to 15 minutes. Symptoms were various: associated: dyspnea in 9 cases, apneas in 28 cases, pallor in 14 cases, cyanosis in 87 cases, hypotonia in 54 cases, hypertonia in 11 cases and vomiting in 12 cases. ALTE were concomitant with fever in 5 cases and hypoglycemia in one case. Etiologies of ALTE were dominated by Gastroesophageal reflux in 37 cases followed by neurological causes in 12 cases, cardiovascular causes in 22 cases (17 cases of anoxic malaise), metabolic causes in 3 cases (2 cases of hypocalcemia and 1 case of hypoglycemia), respiratory causes in 6 cases (5 case of bronchiolitis and another case of malformation of the upper airway), Two cases of vagal malaise and two cases of false food drive. The causes of ALTE in 23 cases remained undetermined. Most of children (89 cases) had a good evolution, after specific treatment, with no recurrence and without sequelae; 12 infants showed recurrence of ALTE, 10 cases has required resuscitation and 5 died.

Conclusions: ALTE remains a real diagnostic and therapeutic emergency in infants especially for the youngest infants (aged less than 2 months). It must be differentiated from the sudden infant death syndrome. A structured approach to the emergency reception and brief hospitalization is necessary and management require meticulous questioning, careful clinical observation and investigation.
CHRONIC STRIDOR IN INFANTS: REPORT OF 14 CASES

Houde Aimi 1, Dhouha Zouari 1, Saïda Hassayoun 1, Sameh Mabrouk 1, Minyar Tfifha 1, Wassim Karmani 2, Jalel Chemli 1, Mohamed Abdelkefi 1, Noura Zouari 1, Saoussen Abroug 1

1Pediatric department, University Sahloul hospital, Sousse, Tunisia; 2ENT department, University Farhat Hached hospital, Sousse, Tunisia

Introduction: Stridor is a common symptom of pediatric consultation. It is a high-pitched sound caused by turbulent airflow passage into partial obstruction of the upper airways. The causes of chronic stridor are variable and symptoms can range from minimal clinical signs to life threatening.

Purpose: The present study aims to review clinical manifestations, etiologies and management of infants with chronic stridor who were referred to the Pediatric department of Sahloul hospital, during a fourteen years period.

Materials and Methods: We performed a retrospective review of all cases of chronic stridor hospitalized in the Pediatric department of SAHLOUN hospital on a period of 14 years (January 2000- December 2014). Fourteen cases presenting severe chronic stridor at the medical examination were enrolled in this study. Cases with acute stridor caused by asthma, laryngitis, acute epiglottitis, foreign body, and trauma were excluded.

Results: Over a period of 14 years, 14 cases of severe chronic stridor were collected. The average age of our patients was 6 month-old [2 -15 month-old]. The different etiologies identified were: 5 cases of Laryngomalacia, 4 cases of aortic arch anomalies, 3 cases of gastrointestinal reflux disease (GIR), a case of tracheal stenosis and a case of subglottic hemangioma (SGH). The 4 children with aortic arch anomalies and the one with the tracheal stenosis underwent successfully a surgical treatment with a good evolution in 4 cases and post-operative death in a patient with a vascular ring. The evolution in children with GIR was favorable under specific treatment. Children with laryngomalacia had spontaneously favorable evolution in 3 cases; one case kept ischemic encephalopathy as neurological anoxic sequelae and one child had a fatal outcome. The last infant with SGH had a tracheotomy and has been treated with β-blockant until regression of the tumor.

Conclusions: Infants with chronic stridor should be examined carefully and explored by endoscopic procedures; even the most frequent etiology is laryngomalacia. In fact, others uncommon etiologies may be the cause and could beneficiate of specific treatment. Moreover, close cooperation by otolaryngologists, pediatricians, surgeons, and anesthesiologists is also indispensable for appropriate managements.

EPIDEMOLOGY OF FULMINANT LIVER FAILURE IN MUSHROOMS POISONING IN CHILDREN IN NORTH-WESTERN ROMANIA (2001-2015)

Alina Grama 1, Aurel Bizo 2, Cornel Aldea 2, Dan Delean 2, Tudor Lucian Pop 2

1University of Medicine and Pharmacy Carol Davila Bucharest, Romania; 2Nephrology Clinic, Emergency Hospital for Children Cluj-Napoca, Romania

Introduction: Mushrooms poisoning occurs quite frequently in Romania, especially in some rural area with low socioeconomic status, and more frequently during late summer and autumn. Amanita phalloides is the most common and fatal cause of mushroom poisoning. Fulminant liver failure is the cause of death in many patients with mushroom poisoning without emergency liver transplantation.

Purpose: The aim of our study was to analyse the prevalence of fulminant liver failure in mushroom poisoning in children during the last 15 years.

Material and Methods: We have analysed retrospectively all patients with wild mushrooms poisonings hospitalized between 2000 and 2015 in our hospital, the main Toxicology Centre in North-Western Romania.

Results: During the last 15 years, 270 children were hospitalized in our centre for mushrooms poisoning. Fulminant liver failure was present in 83 patients (30.75%, mean age 7.92 years, 45 males, 54.21%). Fulminant liver failure was present more frequent in 2001 (32 cases) and 2010 (16 cases). Even though the mortality rate of all mushroom poisoning cases was low (16.66%), in children who developed fulminant liver failure the mortality was high (54.21%), despite the improvement in intensive care management. In our cohort there was no case with possibilities for emergency liver transplantation. The mortality varied between 0% (in 2000) and 100% (2004, 2006, 2008, and 2009). For the last years with fulminant liver failure cases the mortality was decreasing (2010 – 33.75% and 2011 – 20%). During the last years there were announcements on the public TV station in order to present the risks of wild mushroom consumption.

Conclusions: Fulminant liver failure in mushroom poisoning is associated with a high mortality in children, despite optimal medical therapy,without emergency liver transplantation. Improvement in health education and use of media for this aim can plays an important preventive role in decreasing the frequency of mushroom poisoning and subsequently fulminant liver failure in children.

Acknowledgments: Funded by European Social Fund, Human Resources Development Operational Program 2007-2013, Project no POSDRU/187/1.5/S/155631
NEW SLICC CLASSIFICATION CRITERIA DON'T EXCLUDE SYSTEMIC JIA ASSOCIATED WITH MAS: A CASE REPORT

Ayse Yasar, Burcu Karakayali, Ahmet Sami Yazar, Deniz Çakır, Şirin Güven, Ismail Islek
Department of Pediatrics, Umraniye Training and Research Hospital, Istanbul, Turkey

Introduction: Macrophage activation syndrome (MAS) is a serious and fatal complication, which is seen, most commonly in systemic juvenile idiopathic arthritis (sJIA). The Systemic Lupus International Collaborating Clinics (SLICC) group has recently proposed new criteria for the classification of systemic lupus erythematosus (SLE). Studies reported that SLICC criteria are more sensitive but less specific than the ACR criteria in pediatric SLE patients. Also they could not exclude the diagnosis of hemolytic uremic syndrome (HUS) and juvenile dermatomyositis (JDM). We reported a patient in whom SLICC criteria could not exclude sJIA complicated with MAS.

Case Report: A 6-years old boy was admitted with high fever lasting for 7 days, rash on the trunk and legs, abdominal pain and headache. Physical examination revealed high body temperature (intermittent fever on follow-up), malar rash, salmon pink maculopapular rash apparent during periods of fever and myalgia. Laboratory analysis except CRP: 19.8 mg/dl, Direct Coombs test (+), ESR: 47 mm/h were normal. Abdominal USG revealed splenomegaly. We diagnosed patient as sJIA. On the 6th day of hospitalization the patient suddenly deteriorated. Laboratory analysis showed pancytopenia, hypofibrinogenemia, elevated levels of ferritin and triglyceride, abdominal USG showed hepatosplenomegaly and ascites. Viral and bacterial serologic tests were studied. The patient's blood, urine, throat culture was taken and cefotaxime was started. Staphylococcus aureus was recovered in blood culture and teicoplanin was added to the treatment. Peripheral blood smear showed increased immature neutrophils and toxic granulation in neutrophils. Immunological tests were normal. The patient was diagnosed as MaS developed secondary to sJIA.

bone marrow aspiration was performed and hemophagocytosis was detected. Pulse methyl prednisolone treatment was administered. The patient improved clinically within 7 days. On admission our patient met only two of the SLICC criteria (malar rash and direct coombs positivity). After diagnosis of MAS he fulfilled 4 clinical criteria (Malar rash, leucopenia, thrombocytopenia, serositis) and 1 immunologic SLICC criteria for SLE (Direct coombs positivity). According to SLICC criteria, our patient could be diagnosed as SLE. On the other hand our patient met only three criteria of ACR (malar rash, hematologic disorders, serositis), and could not be diagnosed as SLE according to ACR criteria.

Conclusions: Our case showed that SLICC criteria can lead to the misdiagnosis in patients of sJIA associated with MAS as previously reported the HUS and JDM cases in the literature. These criteria may necessitate further revision in pediatrics.
EVALUATION OF CHILDREN WITH FAMILIAL MEDITERRANEAN FEVER IN UMRAÑİE REGION OF ISTANBUL

Nuran Basoglu, Ahmet Sami Yazar, Selime Aydogdu, Burcu Karakayali, Sirin Guven, Ismail Islek
Department of Pediatrics, Umranie Training and Research Hospital, Istanbul, Turkey

Introduction: Familial Mediterranean fever (FMF) is an autosomal recessive disease associated with recurrent self-limiting fever, abdominal, chest and joint pain episodes. The clinical signs and gene analysis of FMF vary according to ethnic groups and different regions.

Purpose: In our study we aimed to evaluate pediatric patients diagnosed with FMF in Umranie region of Istanbul, to determine the correlation of clinical findings with the mutations and to compare these data with other ethnic groups and regions.

Material and Methods: A total of 119 children with FMF were evaluated. The diagnosis was made according to Tel Hashomer Criteria. MEFV gene mutations were studied with sequence-specific primers using the Polymerase Chain Reaction (PCR) technique.

Results: The mean age of diagnosis was 7.56 ± 4.17 years. Male/female ratio was 1.16. The mean time of diagnosis delay was 1.50 ± 2.39 years. MEFV gene analysis revealed 10 mutations. The most common mutations were M694V (47.4%), E148Q (34.5%) and R202Q (12.9%). All patients with simple and compound heterozygous E148Q mutations had clinical findings as other homozygous patients. Mutation causing R202Q change was described as a frequent polymorphism. Our patients having R202Q change fulfilled the FMF criteria. We started colchicine and patients responded well to the treatment. The main clinical features were abdominal pain (79%), fever (58%), arthralgia (49.6%), myalgia (26.9%), arthritis (21%), chest pain (16%), nausea and vomiting (11.8%), erysipelas-like erythema (6.7%). We observed differences in clinical findings between homozygous and heterozygous patients. Abdominal pain in M694V compound heterozygous, fever in M694V homozygous, arthralgia in M694V heterozygous, arthritis in V726A compound heterozygous patients were significantly higher. The rate of HSP together with chest and joint pain in M694V compound heterozygous was significantly lower. There was no correlation between the mutations and clinical findings.

Conclusion: The distribution of MEFV gene mutations in FMF may vary from region to region. M694V was the most common mutation in our study. As in other regions of Turkey, chest pain was lower than reported in Armenians, Arabs and Jews. We detected significant correlation between the mutations and clinical findings.

A CASE REPORT: JUVENILE POLYPsis COLI WITH INTUSSUSCEPTION

Ceyhan Sahin, Ruhan Ozer, Mehmet Arpacik, Burcu Karakayali, Cengiz Gul, Ismail Islek
*Department of Pediatric Surgery, Umranie Training and Research Hospital, Istanbul, Turkey; *Department of Pediatrics, Umranie Training and Research Hospital, Istanbul, Turkey

Introduction: Juvenile polyposis syndrome (JPS) is an autosomal dominant predisposition to the occurrence of hamartomatous polyps in the gastrointestinal tract. Diagnosis of JPS is based on the occurrence of numerous colon and rectum polyps or any number of polyps with family history and, in the case of juvenile polyps, their occurrence outside the large intestine. JPS is subclassified into three types: Juvenile polyposis infancy, Juvenile polyposis coli and generalized Juvenile polyposis. Clinically JPS can present with diarrhea, rectal prolapse, protein losing enteropathy, haemorrhage, malnutrition and intussusception. JPS is associated with an increased lifetime risk of colorectal carcinoma, thought to arise from adenomatous change within the hamartomas. There is no international consensus on treatment or prophylactic surgery for patients. We reported a rare case of juvenile polyposis syndrome which all of the clinical presentation were seen.

Case Report: We reported the case of four years old female patient who was admitted to hospital with vomiting and abdominal distention. She had malnutrition and tenderness on the left abdominal quadrant. Patient’s hemoglobin value was 5.2 mg/dl and suspected invagination in ultrasonography. We learned that she had been diarrhea and hematochezia episodes. Hypoalbuminemia and hypoahbuninemia were present in laboratory findings. We operated after erythrocyte suspension transfusion and we found colocolic invagination in operation. Caecotomy was made after manual reduction due to caecal mass and we saw multiple polyps from caecum to ascenden colon.(image 1). Polypectomy was performed (image 2) and planned that colectomy after malnutrition treatment and colonoscopy. Pulmonary atelectasis and pneumonia were developed in the postoperative period and she was followed in intensive care. Enteral nutrition were began five days after the operation. Polyps pathology result was hamartomatous polyps. Patient were discharged with oral nutrition treatment after 30 days after admission to hospital.

Conclusions: Juvenile polyposis coli is a rare cause of intussusception and treatment should be planned according to the patient's accompanying symptoms during the operation. We planned that partial polypectomy and delayed colectomy because of severe malnutrition and anemia in this patient. We think that invagination segment must be palpated by surgeons in the periop invagination operation, like in this patient.
FIRST SEIZURE IN PEDIATRIC EMERGENCY ROOM

Ana Raquel Moreira, Catarina Maia, Cecília Martins
Division of Pediatric, Centro Hospitalar do Médio Ave - Unit of Vila Nova de Famalicão, Portugal

Introduction: Epilepsy is a common neurological disease in children, with an estimated prevalence between 4 and 6 cases per 1000 children. Several conditions can mimic seizures. The differential diagnosis englobes many pathologies/conditions. Age, comorbidities and suspicious details of the episode can orientate to the diagnosis.

Material and Methods: Retrospective observational study, reviewing medical records of children/adolescents admitted at the emergency room of a secondary hospital with parental suspicion of first seizure, between October 2003 and June 2014. Data was treated with SPSS Statistics software 20.0 ®.

Results: Were included 135 patients with an average age of 70.7 months. Of these patients, 32 were excluded because, clinically, didn’t show any evidence of crisis (ex: syncopes, crying spasms). The 103 remaining match those who had high suspicion of first seizure. With an average age of 73.9 months (maximum age of 17 years and a minimum of 1 month), 52.4% were male. Personal background revealed that 14% were born prematurely, 6.3% needed resuscitation manoeuvres at birth, 7.8% had structural central nervous system lesions and 9.4% had history of febrile seizures. Family history of epilepsy was positive in 43.8% of cases, febrile seizures in 3.4% and developmental impairment in 6.7%. Generalized seizures were reported in 65% of patients. The most frequent type of seizure was generalized tonic-clonic (40.8%) and 4.9% were considered status epilepticus. The duration of the episode was less than 5 minutes in 47.8%. Electroencephalogram (EEG) was performed in 93.2% and pathologic findings were present in 45.3%. Of the 50.5%, who underwent neuroimaging study (magnetic resonance imaging and/or brain computerized tomography), 5.7% had changes. Antiepileptic drug was initiated in 46.1% of patients.

Conclusions: Most of the children who had had a first seizure, won’t have another. However, this can be the initial sign of epilepsy. A meticulous medical history, including family background and a detailed description of the episode can allow clinical distinction of an epileptic seizure and a non epileptic paroxysmal episode.

PREGNANCY OBESITY AND LONG TERM OUTCOMES IN CHILDREN HEALTH

Eleni Papachatzi1,3, Spyros Paparrodopoulos1, Vasillis Papadopoulos2, Gabriel Dimitriou1, Apostolos Vantarakis1
1Department of Public Health, Medical School, University of Patras, Greece; 2Department of Obstetrics and Gynecology, Medical School, University of Patras, Greece; 3NICU, Department of Pediatrics, Medical School, University of Patras, Greece

Introduction: Pregnancies of obese women are considered as high risk, as maternal pre-pregnancy obesity has been correlated to both obstetrical and perinatal complications. These complications include pregnancy induced hypertension and diabetes, premature delivery, higher incidence of cesarean section, infection, birth trauma, neonatal macrosomia, neonatal admission to NICU and low neonatal Apgar scores. (1)

Purpose: The main purpose of our case control analysis was to investigate the impact of maternal pre-pregnancy obesity on long term outcomes in children’s life.

Materials and Methods: A historic prospective case control analysis was conducted. Obese women who gave birth to a living neonate, between 2003 and 2008, in University Hospital of Patras, were defined as cases. Matched controls (age, residency, date of labor) were women of normal BMI, who gave birth at the same period in the same hospital. Data were obtained through telephone interviews, shipping via post or email.

Results: Two hundred and eighty two subjects were enrolled in the study. Children born to cases, were at increased risk of having respiratory disorders (OR 2.05, CI 1.201-3.499, p=0.008) and allergies (OR 2.077, CI 1.072-4.025,p=0.03) during infancy and childhood. Additionally, they were at increased risk of being overweight or obese (OR 2.57, CI 1.524-4.339, p<0.001) and having hypercholesterolemia (OR 65.28, CI 0.092 - ∞, p=0.004) during childhood.

Conclusions: Maternal obesity before pregnancy may play a potential role in the development of respiratory disorders, allergies, hypercholesterolemia and obesity during childhood. Further studies are required in order to gain a clear image.
COMPARATIVE EVALUATION OF PHYSICAL AND SEXUAL DEVELOPMENT OF ADOLESCENTS IN ARAL SEA

Pakhitkanym Ishuova, Boranbaeva Riza, Lim Ludmilla
Scientific Center of Pediatrics and Pediatric Surgery, Kazakhstan

**Purpose:** Characteristics of physical and sexual development of adolescent girls in the Aral Sea area compared to the ecological regions of Kazakhstan.

**Materials and Methods:** 336 girls aged 9-17 years in the Aral Sea region. Indicators of physical development, secondary sexual characteristics, the timing of menarche. Comparison with survey of schoolgirls in ecologically safe regions of Kazakhstan (Turkestan).

**Results:** These figures of girls' somatometry from various regions of current residence revealed no significant differences in terms of physical development between the compared regions. A comparison of the annual increase in the length and weight of the girls of both groups expressed as a percentage, showed that children in Aral Sea region peaks maximum growth of both indicators between the ages of 10 and 12 years and advancing a little earlier than with schoolgirls in Turkestan. The curve of increases year on the length and weight of children of different Turkestan has flatter shape. The latter indicates a more equal and sustainable growth processes than girls of Aral Sea region. The average period menarche were recorded in virtually the same girls age in the Aral Sea area compared to the control region. Girls at Aral Sea area had length 157.1 cm with weight of 48.2 kg and almost matched that of the Turkestan girls (height 157.6 cm, weight 46.7 kg). Thus, the comparison the parameters of somatometry studied in children of Aral sea revealed that currently there are no differences from the figures registered in the city of Turkestan. On the acceleration of girls development in the Aral Sea area and the current conditions suggest an earlier date of registration of secondary sexual characteristics and time of menarche. Therefore, the girls backlog of Aral Sea region in physical and sexual development in 2001 was the result of deterioration of material living conditions for the population at that time.

ERYTHEMA MULTIFORME MAJOR: ONE OUT OF THREE

Sara Rocha, Inês Sanmarful, Alexandra Gavino, Liza Aguiar, José Manuel Onofre
Hospital de Santarém, EPE, Portugal

**Introduction and case report:** Erythema multiforme (EM) is a rare, acute and self-limited condition, characterized by a hypersensitivity reaction to certain infections or medications. It presents with typical cutaneous lesions associated to mucous membrane involvement, within a wide spectrum of severity. We report a case of an 8 year-old girl with previous history of oral aphthous eruptions, hospitalized for pneumonia associated with respiratory distress and vomiting, treated with iv ampicillin. On the 2nd day of hospitalization presented with swelling, blistering and ulcerations of oral mucosa progressing to epithelial necrosis, conjunctival hyperaemia progressively worsening, and skin macular, rounded, well-defined, target-like lesions on the face, abdomen and extensor surfaces of inferior limbs. One vesicle on genital area was also observed. Due to persistent fever and suspicion of atypical agent infection, ampicillin was replaced by clarithromycin, gradually improving the respiratory symptoms. Topical treatment of the oral and skin lesions was instituted, with regression of these in 3 weeks. Thereafter, she had several herpetic reactivations of the oral mucosa, with progressive decrease in severity and frequency, which were treated with oral valacyclovir. Laboratory tests showed: seroconversion to Mycoplasma pneumoniae 4 weeks after infection; positive HSV1 IgM and IgG and negative HSV2 IgM and IgG; negative RAST, prick and intradermoreaction tests for amoxicillin; negative pathergy test; negative primary immunodeficiency research.

**Discussion:** Of the three etiologic factors considered as a possible cause of EM in this case (Mycoplasma, HSV and amoxicillin), we admit that Mycoplasma infection is the most likely, regarding the clinical presentation and well documented seroconversion associated with the negative tests for amoxicillin hypersensitivity. A certain degree of immunosuppression caused by Mycoplasma infection could explain the herpes reactivations.

HEALTH FEATURES IN ARAL REGION’S CHILDREN

Pakhitkanym Ishuova, Boranbaeva Riza, Maytbasova Raikhan, Lim Ludmilla
Scientific Center of Pediatrics and Pediatric Surgery, Kazakhstan

**Objective:** Assessment of 5-17 years old children's health in the Aral Sea region

**Materials and Methods:** Children living in the Aral Sea region; survey of children and adult members of these families

**Results:** The 1st place among the identified deviations in health was occupied by nervous system diseases 30.5%, with different degrees
Poster session 1

of vascular dystonia 45.4%, fatigue 29.4%, cephalalgia 11.3%, neurosis 10.0%, Speech Dev. Delays 3.9%. 2nd place: the digestive system disorders 20.1%, including biliary dyskinesia 48.0%, gastrointestinal tract func. disorders 24.3%, chr. gastroduodenitis 17.1%, chr. cholecystitis 10.5%, reac. pancreatitis 7.9%. The 3rd place: congenital malformations CM 11.2%, among which CM of musculoskeletal system 51.7%, followed by the genitourinary system defects 32.9%, and the CM of the circulatory and hearing, vision systems 15.2%. Bronchopulmonary pathology was found in 8.4% of children, including asthma 23.5%; 51.5% with recurrent obstructive bronchitis, 13.2% with chr. bronchitis, 8.8% with other types. Cardiovascular disease was observed in 4.6% of children. Among other diseases 24.5%; endocrine pathology 31.2% and genitourinary system diseases 24.2%. 17.5% children had frequent and long-term illnesses: comorbidities 44.7% and chronic foci of infection 55.3% were revealed with higher confidence p>0.001, Infection ind: 1.7. Endogenous factors: prematurity 23.8%, perinatal disorders 46.5%. Exogenous factors: the low level of health culture 48.5%, nutritional deficiencies 35.1%. Situational anxiety and low material status had quite a high level 60.3% and 65.3%, respectively. Health groups: 9.2% healthy children I g, the children at risk 50.4% II g, with chronic diseases in the compensation stage 28.6% III., IV g - 6.8% and V g- 5.0%. Addressing the problem of children's health from Aral Sea region requires a comprehensive approach: medical, social and psychological factors.

ID: 289 / POST1: Presentation 45
POSTER
Topics: rare Diseases, lysosomal Storage Diseases
Keywords: umbilical hernia, corneal opacity, Sheie syndrome

PROGRESSIVE GIANT UMBILICAL HERNIA REVEALING AN MPS 1

Hakim Rahmoune, Nada Boutrid, Belgacem Bioud
University of Setif-1, University Hospital of Setif, Algeria

Introduction: Some surgical aspects may reveal authentic metabolic disorders that have “soft” presentation. We report the case of a 30 months boy with an increasing umbilical hernia.

Materials & Methods: A 2.5 years old boy of non-consanguineous parents without specific history consults in pediatric surgery and then in pediatric out-clinic for a progressive, giant umbilical hernia that develops from few months.

Results: Ophthalmology examination reveals a bilateral corneal opacity, while systemic visceral evaluation is free from other organic dysfunction / abnormality, except small dysmorphic features (coarse face)
A high suspicion of lysosomal storage disease (e.i. Mucopolysaccharidosis type 1) allows enzymatic assay and confirms the mild Scheie syndrome.

Discussion: Scheie syndrome is the mildest form of mucopolysaccharidosis type 1, caused by mutations in the IDUA gene (4p16.3) leading to partial deficiency in the alpha-L-iduronidase enzyme and lysosomal accumulation of dermatan sulfate and heparan sulfate. Symptoms commonly occur after the age of 5 years. Corneal opacification occurs progressively and diffusely. Patients present with mild coarsening of the facial features, including a large mouth with thick lips. Genetic counseling is highly recommended in such condition. Enzyme replacement therapy should be started at diagnosis as early treatment slows the progression of the disease.

Conclusion: Surgeon should consider a careful pediatric/metabolic consultation for some peculiar hernias, specially for their giant or recurrent aspect.

ID: 172 / POST1: Presentation 46
POSTER
Topics: General Pediatrics
Keywords: Short stature, rural zone, high altitude

SHORT STATURE: PECULIAR FINDINGS OF A REGIONAL STUDY IN ALGERIA

Nada Boutrid, Hakim Rahmoune, Mounira Amrane, Belgacem Bioud
University of Setif-1, University Hospital of Setif, Algeria

Introduction: Short stature is a common monitored health parameter. We report the preliminary results of a regional study in Algeria with some particular findings

Purpose: The purpose of this work was to have a regional epidemiological reference for short stature in school aged children and to discuss local specificities

Materials and Methods: A multicentric study, involving 8 primary schools with a total of 2493 pupils, was conducted in Setif region (Algeria); in both rural and urban zones. Height was reported according to WHO 2007 Growth Charts.

Results: 66 children (2.64%) had a Z-score at 2 or less, among which 59% were girls. The rural origin, accounting for 98% of height-deficient population, is a hallmark report. The effect of high altitude (narrowing 1000 m in the studied area) is also discussed.

Conclusions: Local influencing factors should be considered while appreciating growth (e.g height) of young population, regarding to such peculiar findings of epidemiological reports. This could lead to a more adapted (and may be more precocious) managing for short stature in children.
**ID: 291 / POST1: Presentation 47**
**POSTER**
**Topics: Neonatology**
**Keywords: Infection, Hemophagocytic lymphohistiocytosis, Newborn, Ferritinemia**

**NEONATAL INFECTIONOUS HEMOPHAGOCYTIC LYMPHOHISTIOCYTOSIS**

**Hakim Rahmoune**, Nada Boutrid  
*University of Setif-1, University Hospital of Setif, Algeria; rahmounehakim@gmail.com*

**Introduction**: The Hemophagocytic lymphohistiocytosis -HLH- is a severe complication of some neonatal infections, as reported here.

**Purpose**: Some non specific sign may lead to very compromising condition and allow a targeted therapy

**Materials & Methods**: The newborn presented a combination of multisviseral deficiency associated to a myriad of anemia - thrombocytopenia and febrile splenomegaly. The balance sheets show a marked inflammation (serum ferritin> 1500); hyponatremia and hypertriglyceridemia. A holistic approach, with antibiotics, antiviral, and steroids is ordered and the newborn recovered within 5 days..

**Discussion**: The secondary -non primitive, non genetic - HLH is defined by clinical criteria (fever, splenomegaly), biological (bi- or pancytopenia, hypofibrinogenemia, hypertriglyceridemia, ferritin) and cyto-histological (hemophagocytosis). A possible infectious agent (bacterial, viral, fungal or parasitic) must be "hunted" and treated urgently. The treatment is etiologic and corticosteroid.

**Conclusion**: The signs of infection and those of HLH can entangle. It should be paid on biochemical results and the search for causative agent.

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**ID: 288 / POST1: Presentation 48**
**POSTER**
**Topics: General Pediatrics**
**Keywords: ITP, Acute, Childhood, Qatar**

**EPIDEMIOLOGY OF ACUTE IMMUNE THROMBOCYTOPENIC PURPURA IN CHILDREN: A RETROSPECTIVE STUDY FROM QATAR**

Shabin Khan¹, **Naja Ba Sharahil¹**, Rasha Qaqish¹, Yasmine Sobeih¹, Yaslam Balfaqih¹, Budoor Alshmary¹, **Ahmed Alhammadi¹²**  
¹Hamad Medical Corporation, Qatar; ²Weill Cornell Medical College - Qatar

**Introduction**: Immune thrombocytopenic purpura (ITP) is the most common bleeding disorder in childhood; usually a self-limiting disorder, follows a benign course and recovers spontaneously after few weeks.

**Purpose**: The objectives of this study were to describe the clinical and epidemiological characteristics of children admitted with newly diagnosed ITP in Qatar.

**Materials and Methods**: A retrospective and descriptive study was conducted in pediatrics department at Hamad Medical Corporation, the main academic tertiary hospital in Qatar. All Children hospitalized with acute ITP from January 2008 to January 2014 were included.

**Results**: A total of 80 acute ITP patients were identified, mean age of presentation was (3) years and (53 %) were male. (80%) of the patients had a platelet count of 20,000 or less on admission and most (84%) were hospitalized for duration of up to 5 days. Recent viral illness considered the most risk factor in (60 %), Spontaneous bruises and petechiae was present in (77.5 %) of children's, only (4 %) developed serious intracranial and lower gastrointestinal bleeding. The treatment modalities were as follows: Intravenous immunoglobulin (IVIG) in (86.5%), IVIG and steroids in (6.5%), observation (6%) and steroids alone (1%).Nearly (66 %) recovery with normal platelet count within 1 year from date of diagnosis compared to (34 %) progressed to chronic ITP.

**Conclusions**: Our study showed that the clinical feature of Acute ITP were similar to findings in other parts of the world. Although the rate of life threatening complication is low, the chronic ITP higher in our population than in literature. Management decisions in our center are often based on physician discretion, rather than established international guidelines.

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**ID: 231 / POST1: Presentation 49**
**POSTER**
**Topics: Mental Health, General Pediatrics**
**Keywords: deliberate self-harm, eating disorders, inpatient care, rapid review, children and young people**

**EVALUATING QUALITY AND IMPACT OF ACUTE PAEDIATRIC INPATIENT CARE FOR CHILDREN AND YOUNG PEOPLE ADMITTED WITH SELF-HARM INJURIES OR EATING DISORDERS: A RAPID REVIEW OF THE LITERATURE**

Joseph C. Manning¹², **Izsvara Blake¹**, Dorothy Bean¹, Joanne Cooper¹, Maria Michail², Elizabeth Hendron¹, Jane Coad¹²  
¹Nottingham University Hospitals NHS Trust, United Kingdom; ²School of Health Sciences, The University of Nottingham; ³Children and Families Research, Coventry University; izsara.blake@nuh.nhs.uk

**Introduction**: In England the prevalence of children and young people (CYP) accessing acute paediatric inpatient care with mental health problems is increasing, with self-harm injuries and eating disorders particularly prevalent. The initial period of acute care for CYP with these conditions can involve multiple assessments and interventions in order to meet potentially diverse needs. However, their is
Currently, there is a deficit in understanding of the quality, experience, and outcomes of those CYP in receipt of inpatient paediatric care with these conditions.

**Purpose:** To review and synthesise existing evidence that reports CYP with self-harm injuries and/or eating disorders experiences and outcomes of being in receipt of acute paediatric inpatient care.

**Materials and Methods:** An eight stage approach to rapidly review the evidence was used (Khangura, et al., 2012). This included: Step 1 – Needs assessment; Step 2 – Question development and refinement; Step 3 – Proposal development and approval; Step 4 – Systematic literature search; Step 5 – Screening and selection of studies; Step 6 – Narrative synthesis of included studies; Step 7 – Report production; Step 8 – Ongoing follow-up and dialogue with knowledge users. Eight electronic databases were searched between February - May 2015. All studies identified from the searches were screened by title and abstract by two independent team members using a predefined eligibility criteria.

**Results:** Database searches yielded 101 papers, with six papers duplicates. Of the remaining 99 papers, screening by title and abstract identified 78 papers did not satisfy the inclusion criteria. Full texts were obtained (n=16), a further six papers were excluded. Of the remaining 10 eligible papers, a search of their reference lists identified a further three papers that were eligible for inclusion in the review. Therefore 13 papers were included in the review. Evidence included international studies from the Western world. Papers that investigated CYP with eating disorders dominated the evidence (n=11), CYP with self-harm injuries (n=2) was significantly underrepresented in this sample. From the 13 studies included, 668 CYP participated. There were six qualitative studies using a range of approaches for analysis, with the remaining studies including: cohort studies, case control designs as well as a literature review. From the narrative synthesis of the included studies, 11 themes emerged that were categorised into three overarching themes: Care, Communication, and Environment.

**Conclusions:** Findings from the studies included in this rapid review indicate that CYP reported experiences and outcomes of receiving acute paediatric inpatient care relates to aspects of care provision, communication and the environmental setting. However, further empirical work is required to explore these themes to establish relevance. This is particularly important due to the scarcity of experiences and outcomes reported by CYP admitted with self-harm injuries.

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**EVALUATING THE QUALITY AND IMPACT OF ACUTE INPATIENT CARE OF CHILDREN AND YOUNG PEOPLE ADMITTED WITH SELF-HARM INJURIES OR EATING DISORDERS: A MULTIPLE STAKEHOLDER ENGAGEMENT PROJECT**

Joseph Charles Manning1,2, Verity Bingham1, Joanne Cooper1, Dorothy Bean1, Iszara Blake1, Damian Wood1, Andrew Turner1, Lucy Rychwalskabrown1, Karine Latter1, Jane Coad1,3
1Nottingham University Hospitals NHS Trust, United Kingdom; 2School of Health Sciences, The University of Nottingham; 3Children and Families Research, Coventry University

**Introduction:** National admission data indicates that the prevalence of Children and Young People (CYP) accessing acute paediatric inpatient care with mental health problems is increasing, with eating disorders and self-harm injuries particularly prevalent. Despite a growing patient population, there is currently no patient centered outcome measure (PCOM) that assesses the impact and quality of being in receipt of non-specialist inpatient care for CYP admitted with self harm injuries or eating disorders.

**Purpose:** This study aimed to evaluate the experiences and impact of admission of inpatient, non-specialist care through stakeholder engagement. Specific objectives included: Evaluate experiences of care; Establish consensus of domains; Assess acceptability of PCOM implementation.

**Materials and Methods:** Participants were identified and recruited from single children’s hospital in England. Six stakeholder engagement workshops were conducted between May -July 2015 with three stakeholder groups: (1) CYP with self harm injuries or eating disorders; (2) Parents/carers of CYP with self harm injuries or eating disorders; and (3) Professionals from health, education and social care. A combination of approaches were employed to capture and prioritise participants’ views and experiences. Graphic elicitation was used to create visual timelines that focused on significant aspects of their care pathway. Nominal Group Technique (NGT) was also employed to rank the relevance of participant- and literature- generated statements relating to the quality and outcomes of care. This technique allows for group decision-making to be undertaken whilst ensuring involvement from everyone. Data was transcribed verbatim and analysed using thematic analysis. Statements from the NGT were inserted into Excel™ and analysed by calculating a strength score using the following equation: (score achieved for the item)/maximum possible score).

**Results:** In total 96 CYP, parents and carers, and professionals participated. From the qualitative feedback, Thematic analysis of the data resulted in the emergence of 12 themes, from 49 codes. Themes identified variation in pathways and experiences of care that resulted in both positive and negative, and sometimes conflicting outcomes and impact. Analysis using from NGT identified congruence between groups with top ranking statements with highest consensus related to care and environmental factors.

**Conclusions:** This evaluative stakeholder project has provided opportunity for the views of CYPs, parents and carers, and professionals from health and education to be explored in relation to being in receipt of non-specialist inpatient care and provide direction for the development of services as well as the focus for a PCOM. Both positive and negative aspects of care were identified. The acceptability of when and how outcomes are measured varied between the two groups of presenting conditions. Therefore any PCOM developed needs to be flexible in how and when it is implemented to satisfy these diverse needs.
FROM LUMBAR TUMEFACTIOON TO TUBERCULOUS SPONDYLODISCITIS – A CASE REPORT OF POTT’S DISEASE

Sara Soares¹, Ana Lucia Cardoso¹, Catarina Liz¹, Teresa Pena¹, Angela Machado¹, Lucília Vieira¹, Sonia Lira¹, Sandra Teixeira¹, Carlos Sousa¹, Leonilde Machado¹
¹Department of Pediatrics and Neonatology, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal; ²Department of Orthopaedics and Traumatology, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal

Introduction and Purpose: Pott’s disease, also known as tuberculous spondylodiscitis, represents 1-2% of total cases of tuberculosis, generally occurring as a consequence of a non spinal infection. It is not only related to socioeconomic factors, but also to past history of exposure to infection. It presents itself in a nonspecific way, namely through lumbar pain, fever and weight loss. Neurologic symptoms are present in 50% of cases and there is risk of bone destruction, deformity and paraplegia.

Material and Methods: Case report of a 16 years old adolescent with Pott’s disease.

Results: A sixteen year old female adolescent, with no relevant past history, came in to the emergency room with a lumbar tumefaction, with 8 days of progression and no history of trauma, associated with lumbar pain and left inguinal pain on walking. Manual palpation was painful. Initial blood tests revealed augmented inflammatory markers, including sedimentation rate. The ultrasonography described a large nodular lesion with internal cystic areas. The patient was admitted for study, and an magnetic resonance imaging was done, revealing lesions suggesting an infectious spondylodiscitis on L1L2, associated with an intrasomatic abscess, with an anterior epidural intracanal component, as well as a right lateral anterior paravertebral one and a large left paravertebral abscess ranging from T12L1 to the inferior part of the iliac fossa, with extension to left soft tissue, originating a tumefaction in the lumbar area (images 1 and 2). Complementary investigation documented the presence of Mycobacterium tuberculosis on caseous material obtained by computed tomography guided tube drainage. Anti-tuberculous treatment was initiated and she was submitted to orthopaedic surgery 4 weeks later.

Conclusions: Pott’s disease is a potentially serious condition which, as other types of extrapulmonary tuberculosis, represents a diagnostic challenge. The diagnosis and treatment in an early stage is crucial for the prognosis.

MORTALITY OF CHILDREN FROM CONGENITAL MALFORMATIONS IN THE KYZYLORDA REGION

Pakhilkany Iskhuova, Boranbaeva Riza, Maybashova Raikhan, Sharipova Maira, Sarsenbayeva Gulzhan
Scientific Center of Pediatrics and Pediatric Surgery, Kazakhstan

Objective: To determine the frequency and structure of the mortality rate of children from 0 to 5 years of congenital malformations (CDF) in Kyzylorda region for the development of future programs to strengthen children's health in the region.

Material and Methods: Expert analysis of the mortality rate of 0-5 years old children on a specially designed map. Medical records of children died for 2009-2011 in Kyzylorda region were analyzed.

Results and Discussion: In 2009, the proportion of children deaths under 5 from the CDF was 18.5% of all deaths of 0-5 years old children, in 2010 - 18.1%, in 2011 - 16.0%. In the early neonatal period, mortality rate was 37.7%, in the late neonatal period - 26.9% and in the post-neonatal period - 33.9% of all deaths from congenital malformations in the region over 2009-2011. In the structure of children died in the neonatal period from the CDF, multiple malformations accounted for 1/3, where in each case congenital heart disease, combined with other congenital disorders was present. At the age of 1-5 years, the proportion of deaths from congenital malformations in 2009 was - 12.6%, in 2010 - 12.5% and 8.1% in 2011. Congenital heart disease (>45.6%) were at the first place as a cause of infant mortality. Thus, the major losses from CDF (> 37.7%) were observed in the first 168 hours after birth, indicating the high rate of malformations incompatible with life. The increase in the proportion of malformation in the structure of neonatal and infant mortality in Kazakhstan is due to a relative decrease in infant mortality from infections and birth defects. One of the priorities is the development of modern neonatology and improvement of prenatal diagnosis, which would allow not only to determine the CDF in utero, but also to carry out management of pregnant women, the prognosis, to determine the place of birth, taking into account the capability to verify defect in the fetus.
ID: 114 / POST2: Presentation 3
POSTER
Topics: General Pediatrics
Keywords: intestinal lymphangiectasia, hypoproteinemia, immunodeficiency, sandostatin

A CLINICAL CASE OF WALDMAN SEVERE FORM SYNDROME IN CHILD OF THE FIRST YEAR OF LIFE

Minira Bulegenova, Oleg Mustafin, Anna Makhneva, Aigul Bekisheva
Scientific Center of Pediatrics and Children's surgery, Kazakhstan

Primary intestinal lymphangiectasia (Waldman syndrome) - congenital abnormality of the lymphatic system in children – a disease that occurs infrequently. The main clinical manifestation of intestinal lymphangiectasia is a syndrome of malabsorption: diarrhea, nausea, vomiting, abdominal pain, peripheral edema. In some cases, there is steatorrhea of varying severity. Loss lymph, containing the main immune cells and immunoglobulins, contributes to the emergence of secondary immunodeficiency, characterized by increased susceptibility to infectious diseases.

Patient: B. A. At the age of 6 months was diagnosed with acute respiratory viral disease. Antibacterial therapy was prescribed. For the first time mother observed the swelling on the face, then, during breastfeeding, the child had attacks of tonic-clonic seizures with loss of consciousness. The patient was referred to our hospital. The child was hospitalized on the intensive care unit to the regional children’s hospital. Biochemical analysis: hypocalcemia (1.57 mmol/l) and hypoproteinemia (31 g/l) was detected. Swelling in the face and extremities appeared at discharge. The patient was sent to the Scientific Center of Pediatrics for further diagnosis. Clinical data and laboratory tests showed lung damage, Central nervous system, mucous membranes, kidneys, and bone marrow. Significant liver damage with liver failure. Clinical data and laboratory tests showed lung damage, Central nervous system, mucous membranes, kidneys and bone marrow. Significant liver damage with liver failure. The disease was characterized by undulating course with a sharp increase in the level of ferritin - 6.000 pg/l, neurological symptoms, pneumonitis, cytopenia. A positive effect was observed at high

Conclusions: This clinical case has the following interesting facts:
1. a rare occurrence pathology
2. uncommon early onset
3. the severity of developed immunodeficiency,
4. manifested infectious syndrome that made difficult to diagnose the underlying disease.

ID: 114 / POST2: Presentation 4
POSTER
Topics: General Pediatrics
Keywords: secondary haemophagocytosis, hypoferritinemia, procalcitonin

CLINICAL CASE: THE DEVELOPMENT OF SECONDARY HEMOPHAGOCYTIC SYNDROME IN A CHILD WITH COMBINED DISEASE OF THE CONNECTIVE TISSUE

Minira Bulegenova, Aida Akhenbekova, Riza Boranbaeva
Scientific Center of Pediatrics and Children's surgery, Kazakhstan

The clinical case of activated macrophages syndrome in patient with combined disease of connective tissues was diagnosed in Scientific center of pediatrics and children surgery. Patient: S. K., girl, 7 years old. The first symptoms developed after an acute intestinal infection. Diagnose “generalized stage of yersiniosis” have been confirmed in positive laboratory tests. Antibacterial treatment – without any efficiency. Child was sent to our clinic because of ineffective therapy, continued fever, rash, increased levels of acute-phase proteins. The patient was admitted with the swelling on the face, then, during breastfeeding, the child had attacks of tonic-clonic seizures with loss of consciousness. The patient was sent to the Scientific Center of Pediatrics for further diagnosis. Clinical data and laboratory tests showed lung damage, Central nervous system, mucous membranes, kidneys, and bone marrow. Significant liver damage with liver failure. Clinical data and laboratory tests showed lung damage, Central nervous system, mucous membranes, kidneys and bone marrow. Significant liver damage with liver failure. The disease was characterized by undulating course with a sharp increase in the level of ferritin - 6.000 pg/l, neurological symptoms, pneumonitis, cytopenia. A positive effect was observed at high
doses of methyprednisolone, intravenous immunoglobulin 1g/kg per day (No 5), dexamethasone. Cyclosporine did not cause inhibition of the activation of macrophages.

**Conclusions:** there are difficulties to confirm a severe variant of secondary “macrophage activation syndrome” in a child with systemic autoimmune pathology. Antibacterial therapy is considered to be a trigger in the development of macrophage activated syndrome. This complications require to develop an algorithm for the diagnosis of early MAS markers combined with autoimmune pathology.

**MATERIALS AND METHODS:** This study involved the collection and analysis of statistics of the clinic's Gynecological Department in the years 2012 - 2014 in order to determine the number of women infected with different HPV types, including types 16 and 18 and the number of women newly diagnosed with cervical cancer.

**RESULTS:** It was found that over the period of 2012 – 2013 – 2014 the number of women aged 18 to 57 that sought medical advice for various gynecological disorders amounted to 22515 – 20655 – 19109 respectively. 5979 women were screened for various types of papillomavirus. Cervical cancer was diagnosed in 3 (0.09%) women in 2012, 4 (0.08%) in 2013 and 2 (0.06%) in 2014. Analysis infection rates showed that the number of people infected with HPV was 1284 (21.5%), of which 24.6% infected with HPV-16, 6.5% with HPV-18, and 1.4% infected with both types. The analysis of the age structure of women infected with HPV-16 type under the age of 25 years was 14% (58 people). The age structure analysis showed that the number of women infected with HPV-16 aged under 25 years was 14% (58 people). The analysis infection rates showed that the number of people infected with HPV was 1284 (21.5%), of which 24.6% infected with HPV-16, 6.5% with HPV-18, and 1.4% infected with both types. The analysis of the age structure of women infected with HPV-16 type under the age of 25 years was 14% (58 people). The age structure analysis showed that the number of women infected with HPV-16 aged under 25 years was 14% (58 people), and this number increased to 52% (214 people) for women aged under 30 years. The analysis provides enough information on the early infection of women aged under 30 years with HPV. This helps improve the awareness, confidence, and motivation of pediatricians that take decisions on the need for timely vaccination of children in order to prevent the development of cervical cancer. Work has begun on the follow-up medical supervision of vaccinated girls in order to determine the degree of protection against the HPV.

**Conclusions:** Systematic interaction of doctors and the analysis of morbidity within the medical care units can be considered as the model that helps overcome the barriers on the way to anti-HPV vaccination.

**INTRODUCTION:** One of the problems of preventive vaccination is the insufficient vaccination coverage of adolescents against the human papilloma virus (HPV). Out of all the children from PD MED since the year 2008, only 30 girls aged 12 to 15 were vaccinated against HPV (which amounts to 90 doses). According to a survey reasons for the refusal of vaccination include doubt, insufficient reasoning, and pediatricians’ uncertainty of the need for vaccination against diseases that are not listed in the national vaccination schedule.

**PURPOSE:** increasing people’s awareness about HPV infection could persuade pediatricians to pay more attention to this issue.

**MATERIALS AND METHODS:** This study involved the collection and analysis of statistics of the clinic's Gynecological Department in the years 2012 - 2014 in order to determine the number of women infected with different HPV types, including types 16 and 18 and the number of women newly diagnosed with cervical cancer.

**RESULTS:** It was found that over the period of 2012 – 2013 – 2014 the number of women aged 18 to 57 that sought medical advice for various gynecological disorders amounted to 22515 – 20655 – 19109 respectively. 5979 women were screened for various types of papillomavirus. Cervical cancer was diagnosed in 3 (0.09%) women in 2012, 4 (0.08%) in 2013 and 2 (0.06%) in 2014. Analysis infection rates showed that the number of people infected with HPV was 1284 (21.5%), of which 24.6% infected with HPV-16, 6.5% with HPV-18, and 1.4% infected with both types. The analysis of the age structure of women infected with HPV-16 type under the age of 25 years was 14% (58 people). The age structure analysis showed that the number of women infected with HPV-16 aged under 25 years was 14% (58 people), and this number increased to 52% (214 people) for women aged under 30 years. The analysis provides enough information on the early infection of women aged under 30 years with HPV. This helps improve the awareness, confidence, and motivation of pediatricians that take decisions on the need for timely vaccination of children in order to prevent the development of cervical cancer. Work has begun on the follow-up medical supervision of vaccinated girls in order to determine the degree of protection against the HPV.

**Conclusions:** Systematic interaction of doctors and the analysis of morbidity within the medical care units can be considered as the model that helps overcome the barriers on the way to anti-HPV vaccination.
cytolysis syndrome evolution is favorable. At 12 years old the patient returns for investigation, at which point can be detected the presence of an autoimmune thyroiditis.

**Conclusions:** The negative serology makes early diagnosis difficult. The combination of three autoimmune diseases in the same patient can lead to a bad prognosis. Association between celiac disease and autoimmune hepatitis can lead to negative serology for both diseases, but evolution progresses.

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**DUBOWITZ SYNDROME – CASE REPORT OF A RARE CONGENITAL DISORDER**

Ana Lúcia Cardoso, Sara Soares, Catarina Liz, Teresa Pena, Cláudia Monteiro, Leonilde Machado, Eunice Moreira  
Centro Hospitalar do Tâmega e Sousa, Portugal

**Introduction and Purpose:** Dubowitz syndrome (DS) is a rare developmental disorder characterized by distinctive facial features (ptosis, telecanthus, facial asymmetry, low-set ears, micrognathia/retrognathia), growth failure, microcephaly, urogenital malformations, eczema and mild mental retardation. Behavioural characteristics include hyperactivity, short attention span, feeding problems and social anxiety. The inheritance pattern seems to be autosomal recessive, but the specific responsible gene mutation has not yet been identified. The diagnosis is based on the identification of the characteristic features (mainly the facial features).

**Material and Methods:** Case report of a 3-year-old child with DS.

**Results:** We describe a 3-year-old boy clinically diagnosed with DS. His phenotypical signs include microcephaly, peculiar facial features (short downslanted palpebral fissures, ptosis, telecanthus, anteverted nares, wide nasal base, thin upper lip, micrognathia, low low-set ears), clyndactily, hypospadias, micropenis, nonpalpable right testicle and sacral dimple. He also has growth failure and feeding difficulties from birth, interatrial communication (solved in the meantime), eczema, recurrent wheezing and mild developmental delay. He underwent orchidopexy and hypospadias corrective surgery at 2 years old. At present time, his daily medication is dihexazin PO and inhaled fluticasone.

**Conclusions:** DS is a rare syndrome. As no data is available after puberty, long-term outcome still remains elusive.

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**HEPATITIS IN RUBEOLA INFECTIONS IN A CHILD**

Namık Kemal Akpınar, Ayse Sokullu  
N. Kemal Akpınar, Neşe Biyikli, Ayşe Sokullu & Ebru Gözer  
Department of Pediatrics / Anadolu Medical Centre Hospital, Kocaeli / Turkey

**Background:** Measles is an acute, pyretic, exanthematous disease; caused by paramyxovirus family. The presentation occurs with prodromal symptoms followed by generalized rash. Pneumonia and otitis media are the common complications of measles. However some cases occurs with hepatitis, meningitis, encephalitis and myocarditis. This case was presented with acute hepatitis.

**Case report:** An eight years old girl was admitted to our hospital with fever, coryza, cough and fatigue. She was diagnosed as viral upper respiratory tract disease and followed without any medications. One week later she presented with jaundice, dark urine and abdominal pain. She was hospitalized with the diagnosis of hepatitis. Her blood tests were as follow : AST:468 U/L, ALT: 362 U / L, Total Bilirubine: 10,7 mg / dl, Direct Bilirubine: 10,7 mg / dL, GGT: 429 U/L, ALP: 1193 U/L. After three days maculopapular rash erupted from face to toe including her body and extremities. The rash was consistent with measles, rubella, scarlet fever, EBV and CMV infections. Her past history was unremarkable. She was vaccinated with 2 doses of M-M-R at 1 and 6 years of age. Viral serological tests were studied. Rubeola IgM proved to be 2,1 ISR (> 1,15 ISR is Pozitive ). Jaundice and rash disappeared within five days and liver enzymes and bilirubin levels reduced to normal.

**Conclusions:** Measles may appear with different clinical pictures in patients. Hepatitis is a very rare presentation of measles especially in vaccinated children.
**Poster session 2**

**Abstracts**

**A CASE REPORT SUGGESTING ROLE OF N ACETYLE CYSTINE IN MANAGEMENT OF HEPATIC ENCEPHALOPATHY DUE TO WILSONS DISEASE**

Lokesh Tiwari, Gaurav Vishal, Chhitiz Anand, Manish Kumar, Arun Kumar Baranwal  
All India Institute of Medical Sciences, Patna, India

**Background:** Management of hepatic encephalopathy in children remains supportive. Use of N acetylcystine (NAC) is recommended in case of drug induced liver failure and some other conditions. We could not find any study supporting or refuting role of NAC in hepatic encephalopathy due to Wilsons disease.

**Case Report and Results:** An 8 year old male child with hepatic encephalopathy grade II, who was resuscitated in PICU, showed progressive worsening of encephalopathy with fall of GCS from 13 to 8 over a week on recommended supportive therapy. His viral markers for hepatitis A, B, C and E were negative. He was started on NAC infusion while serum ceruloplasmin level was awaited. Child showed progressive improvement even before Wilson’s disease was confirmed and he was started on D penicillamine. Child showed consistent clinical and biochemical improvement and he was discharged after 4 weeks of hospital stay with GCS of 15. Presently under follow up, he has resumed his school and he is able to perform all age appropriate activities.

**Discussion:** Role of N acetylcystine in hepatic encephalopathy has not been established in cases other than drug induced liver failure but it seemed to be beneficial in this case. This case was unique as his encephalopathy progressed over one week in spite of standard supportive management and rapidly improved after starting NAC even before starting chelation therapy for Wilsons disease.

**Conclusions:** It will be interesting to further investigate role of NAC in management of hepatic encephalopathy due to Wilsons disease.

**NPHROTIC SYNDROME: PARANEOPLASTIC SYNDROME IN HODGKIN LYMPHOMA**

Ioana Tiitanu, Doinita Sfrijan, Loredana Popa, Iulia Bogzeanu, Mihaela Balgradean  
“Marie Curie” Emergency Childrens Hospital, Romania

**Introduction:** In 1922 Galloway described for the first time the combination nephrotic syndrome (NS) - extrarenal malignancies. Over the years, there were reported a limited number of cases which highlight the association between NS, as a paraneoplastic syndrome, and malignancies such as leukemia, Hodgkin and non-Hodgkin lymphoma and different carcinomas; it was observed, in particular, the association between minimal change nephropathy and Hodgkin lymphoma, these two entities occurring simultaneously or at distance from each other. The exact relationship between these two pathologies is still unknown, different theories are still to be verified.

**Case Report:** A school age, 9 years old boy, was hospitalized edema. The physical exam at admission revealed anasarca (ascites, pleural effusion, eyelid, scrotal, ankle edema), without any lymph node, liver or spleen enlargement. Laboratory investigations yielded: proteinuria (8,76 g/day), hypoproteinemia (4,1 g/dl), dyslipidemia and inflammatory syndrome. The renal biopsy was not performed at disease onset. Oral corticosteroid treatment was started according to the ISKDC protocol and the patient was discharged after 14 days, in remission. Fourteen days later the patient was re-hospitalized for nephrotic range proteinuria and laterocervical adenopathy. The lymph node biopsy sustained the diagnosis of Hodgkin lymphoma stage II A - nodular sclerosis and the Euronet PHL – C1 protocol, OEPACA cure was started. After the first chemotherapy course the proteinuria disappeared.

**Conclusion:** Considering that the NS can be a paraneoplastic manifestation of Hodgkin lymphoma, the careful clinical evaluation becomes mandatory in any child with NS and persistent proteinuria despite appropriate treatment protocol. The prognosis of these patients is good, the treatment of Hodgkin disease causing the disappearance of proteinuria.

**Acknowledgement:** This paper is supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number POSDRU/187/1.5/S/156940

**SIMULATION-BASED PEDIATRIC RESUSCITATION IN UNDERGRADUATE MEDICAL EDUCATION**

Uthen Pandee  
Faculty of Medicine Ramathibodi Hospital, Mahidol University, Thailand

**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 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 attends simulation session from March to February 2014. The session has 30 minutes of skill teaching; Pediatric Basic Life Support and Pediatrics Advanced Life Support. Then followed by 20 minutes of case simulation and 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.

Conclusions: 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: 269 / POST2: Presentation 12
POSTER
Topics: General Pediatrics
Keywords: hepatitis B virus, infection, vaccination

B HEPATITIS: WHEN THE INFECTION OCCURS DESPITE VACCINATION

Ana Gomes da Silva, Inês Marques, Carolina Prehlaz
Centro Hospitalar barreiro montijo, Portugal

Introduction: In Portugal the incidence of hepatitis B virus (HBV) is 0.36 % and decreasing, reflecting the successful introduction of the vaccine (with a response rate >90%) in the National Immunization Program. Although less common in children, the probability of infection becoming chronic is inversely proportional to the age of infection. Risk factors in this group age are distinct from the adult ones and include perinatal and parenteral exposures and living in the same household of infected people. However in 40 % of infected cases there are no identifiable risk factors.

Case Report: 5 year old boy, born and resident in Barreiro, with immunization for HBV, was brought to the emergency room with dark urine and sclerotic jaundice for about a week. Afebrile, with no change in stools, prostration or weight loss. Besides jaundice of the sclera, he has a palpable liver 1 cm below the costal margin. Analytically he presented microcytic-hypochromic anemia, direct hyperbilirubinemia (total bilirubin 6.3 mg/dL and direct 5.3 mg/dL) and elevated liver enzymes (AST 1689 IU/L and ALT 2211 IU/L). He was admitted with the diagnosis of acute hepatitis of probable viral etiology. Abdominal ultrasound showed homogeneous hepatomegaly. Screening of hepatotropic viruses revealed positivity only for Ab HBe and Ab Hbc (IgM). The cohabitant family was all screened and the older sibling, natural of Cabo Verde living in Portugal for less than a year, was infected with HBV (positivity for Ag HBs and Ag HBe).

Conclusions: We brought this case to enhance the possibility of infection even with adequate immunization and in low prevalence countries where globalization brings people from endemic countries on a daily basis. A universal immunization of the population, with verification of the immune status in risk groups, seems to be our best weapon for disease prevention.

ID: 286 / POST2: Presentation 13
POSTER
Topics: General Pediatrics
Keywords: Hodgkin lymphoma; children;lymph nodes; chemotherapy

HODGKIN LYMPHOMA IN CHILDREN: STUDY OF 7 CASES

Haifa Regaieg1, Bechir Ajmi1, Nesrine BenSaïd1, Houda Ajmi2, Yosra Ben Youssef1, Abderrahmen Khelif1
1Department of Clinical Hematology Farhat Hached University Hospital, Sousse, Tunisia; 2Pediatric department, University Sahloul hospital, Sousse, Tunisia

Introduction: Hodgkin's lymphoma is an entity that is rarely found in children less than 15 years.

Purpose: The objective of our work is to study the epidemiological, clinical, therapeutic and evolutionary child's Hodgkin lymphoma

Materials and Methods: A retrospective study of 07 cases of Hodgkin lymphoma collected in the hematology department of the Farhat Hached hospital of Sousse over a period of 6 years (2008-2013).

Results: The average age of our patients was 10.7 years with a sex ratio (M / F) of 2.5. The average time for consultation is 4.14 months. The presence of peripheral lymph nodes is the main reason for consultation. Five children have Hodgkin lymphoma nodular sclerosis type and for the other two it is Hodgkin lymphoma type mixed cellularity. At the end of staging, five children are classified evolved stage (III and IV) and two localized stage (II). Three children have signs of clinical progression (weight loss, fever, night sweats). Therapeutically, five patients received chemotherapy according to the Euronet protocol and a child received ABVD chemotherapy (6 course). Two of seven received in addition to chemotherapy radiotherapy in residual sites. The median survival was 28 months. The evolution is marked by the relapse in two cases. A patient is caught by second-line chemotherapy; it is still in remission. The other is still in progress despite third-line chemotherapy.

Conclusions: The main objective of the management of the child's Hodgkin lymphoma is to limit the risk of long-term effects without compromising the excellent survival.
**NEONATAL ACUTE MYELOID LEUKEMIA: THREE CASES REPORTS**

Haifa Regaieg,1 Bechir Achour,1 Houida Aimi2, Nesrine Ben Said1, Saoussen Abroug2, Yosra Ben Youssef1, Abderrahmen Khilfi1

1Hematology department, University Farhat Hached hospital, Sousse, Tunisia; 2Pediatric department, University Sahloul hospital, Sousse, Tunisia

**Introduction:** Acute leukemia (AL) in newborn is rare and represents less than 1% of AL of children. On the opposite to older children in whom ecchymosis lesions (n= 1 case). Biologically, there was a leukocytosis with a rate of Gb > 100 000/mm3 in 2 cases and peripheral blasts were present.

**Cases Reports:** We report 3 cases of neonatal leukemia collected in Sousse at the department of hematology University Hospital Farhat Hached and Department of pediatrics University Hospital Sahloul. They were two boys and one girl less than 3 month-old. The reason for hospitalization was fever. The main clinical manifestations were respiratory distress (n= 2 cases), splenomegaly (n= 1 case), lymphadenopathy (n= 1 case) and ecchymosites lesions (n= 1 case).

Biologically, there was a leukocytosis with a rate of Gb > 100 000/mm3 in 2 cases and peripheral blasts were present. Myelogram confirmed the diagnosis of AML in the 3 cases. Medullary karyotype was performed in 2 cases and it was normal. They received chemotherapy according to the protocol ELAM 02. The outcome was favorable in one case (with a complete remission) and fatal for others.

**Conclusions:** Neonatal AL is a rare condition. It differs from AL of children by their clinical presentation (hepatomegaly, splenomegaly, meningeal involvement and more frequent skin disease), their biological presentation (leukocytosis forms) and the frequency of associated cytogenetic abnormalities. The prognosis is generally worse than in older children especially since it is still no therapeutic consensus.

**ACUTE MYELOID LEUKEMIAS IN CHILDREN: A RETROSPECTIVE STUDY OF 36 CASES**

Haifa Regaieg1, Bechir Achour1, Houida Aimi2, Nesrine Ben Said1, Yosra Ben Youssef1, Abderrahmen Khilfi1

1Department of Clinical Hematology Farhat Hached University Hospital, Sousse, Tunisia; 2Pediatric department, University Sahloul hospital, Sousse, Tunisia

**Introduction:** Acute myeloblastic leukemia (AML) is a heterogeneous hematologic malignancy accounting for about 20% of all acute leukemias in children and adolescents. Several clinical and biological prognostic factors have been identified to allow a better prognostic stratification of patients and therefore better treatment adjustments.

**Purpose:** The objectives of this study is to discuss and analyze the different prognostic factors influencing the survival of patients, report and analyze therapeutic results according to different prognostic groups while clarifying the impact of intensive chemotherapy and allogeneic HSCT in terms of survival, and finally propose a new protocol for treatment of AML children.

**Materials and Methods:** This is a retrospective study including 36 patients with an age ≤ 18 years with de novo AML treated with acute myeloblastic leukemia protocol of the Child and Adolescent (ELAM -02) and followed in the Farhat Hached hospital of Sousse over a period ranging from January 2002 to December 2011.

**Results:** The overall CR rate was 80.5 % (29 patients), CR was 90%, 87.5 % and 55.5 % respectively in the group favorable, intermediate and unfavorable. A significant relationship was found between the FC, sex, the rate of GB (< or ≥ 50 000/mm3) and platelet (> or ≤ 50000/mm3), SG, SSR and SSE 2 years in the entire population were 54 %, 42 % and 40.6 %. The difference in terms of SG, SSR and SSE at 24 months according to the criteria clinico-biological state with statistically significant cytologic category. The study of the influence of cytogenetic prognostic groups on survival is a statistically significant difference (p = 0.008) between the ILI rates at 24 months of patients with a favorable karyotype (68%) and those with intermediate karyotype (56, 7%) and high risk (22 %) as for the influence of treatment response after 1 induction is a statistically significant difference (p = 0.004) in terms of SG.

**Conclusions:** Our results could be improved by a better prognostic stratification of our patients and therefore better treatment adjustments.

**EARLY REVELATION OF CONGENITAL HYPOFIBRINOGENEMIA IN A TWO MONTH-OLD BABY BY CEREBRAL BLEEDING**

Salsabil Nouiri1, Houida Aimi1, Minyar Tlifha1, Sameh Mabrouk1, Hajer Guediri2, Saida Hassayoun1, Jalel Chemli1, Hadef Skouri2, Noura Zouari1, Saoussen Abroug1

1Pediatric department, University Sahloul hospital, Sousse, Tunisia; 2Hematology department, University Sahloul hospital, Sousse, Tunisia

**Introduction:** Congenital fibrinogen deficiency is a rare bleeding disorder, affecting either the quantity (afibrinogenemia, hypofibrinogenemia) or quality (dysfibrinogenemia) of circulating fibrinogen. Though the patients with congenital afibrinogenemia are symptomatic since birth,
patients who have hypofibrinogenemia present late manifestations with trivial bleed. We report a congenital fibrinogen deficiency revealed by spontaneous cerebral bleeding in a two month old female infant

Case report: A two month-old girl presented to our pediatric department with seizure. In her history, an oozing of blood occurred in the umbilical site after birth. On admission, clinical findings revealed symptoms of seizure, fever of up to 38.5°C, and pallid skin. The baby was suffered from poor activity and drowsiness. Neurologic examination showed the presence of a tense anterior fontanelle, decreased Muscle tone and strength. Rest of the systemic examination was unremarkable. Lumbar puncture showed homogeneous bloody cerebrospinal fluid (CSF), but no growth was seen in CSF culture. emergency computed tomography of the brain showed intraventricular massive hemorrhage, intracranial hemorrhage around the right caudate nucleus and quadri-ventricular hydrocephalus arising to cerebral herniation. blood tests showed a hemoglobin concentration of 7,9g/Dl, white blood cell count of 17800/mm3  and platelet count of 234×103 cells/l. The screening coagulopathy showed prolonged Activated Partial Thromboplastin Time at 69'' and decreased Prothrombin Time at 54% as well as increased INR. Fibrinogen degradation product was negative and liver function tests were normal. The specific-factor assays showed plasma levels of fibrinogen was 0,5g/L which confirms this diagnosis of hypofibrinogenemia. The baby was transfused with fresh frozen plasma and erythrocyte suspension and she has undergone a ventriculoperitoneal derivation. However, she developed meningitis after neurological surgery and died secondary to septic shock.

Conclusions: Congenital disorders of fibrinogen have been attributed to chromosome 4 (q26-q28) with hypofibrinogenemia commonly occurring in heterozygous and afibrinogenemia in the homozygous. Most cases of hypofibrinogenemia (heterozygous) are asymptomatic. However, they could show variable phenotypic expression and present with bleed of varied severity.

ID: 102 / POST2: Presentation 17
POSTER
Topics: General Pediatrics
Keywords: l.e.i.sh.m.a.n.i.a.s.i.s

THE EPIDEMIOLOGIC CONSIDERATIONS ABOUT VISCERAL LEISHMANIASIS IN ALBANIA

Raida Petrela1, Eli Kallfa1, Hamide Hoxha2, Ferit Zavalani2, Bashkim Neza2
1Faculty of medicine, University Hospital Center Mother Theresa, Albania; 2University Hospital Center Mother Theresa, Albania

Background: The aim of this study was to analyze some epidemiologic features of visceral Leishmaniasis in Albanian children.

Methods and Materials: There were included 1576 children aged 0-14 years in this study, all admitted and treated for visceral Leishmaniasis since 1994-2014 in Pediatric Infectious Disease Service. We studied the distribution of the disease according to annual incidence, age, gender, living area.

Results: The results are shown in the following table.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NEW CASES</th>
<th>GENDER</th>
<th>LIVING AREA</th>
<th>AGE (in years)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Rural</td>
</tr>
<tr>
<td>1994</td>
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<td>TOTAL</td>
<td>1576</td>
<td>675</td>
<td>901</td>
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</tr>
</tbody>
</table>
Conclusions: Visceral Leishmaniasis is a frequent disease in Albania presented with a considerable number of cases per year. The most affected age group is from 1-4 years old, the male gender is the most affected and urban areas are also predominant over rural ones. It is noticeable a higher annual incidence of Leishmaniasis during the years 1995-2001.

ID: 103 / POST2: Presentation 18
POSTER
Topics: General Pediatrics
Keywords: toxoplasmosis

A CASE REPORT OF LONGSTANDING TOXOPLASMOSIS CHORIORETINITIS

Raida Petrela1, Eli Kallfa1, Emajola Brahimiari2
1Faculty of medicine, University Hospital Center Mother Theresa, Albania; 2University Hospital Center Mother Theresa, Albania

Introduction: Congenital toxoplasmosis (CT) can elicit severe damage to several organs, especially the eye, and may be manifested at birth or later. The diagnosis of ocular toxoplastic infection is based primarily on the characteristic ocular findings and supportive serologic evidence. It is generally well agreed on that macular lesions, involving the optic nerve, and cases with intense inflammation should be treated.

Objective: To describe a clinical presentation and reviews the current management options of reactivation of ocular inflammation, typical of a ocular toxoplasmosis with evidence of congenital infection, a satellite scar or an inactive lesion in the other eye, in which antibodies titer remain as a chronic infection.

Material and methods: This is a retrospective case report of a 13 years old boy presented with complaints of decreased vision in his left eye for 4 weeks and did not refer clearly for the vision in the right eye. Examination of the fundus oculi noticed cikatricial chorioretinal macular area in the right eye with visual acuity 1/10, and active chorioretinitis, preretinal and intraretinal hemorrhage in the left eye with visual acuity 1/10. The serology resulted positive for Toxoplasma gondii. He was treated at our Pediatric Department of Infectious Disease Service with classic therapy: Pyrimethamine, Sulfadiazine with supplemental leucovorin (folic acid) to minimize pyrimethamine associated hematologic toxicity and oral steroids for 6 weeks.

Results: The fact that our patient presented initially with such severe anterior inflammation suggests that this was a longstanding infection. This is further supported by the results of his blood work, IgG for Toxoplasma gondii resulted positive, 650. The patient had presumed ocular toxoplasmosis from his mother, which also resulted IgG positive for Toxoplasma gondii. The therapeutic outcome showed improvement in acute case, treatment resulted in reduced retinal area of left eye, without cikatricial signs and no vitreal inflammation with a visual acuity of left eye 10 / 10, and no change in visual acuity of right eye 1/10 with cikatrical central area. Monitoring of blood counts showed no bone marrow suppression after therapy.

Conclusions: This case shows a severe presentation of a relatively well known clinical entity. Although ocular toxoplasmosis may be self-limiting in immunocompetent individuals, prompt diagnosis and proper management can improve visual outcome. In a case such as this, it is important to utilize the current management options to fight the infection and as well to control inflammation and minimize long-term ocular damage. Pyrimethamine, Sulfadiazine, in combination with corticosteroids is the first choice in the treatment of acute phase of chorioretinitis from Toxoplasma Gondi.

ID: 122 / POST2: Presentation 19
POSTER
Topics: Mental Health
Keywords: autism, connectivity, communication, causality, therapy

AUTISM FROM IMPAIRED CONNECTIVITY TO IMPAIRED COMMUNICATION AN UPWARD/DOWNWARD CAUSALITY MODEL IN ASDS

Amalia Megremi1,2
1University of Aegean, Product and Systems Design Engineering, Greece; 2University Hospital "Attikon", Ilion Socio-Medical Center, Greece

Introduction: ASDs are increased today and their etiopathogenesis is unidentifiable.

Purpose: It is essential for new aspects of the disorder to emerge.

Material and Methods: Literature review

Results: AUTISM AS A “DISCONNECTION SYNDROME”: Genetics studies indicate that 80% of high-risk genes for autism influence neural induction, neuroblast maturation and synapse development. These discoveries point to synapses as possible sites of autism’s origin and talk about synaptic pathophysiology of autism. Synapses, however, are specialized contact sites where neurons communicate with one another. Main abnormality in autism is the altered levels of neurotransmitters (serotonin, dopamine, epinephrine, norepinephrine, acetylcholine, GABA and glutamate). Neurotransmitters are communication molecules that are released at the presynaptic compartments and ensure contact between different brain regions and between brain and other systems. Neuroimaging and electroencephalographic studies have shown that connectivity patterns (anatomical, functional) are altered in autism. The deficits in autism are a result of a reduced integration of information due to this underconnectivity and impaired communication between different brain regions.

Gastrointestinal problems have been implicated in autistics. Disruption of tight junctions, which leads to intestinal hyperpermeability, is the possible mechanism. Also, there is a link between gut symptoms severity and autism severity, which gives more evidence for the gut-to-brain connection. So, it is proposed impaired systems (brain-gut) connectivity in autism. Sleep problems are common in autistics. Sleep is required
to maintain an optimal set point of brain connectivity and consolidation and optimization of synaptic circuits. So, sleep dysfunction in autism reflects the impaired connectivity that governs the disorder. Use of oxytocin in autism shows encouraging improvements in social cognition and attachment. Oxytocin, “the peptide that binds”, has been recognized as implicated in social development, affiliative behaviors and social bonds. Subsequently, oxytocin in autism represents the “disconnection effect” of the disorder. IMPAIRED COMMUNICATION IN AUTISM: Main clinical feature of the autism is the communication impairment. Autistics don’t interact with others, are no more open systems, so it is noticed an interruption in circular causality and feedback between the organism and its environment.

Conclusions: In autism, the impaired connectivity at lower-scale (genetic, molecular etc) refers to impaired communication at the higher-macroscopic scale (phenotype). When cells-molecules-networks-systems in the brain or elsewhere cease to connect, individuals cannot communicate. This process constitutes the downward/upward causation, according to systems theory. If it is so, autism therapy has two components: the reestablishment of synaptic and receptors abnormalities and altered signaling in combination with behavioral therapy.

ID: 270 / POST2: Presentation 20
POSTER
Topics: Rare Diseases
Keywords: Nontuberculous mycobacteria, Mycobacterium Gordonae

MYCOBACTERIUM GORDONAE IN AN IMMUNOCOMPETENT PATIENT: A CASE REPORT

Catarina Liz, Ana Catarina Carvalho, Ana Lúcia Cardoso, Teresa Pena, Sara Soares, Joaquim Cunha, Susana Lira
Centro Hospitalar Tâmega e Sousa, Portugal

Introduction and Purpose: Mycobacterium Gordonae is classified as a nontuberculous mycobacteria and is found in soil, tap water and unpasteurized milk. Disease caused by this microorganism is rare as it is the least pathogenic mycobacteria and its isolation is often associated with immunosuppression or contamination. Diagnosis is based on respiratory symptoms, radiologic and microbiologic evidence. The most effective treatment regimen is yet to be established and should be maintained until resolution of symptoms.

Materials and Methods: Case report of a 15-year-old patient with pulmonary disease caused by Mycobacterium Gordonae.

Results: A healthy 15-year-old male was admitted in the ER with cough, sputum, night sweats, intermittent fever, shortness of breath, anorexia and weight loss (6.6%) in the last two months. He presented a normal physical examination with no signs of respiratory distress. The chest X-ray revealed a hypo transparency with undefined borders in the left hilar region. Blood test showed white blood cell count of 11600/mm³ with 78,8% neutrophils and 15,1% lymphocytes, c-reactive protein of 17,6 mg/L and sedimentation rate of 20 mm. He was treated with a 5-day course azitromicin with partial remission of symptoms. Tuberculin skin test was non-reactive, PCR for mycoplasma pneumonia and sputum for acid-fast bacillus smear were negative. After 24 days Mycobacterium Gordonae was isolated in the spectrum of antibiotics treatment with a 5-day course azytromicin with partial remission of symptoms. Tuberculin skin test was non-reactive, PCR for mycoplasma pneumonia and sputum for acid-fast bacillus smear were negative. After 24 days Mycobacterium Gordonae was isolated in the spectrum of antibiotics treatment.

Conclusions: Mycobacterium Gordonae is frequently an innocuous specimen but its identification should not be promptly interpreted as contamination. Although rare, this microorganism can cause symptomatic disease in both immunocompetent and immunosuppressed individuals.

ID: 276 / POST2: Presentation 20
POSTER
Topics: General Pediatrics
Keywords: Lyme disease, neuroborreliosis, demyelinating neuropathies, Guillain-Barré syndrome

NEUROBORRELIOSIS AND GUILLAIN-BARRÉ SYNDROME: COULD BE THE SAME DISEASE?

Ana Margarida Garcia, José Pedro Vieira, Maria João Brito
Hospital Dona Estefânia, Portugal

Introduction: The classic triad of neurologic Lyme disease (LD) is lymphocytic meningitis, cranial neuropathy and radiculoneuritis. These neuropathies are commonly related to multifocal axonal process although rare cases of demyelinating neuropathies have been reported in Lyme disease.

Case Report: A four-year-old boy presented with a 10-day history of lower extremity weakness and pain, followed by urinary and fecal incontinence. Five-day before the onset of symptoms was diagnosed a bacterial tonsillitis. At physical examination, global symmetrical weakness, bilateral lower limb areflexia, Gower’s sign and neck stiffness was observed. Lumbar puncture revealed a cerebrospinal fluid (CSF) with albuminocytologic dissociation, with a normal white blood cell count (0,8/ul) and an elevated protein concentration (211,2 mg/dL). Electromyogram was compatible with demyelinating neuropathies, suggesting Guillain-Barré syndrome, so immunoglobulin (Ig) was promptly instituted without significant clinical improvement. The additional investigation revealed positive IgG Western blot to Borrelia burgdorferi in serum and positive IgM ELISA in CSF. VDRL was negative. The microbiologic tests of feces and CSF were negative too, such as immunologic study, including anti-GQ1b. Ceftriaxone was instituted during 14 days, with clinical improvement. At 5-week follow-up the neurologic examination was almost normal, with a slower recovery of the autonomic dysfunction.

Conclusions: This case report highlights an atypical presentation of neuroborreliosis. The presence of CSF Borrelia burgdorferi antibody, which is highly specific for nervous system LD, associated with clinical improvement with antibiotic therapy suggest an infectious rather than an immune-mediated pathogenesis. In patients with GB-like symptoms and demyelinating neuropathies, LD should be considered, in order that adequate treatment can be instituted to maximize recovery.
**Poster session 2**

**IS IT SAFE TO ABANDON 6-HOUR CRP TEST FOR NEONATES AT RISK OF GROUP B STREPTOCOCCUS?**

*Kiera Geo, Luke Williamson, Simon Hauser*

*Northern Health, Australia*

**Introduction:** Group B Streptococcus (GBS) is a significant cause of early onset neonatal sepsis (EONS). GBS is contracted from colonised mothers during vaginal delivery. Intrapartum prophylactic antibiotic therapy is standard care in GBS positive mothers. However, for at risk neonates born to GBS unknown or GBS positive mothers with ‘inadequate’ prophylaxis, there is no established international best practice guideline for evaluation or management. Guidelines including NICE and CDC advise laboratory evaluation, including a FBE and CRP. However there is difficulty interpreting the asymptomatic neonatal CRP as the significance and correlation of a raised CRP with infection, remains unclear. Additionally, a recognised value at which treatment should be commenced remains undetermined. Investigations for asymptomatic neonates are often low yield, expensive, cause suffering for the neonate, and disrupt maternal-infant bonding. Two recently published studies propose that laboratory tests held no advantage over close clinical examination alone. The original protocol in the metropolitan hospital in which this study was conducted, required 6- and 30-hour CRP levels. If the CRP was >10 mg/L regardless of clinical evaluation, the infant received a minimum of 48 hours of broad-spectrum antibiotics.

**Purpose:** How useful is the 6-hour CRP to direct clinical management in term neonates who are at risk GBS EONS?

**Material and Methods:** A retrospective review of medical records of all neonates >37 weeks conducted in a district Victorian hospital from December 2013 – May 2014. Inclusion criteria were: neonates born >37 weeks, maternal GBS status unknown or positive at the time of delivery with inadequate antibiotic prophylaxis (NICE). Exclusion criteria included other risk factors for sepsis (PROM, maternal fever, chorioamnionitis) or <35 weeks. 6-hour CRP and blood culture results were recorded.

**Results:** Of 149 neonates who fitted the inclusion criteria, 98% had a 6-hour CRP <0.7mg/L. There were 3 cases with an elevated 6-hour CRP (16.4, 24.6 and 33.9mg/L). All 3 cases had already been admitted to Special Care nursery for at least one abnormal clinical sign. None of the 149 neonates had any blood culture growth at 48 hours.

**Conclusions:** A 6-hour CRP is not an independently useful measure to direct management in neonates at risk of GBS sepsis. Clinical observation and regular recording of vital signs were more effective in guiding management. Our department has since abandoned the 6-hour CRP policy, with no adverse outcomes after six months.

**CLINICAL CHARACTERISTICS OF HOSPITAL-ACQUIRED ROTAVIRUS INFECTION IN NEWBORN INFANTS AND GENOTYPE ANALYSIS**

*Chun Soo Kim, Ga Hyun Lee, Jae Hyun Park, Dong Seok Kim, Sang Lak Lee*

*Keimyung University School of Medicine, Korea, Republic of (South Korea)*

**Introduction:** The data on hospital-acquired rotavirus infection (Ha-r VI) in young infants are limited.

**Purpose:** This study was undertaken to investigate the epidemiology, clinical features and genotypes of Ha-r VI in newborn infants.

**Materials and Methods:** A retrospective analysis of the medical records was conducted in a university hospital over a 3-year period (2011-2013). The enrolled cases were distributed as Ha  and community-acquired (Ca) infection according to where r VI occurred. 6-hour CRP and blood culture results were recorded. Results: Of 122 patients, Ha  and Ca  infection were 75 (61.5%) and 47 (38.5%), respectively. Ha-r VI was more frequently developed in the cold (Nov-Apr) than in the hot-season (May-Oct) (P<0.001). The attack rate of HA-RVI was 1.3%, and the incidence density was 1.45 per 1,000 hospitalized days. There were some differences in perinatal characteristics between HA- and CA-groups, but both groups had similar clinical and laboratory findings of RVI. In detailed study for the infants with HA-RVI, clinical problems related to RVI including feeding intolerance, bloody stool, and necrotizing enterocolitis were more common in preterm than term infants (P<0.05). The genotype of rotavirus was identified in 111 cases (91.0%), and all of them were G4[P6] strain.

**Conclusions:** Clinical symptoms and outcomes of HA-RVI differed in both preterm and term infants, and the G4[P6] was an exclusive strain of neonatal RVI regardless of where the infection occurred and clinical findings of patients.
PERICARDIAL EFFUSION ASSOCIATED WITH PERIPHERALLY INSERTED CENTRAL VENOUS CATHETER IN A PRETERM INFANT

Chun Soo Kim, Yun Jung Kim, Jae Hyun Park, Hee Jung Choi, Sang Lak Lee
Keimyung University School of Medicine, Korea, Republic of (South Korea)

Introduction: Peripherally inserted central venous catheters (PICC) are used to provide vascular access for parenteral nutrition and medications in preterm infants.

Purpose: The placement of PICC may cause various complications, and rarely life-threatening problems such as pericardial effusion associated with malposition of catheter tip.

Case: A female infant, weighing 1,130 g at 34 weeks of gestation, was delivered by Cesarean section. The baby was presented hypoglycemia and feeding intolerance in early phase of life, so a PICC (Premicath, Vygon, Germany) was inserted through right antecubital vein on day 5. After insertion, the catheter with partly looped tip was located in the right atrium on chest X-ray, and the PICC was withdrawn by 2 cm to place catheter tip at outside of the heart. One day later, the following X-ray showed advanced cardiomegaly and the catheter of which distal part being passed through the right atrium, into the right ventricle. Although vital signs of the patient were stable, echocardiographic findings showed marked pericardial effusion. Emergent pericardiocentesis was performed and aspirated 3 mL of yellowish fluid. Microbiologic studies of the exudates were unremarkable. The catheter tip was located in the superior vena cava with additional withdrawing by 2 cm. After intervention procedures, the cardiac problems were subsided in 4 days later. The baby achieved full enteral feeding on day 20, and then the PICC was removed. She was discharged from the hospital on day 48, and her neuroradiologic images were unremarkable.

Conclusions: The tip of PICC should not be placed in the right heart in preterm infants to prevent pericardial effusion resulting in tamponade.

EFFECTIVENESS OF MLPA METHOD IN GENETIC DIAGNOSIS OF SEGAWA DISEASE

Haruo Shintaku, Hiroki Fujioka, Satoshi Kudo, Tomoko Sakaguchi, Takashi Hamazaki
Osaka City University Graduate School of Medicine

Introduction: Segawa disease, called dopa-responsive dystonia (DRD), is induced by a genetic disorder that affects the regulation of neurotransmitters in children. Hemizygous gene mutations in guanosine triphosphate cyclohydrolase I (GTPCH) have been reported in Segawa disease, therefore genetic analysis of GTPCH gene (GCH1) has been essential for the molecular diagnosis. However a few patients with Segawa disease who do not find the gene abnormality by direct sequence method have also been reported.

Purpose: To detect the gene mutation in patients with Segawa disease who have not found abnormalities by the direct sequencing method, we applied MLPA (Multiplex Ligation-dependent Probe Amplification) method which can detect large deletions. We characterized pteridines profiles in these patients.

Patients and Methods: We diagnosed 25 patients with Segawa disease by clinical symptoms and pteridines analysis in cerebrospinal fluid (CSF). Among 25 patients with Segawa disease, 22 patients were confirmed genetically by direct gene analysis of GCH1. In the other 3 patients we performed gene analysis by using MLPA methods.

Results: All 25 patients with Segawa disease showed significantly lower levels of both neopterin (N:6.59±4.09 nM) and biopterin (B:5.20±2.85 nM) in CSF than controls (N:19.5±2.10, B:23.7±8.50 nM). Twenty-two patients diagnosed by direct sequencing method had a point mutation or two bases deletion in one allele and the other 3 patients had a large deletion in their one allele which detected by MLPA method. Both N and B levels in CSF were significantly lower in the former 22 patients (N:6.92±3.92, B:5.58±2.74 nM) than in the latter 3 patients (N:1.98±0.94, B:1.67±1.46 nM).

Conclusions: All patients with Segawa disease had very low N and B levels in CSF. Especially patients who had large deletion showed significantly lower levels of both N and B in CSF than the other patients who had a point mutation or 2 bases deletion. Patients with Segawa disease who had very low N and B levels in CSF should be considered for GCH1 gene analysis by MLPA method.

PROBIOTICS, PREBIOTICS AND SYNBIOTICS – EXCESSIVE USE OR A REAL NECESSITY?

Cristina Adriana Becheanu, Virginia Sobek, Ioana Nenco, Adina Lazar, Andreia Nita, Iulia Florentina Tincu
“Grigore Alecsandrescu” Emergency Children Hospital, Romania

Introduction: The probiotic, prebiotic and symbiotic movement is rapidly growing and, although to date none of them have been approved by the
Introduction and Purpose
Centro Hospitalar Tamega e Sousa, Penafiel, Portugal

Tudor Lucian Pop1, Alina Grama1, Ana Stefanescu1, Adrian Trifa1, Mariela Militaru2

12nd Pediatric Clinic, University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca, Romania; 2Genetic Center, Cluj-Napoca, Romania

Purpose: The aim of our presentation is to reveal the clinical features of liver disease in infants with A1AT deficiency.

Materials and Methods: We carried out a prospective study during one month, for which we have randomly selected 102 infants with age between 1 and 12 months, with no chronic pathology, admitted to “Grigore Alexandrescu” Emergency Children’s Hospital from Bucharest, Romania. Data were collected using a questionnaire, which was completed by the physician.

Results: More than half of the infants (58.8%) received probiotics, prebiotics or symbiotics in the first year of life, 32.36% before the age of 1 month.

Conclusions: The findings show that half of the infants in our study who received probiotics, prebiotics or symbiotics were younger than 1 month. Despite ESPGHAN guidelines, mothers have administered probiotics for prevention of various gastrointestinal conditions. Promoting probiotics, prebiotics and symbiotics as dietary supplements may increase their usage in infants although there is not clear evidence about their benefits.

LIVER DISEASE IN ALPHA-1-ANTITRYPSIN DEFICIENCY IN INFANTS

Tudor Lucian Pop1, Alina Grama1, Ana Stefanescu1, Adrian Trifa1, Mariela Militaru2

12nd Pediatric Clinic, University of Medicine and Pharmacy Iuliu Hatieganu Cluj-Napoca, Romania; 2Genetic Center, Cluj-Napoca, Romania

Introduction: Alpha-1-antitrypsin (A1AT) deficiency is an autosomal recessive disorder, rarely reported, with unknown prevalence in Romania.

Severe liver manifestations in neonates could be misleading to a biliary atresia diagnostic.

Purpose: The aim of our presentation is to reveal the clinical features of liver disease in infants with A1AT deficiency.
**Material and Methods:** We report four infants with A1AT deficiency diagnosed during the last year, using A1AT serum level and genetic analysis of S2 alleles (PCR – restriction fragment length polymorphism).

**Results:** Four infants were finally diagnosed with AAT deficiency: (1) Male, 2 weeks old, with neonatal hepatitis, decreased A1AT level and normalization of transaminases in one month (genotype SZ); (2) Female, 2 months 2 weeks old, with severe neonatal cholestatic hepatitis, normalization of transaminases and bilirubin, persistent mild cholestasis at age of 7 months (genotype ZZ); (3) Female, 2 months 2 weeks old, with severe neonatal cholestatic hepatitis, CMV infection, septic arthritis, normal level of AAT (during septic episode, decreased after), with only slight elevated transaminases, no cholestasis at age of 9 months (genotype ZZ); (4) Male, 8 months, hepatitis syndrome revealed during an infectious episode with decreased AAT level, with normalization of transaminases at age of 18 months (genotype heterozygote Z, determination of a possible second mutation is needed).

**Conclusions:** Liver disease in A1AT deficiency is variable, rare in neonates (10% in the literature), but could be severe at presentation. Even that the majority of infants recover clinically, the progress to fibrosis, cirrhosis requiring liver transplantation is possible and impose an attentive follow-up.

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**REHABILITATION OF A CHILD WITH DANDY-WALKER VARIANT: A CASE STUDY**

Andrea Polovina1, Svetislav Polovina1, Romana Gjerga Juraški2, Tomislav Đapić3, Jelena Oreški1, Tamara Crnković1

1Polyclinic for physical medicine and rehabilitation “Prof.dr.sc.Milena Stojcevic Polovina”, Croatia; 2Children’s Hospital Srebrnjak, Croatia; 3University Hospital Centre Zagreb, Croatia

**Introduction:** Dandy Walker variant (DWV) has been used to describe a combination of cystic dilatation of the fourth ventricle and hypoplastic cerebellar vermis in the absence of an enlargement of the posterior fossa. Recently it has been advocated to abandon this terminology altogether because inconsistencies in its definitions prevent comparison of diagnosis and outcomes. There are reports that indicate that more than half of children with DWV develop normally, but there are also reports that all children with DWV experience neurological sequelae.

**Purpose:** To emphasize the importance of the rehabilitation in the children with DWV.

**Materials and Methods:** In this study we present a child with DWV.

**Results:** A child presented in this study was born with 38 weeks of gestation. After birth he showed signs of perinatal infection and oxygen support and antibiotics were included. However, he recovered very fast so that on the fifth day of life he was discharged. At the age of 14 months due to delayed psychomotor development, child was examined by neuropediatrician. Initially, all radiographic findings were normal and his developmental delay was attributed to perinatal asphyxia. When seen at our Polyclinic at the age of 15 months, he was able to sit independently, but he was very unstable and with severe kyphosis. He was crawling, getting into standing while holding onto object; all activities were unsecure, unstable and often with falling. His next visit was 2 years later, still unable to stand without support. This time, he was included in intensive rehabilitation program at our institution, with parents being trained into performing therapy at home. A child had several hours of therapy, on daily bases, performed by his parents. At the age of 4, brain MRI was repeated and this time DWV was diagnosed. In rehabilitation, the main problems were severe hypotonia, poor balance and motor planning. Attempting to walk, he would usually fall without any defensive reaction. Therefore, we had to find alternative for poor balance and motor planning and that was done through verbal guidance and visual orientation. After five years of intensive rehabilitation, he started to walk independently, at this moment, in secure, home environment.

**Conclusions:** Due to very poorly defined outcomes of children with DWV it is very hard to determine influence of rehabilitation on outcome in cases as this one. However, we strongly suggest intensive rehabilitation to be continuously performed in order to achieve maximal ability of the child. Also, it should not be terminated too soon, as we can see in this case, when the beginning of the independent walking occurred at the age of 8.

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**HEPATITIS FOLLOWED BY MEDULLARY HYPOPLASIA – WAS LEPTOSPIRA THE CULPRIT?**

Rute Baeza Baptista1, Raquel Costa2, Raquel Maia3, António Pedro Campos4, Flora Candéias1, Maria João Brito1

1Pediatric Infectious Diseases Unit - Hospital Dona Estefânia, Portugal; 2Pediatrics Department - Hospital do Espírito Santo, Évora; 3Pediatric Hematology Unit - Hospital Dona Estefânia, Lisbon; 4Pediatric Gastroenterology Unit - Hospital Dona Estefânia, Lisbon

**Introduction:** Leptospirosis is a spirochetal zoonosis which clinical presentation varies from subclinical to potentially fatal Weil’s disease. Pancytopenia has been reported as a rare presentation of severe leptospirosis in adult patients.

**Clinical Case Report:** A 12 year-old healthy boy developed fever, progressive asthenia and non-productive cough. Two weeks later, jaundice and hepatomegaly became apparent. Laboratory workup showed total bilirubin 16.34mg/dL, direct bilirubin 14.07mg/dL, aspartate aminotransferase 1566 U/L, alanine aminotransferase 2360 U/L, g-glutamyltranspeptidase 318U/L. Blood cell count, electrocardiography and chest X-ray were normal. Abdominal ultrasound revealed homogeneous hepatomegaly with no signs of biliary...
Poster session 2

dilatation or space occupying lesions. Leptospira were visualized in the urine by dark field microscopy and confirmed by real-time polymerase chain reaction (rt-PCR). The patient was treated with penicillin, with progressive clinical and liver function tests recovery. At four weeks after the onset of jaundice, progressive asymptomatic pancytopenia was noted (minimum values of haemoglobin 10.7g/dL, leucocytes 1.100/µL, neutrophils 400/µL, platelets 61 x 109/L). Direct coombs test was negative. Autoimmune screening was normal. A bone marrow biopsy showed medullary hypoplasia (20-30% cellularity). Marrow culture was negative. DNA from parvovirus B19 was detected in medullary blood by rt-PCR. The patient showed progressive spontaneous recovery of blood cell count with full recovery at 6 months after presentation.

Conclusions: Although pancytopenia has been reported in severe acute leptospirosis, in the reported case it is more likely to represent hepatitis associated medullary hypoplasia (immunological mediated marrow failure that follows the development of hepatitis). A concurrent parvovirus B19 infection may also have been implicated.

ID: 211 / POST2: Presentation 31
POSTER
Topics: Neonatology
Keywords: neonatal seizure, electroencephalogram, phenobarbital

NEONATAL SEIZURES - EXPERIENCE OF A NEONATOLOGY UNIT IN A SECONDARY HOSPITAL

Ana Raquel Moreira, Catarina Maia, Cecilía Martins
Division of Pediatric, Centro Hospitalar do Médio Ave - Unit of Vila Nova de Famalicão, Portugal

Introduction: Neonatal seizures are relatively common. They occur in an estimated incidence of 80-120 cases per 100,000 newborns (NB) per year. Its presence is often the first sign of neurological dysfunction, and they can be a long-term predictor of cognitive and/or developmental impairment.

Materials and Methods: Retrospective observational study of NB admitted in a neonatology unit of a secondary hospital between October 2011 and December 2014. The study was conducted reviewing medical records and data was treated with SPSS Statistics software 20.0 ®.

Results: Nine NB were included, 5 were male. Median gestational age was 40 weeks and none of the cases showed family history of epilepsy. Caesarean section was performed in 6 and 3 required resuscitation manoeuvres. The type of crisis varied from subtle events to partial complex seizures, and recurrence within 24 hours was found in 55.6% of patients. Eight NB underwent an electroencephalogram (EEG), in which 62.5% had pathological findings. Six were treated with anti-epileptics (phenobarbital in 100% of cases) and 3 needed to be transferred to a tertiary hospital. It was possible to identify a triggering factor in 4 of the cases (two cases of hypoxic-ischemic encephalopathy, one of sepsis and other of structural brain damage).

Conclusions: The most prominent feature of neurological dysfunction in the neonatal period is the occurrence of seizures. Neonatal seizures can be subtle and are often not translated at the EEG due to brain immaturity. In NB, the primordial objective is aetiology identification since it can determine a particular therapy and limit the dysfunction of the central nervous system.

ID: 227 / POST2: Presentation 32
POSTER
Topics: Rare Diseases
Keywords: Neonatal Palliative Care, Neonatal bone fractures, Genes COL1A1 e COL1A2, Pulmonary Hypoplasia, Osteogenesis imperfecta

NEWBORN WITH MULTIPLE BONE FRACTURES

1Division of Pediatric Cardiology, Integrated Pediatric Hospital, Centro Hospitalar São João, Porto, Portugal; 2Division of Pediatric, Centro Hospitalar do Médio Ave - Unit of Vila Nova de Famalicão, Portugal; 3Division of Neonatology, Integrated Pediatric Hospital, Centro Hospitalar São João, Porto, Portugal; 4Division of Orthopaedics, Centro Hospitalar São João, Porto, Portugal; 5Faculty of Medicine of University of Porto, Portugal

Introduction: Osteogenesis imperfecta (OI) is a genetic disease of the connective tissue, characterized by bone fragility, skeletal deformities and variable short stature. The typical phenotypic variability contributes to it's classification in different subtypes.

Clinical case: We present a case of a female newborn, irrelevant family history and non-consanguineous parents, with the prenatal diagnosis of intrauterine growth restriction and short lower limbs. She was born at 39 weeks by caesarean section with low Apgar score (3/9/10), requiring resuscitation and hospitalization in Neonatal Intensive Care Unit for hypoxemia and deformity of the face and limbs. She presented multiple bone fractures on radiography and normal phosphocalcic balance and hydroelectrolytic equilibrium. At the fourth day of live, she was transferred to tertiary hospital for proper orientation. Temporary invasive ventilation was needed for sedoanalgesia. The skeletal radiography confirmed multiple fractures in the skull, ribs and limbs in various stages of consolidation. Given the clinical diagnosis of OI type IIA and after multidisciplinary assessment, palliative care was initiated until the death of the newborn on the 29th day of life. Histopathological examination revealed severe pulmonary hypoplasia and skeletal ostochondro dysplasia (lethal form) with multiple fractures, many occurring during intrauterine life, pointing to the diagnosis of OI type II (Silence classification). No mutations in the COL1A1 and COL1A2 genes was found. Pending genetic study of recessive mutations.

Conclusions: The authors emphasize the rarity and severity of the OI type II. Its treatment is merely supportive, due to pulmonary hypoplasia and multiple fractures. The mutational study is important for genetic counselling.
Abstracts

**PROSPECTIVE STUDY ON SLEEP HABITS IN CHILD AND ADOLESCENT**

**Vera Ramos Rocha**, 1 Jacinta Fonseca, 2 Claudia Monteiro, 1 Conceição Silva, 2 Isabel Ribeiro 3
1Centro Hospitalar Tâmega e Sousa, EPE, Portugal; 2Centro Hospitalar Gaia/Espinho, EPE, Portugal; 3UCSP Barão Corvo, Gaia, Portugal

**Introduction:** The importance and impact of sleep on health have earned in recent times, greater attention and is a growing concern of parents. Sleep plays a key role in biological point of view, but also emotional, familial and social.

**Purpose:** Evaluate and characterize the sleep habits of children and adolescents. Relate the pattern of sleep and school performance of children and adolescents.

**Material and Methods:** We applied an inquiry by direct interview to the children and adolescents aged between 10 and 18 years in children’s health surveillance consultation, during the period of three months.

**Results:** 113 children/adolescents responded to the inquiry, with median age of 13 years (minimum: 10 and maximum: 17) and most respondents were female (62.8%). The median of sleep duration in both sexes was 8 hours. Only 15 (13.3%) fulfilled the 10-11 hours recommendation of sleep. 68% of children/adolescents who were retained in same school year at least one time, said sleeping less than 8 hours/day (p<0.001). About 88% with self-assessment of school performance as “bad” reported a sleep duration less than 8 hours, while this proportion was 11.8% among those who reported a self-assessment “very good” (p=0.001). Children/adolescents with shorter sleep duration had a probability of a bad/reasonable academic performance about 30 times higher compared to those with longer sleep duration. Children/adolescents sleep duration less than 8 hours/day had a 5.5 times more likely of ever having been retained in the same school year compared with that presented sleep duration bigger or equal than 8 hours. We found statistically significant differences (p<0.001) between sleep duration and difficulty falling asleep, the occurrence of nightmares and sleep in class.

**Conclusions:** The results show us that it is important act on prevention, alerting parents, children and adolescents to the importance of good sleep hygiene, promoting healthy sleep patterns.

**THE VALUE OF MULTIPLE TESTING MODALITIES IN DETERMINING SEVERITY OF RESPIRATORY INFECTIONS IN YOUNG CHILDREN**

**Maria Karasas**1, Piet J. Becker2, Robin J. Green1
1Department of Paediatrics, University of Pretoria, South Africa; 2Department of Biostatistics, University of Pretoria, South Africa

**Introduction:** Serious respiratory infections in children are difficult to determine from symptoms and signs alone. Fever is, both a marker of insignificant viral infection, as well as more serious bacterial pneumonia. Radiological findings are often viewed as the “gold standard” for diagnosing bacterial pneumonia, however variability in chest radiograph interpretation amongst practitioners is a well-recognised obstacle. Therefore, seeking markers of invasive disease in respiratory illness has been a goal of Paediatricians for many years.

**Purpose:** The evidence for multiple testing methods to detect invasive bacterial respiratory infections is unclear. The purpose of this study was to evaluate whether biomarkers may contribute to the diagnosis of serious bacterial respiratory infections in febrile young children as opposed to the current “gold standard” clinical and radiological findings.

**Materials and Methods:** This study involved a prospective, cross-sectional study over a 1 year period and included all documented febrile patients (with an axillary temperature ≥ 38 °C) that presented to Steve Biko Academic Hospital under 5 years of age, with signs and symptoms of pneumonia and generalised sepsis. A data collection table was used on which to enter all clinical, laboratory and radiological findings in order to assess the correlation between clinical findings and biomarker testing.

**Results:** A total of 63 patients were enrolled; 35 males (56%). The mean age was 14 months (1- 53 months). No statistical significance was found between degree of fever and duration of stay (p=0.123). No statistical significance was found between duration of stay and white cell count (WCC) (p=0.611). C-reactive protein [CRP] (p=0.863), procalcitonin (p=0.392) or blood culture (p value =0.560). No statistical significance was found between WCC, CRP or nasopharyngeal aspirate multiplex PCR and positive chest radiograph findings (p=0.313; 0.368; 0.686, respectively).

**Conclusions:** Biomarkers and degree of fever do not predict source or severity of infection nor duration of hospitalisation. Multiple testing modalities (including biomarkers and radiographs) have not been shown to be effective in predicting serious bacterial respiratory tract infections in febrile children under 5 years. This study suggests that clinical diagnosis and suspicion of severity should be considered the “gold standard”, and is as valuable as extensive testing in guiding appropriate management of serious respiratory illnesses in febrile children.
**Conclusions**

Mean values for total cholesterol, LDL cholesterol and triglycerides when compared with those on first line drugs (zidovudine, stavudine and ddl respectively, P value = 0.006). HIV Positive subjects on second line drugs (zidovudine, lopinavir and abacavir) had significantly higher.

The mean triglyceride level was significantly higher in the HIV Positive subjects compared to the controls (83.4±42.8mg/dl vs 67.8±36.4mg/dl). The ratio was significantly higher in the subjects when compared with their controls (0.47±0.04 vs 0.45±0.05 respectively, P value = 0.0009). The results:

- The mean age of the subjects and their controls was 10.5±3.2 years with an equal number of males and females. The waist to height ratio was significantly higher in the subjects when compared with their controls (0.47±0.04 vs 0.45±0.05 respectively, P value = 0.0009). The mean triglyceride level was significantly higher in the HIV Positive subjects compared to the controls (83.4±42.8mg/dl vs 67.8±36.4mg/dl). HIV Positive subjects on second line drugs (zidovudine, lopinavir and abacavir) had significantly higher mean values for total cholesterol, LDL cholesterol and triglycerides when compared with those on first line drugs (zidovudine, stavudine and nevirapine or efavirenz).

**Conclusions**

Cardiovascular disease risk is significantly higher in HIV-Positive children on HAART containing protease inhibitors.

**RISK ASSESSMENT OF CHILDREN WITH EATING DISORDERS: A RETROSPECTIVE ANALYSIS OF INPATIENT ADMISSIONS**

**Craig Swinburne**
NHS Ayrshire & Arran, United Kingdom

**Introduction:** In 2012 the Royal College of Psychiatrists published the Junior MARSIPAN guideline on the management of anorexia nervosa in patients under 18 years of age. A risk assessment framework was proposed at this time to aid identification of patients at risk of serious complications.

**Purpose:** To evaluate current clinical practice, with a focus on risk assessment at time of admission, and to compare this with the proposed risk assessment framework published by the Royal College of Psychiatrists.

**Materials and Methods:** All paediatric patients with an eating disorder requiring inpatient admission were identified over the period of June 2009 to February 2014. A retrospective case note analysis was performed and data extracted using a standard proforma. Initial assessment of each patient was reviewed for documentation of BMI, weight, cardiovascular health (heart rate, syncope, significant orthostatic changes, irregular heart rate), ECG abnormalities, hydration status, temperature, biochemical abnormalities, disordered eating behaviours, engagement with management plan, activity and exercise, muscular weakness, self-harm/suicide, other mental health diagnoses as well as other potential co-existing risk factors.

**Results:** A total of 14 patients were identified, with a total of 22 admissions over the data collection period. 15 patients were admitted electively via the local child and adolescent mental health team, 4 patients via the accident and emergency department and 3 patients following GP referral. No patients had a formal risk assessment performed. Assessment performed at the time of admission was highly variable. With the information available 10 patients were categorised as high risk, 11 patients were categorised as alert to high concern, and 1 admission was categorised as moderate risk. No patients were classified as low risk.

**Conclusions:** This study demonstrates that children with eating disorders are treated in paediatric inpatient wards as well as in specialist centres. Admissions to paediatric wards are infrequent. Initial assessment and investigation of this patient group is highly variable and does not adhere to current guidance. Implementation of a formal risk assessment framework is required in order to identify patients at risk of complications. Development of specific admission documentation based on Royal College guidance would aid assessment, help guide inpatient management and provide a more consistent approach to patient care.
SUBSTANCE EXPERIMENTATION DIFFERENCES AMONG INTELLECTUALLY DISABLED STUDENTS AND MAINSTREAM STUDENTS

Dibia Liz Pacoricona Alfaro1*, Virginie Ehlinger2*, Stanislas Spilka3,4*, Mariane Sentenac2, Emmanuelle Godeau1,2*  
1Repartit de Toulouse, France; 2Inserm U1027, France; 3Observatoire Français des Drogues et des Toxicomanies (OFDT), Saint Denis, France; 4Inserm U1178, Paris, France

Introduction: Current inclusive education policies at international level allow students with intellectual disabilities to participate in community and school life that could raise their exposure to risky behaviours such as substance use, and lead to their engagement in substance use as for any other adolescents.

Purpose: To describe the prevalence of tobacco, alcohol and cannabis experimentation among intellectually disabled adolescents schooled in special units (ULIS) in French junior high-schools compared to those of students the same age; further to explore associated factors with substance experimentation among ULIS students.

Materials and Methods: In 2014, an experimental survey adapted from the international HBSC questionnaire was conducted among ULIS students who in most cases present a mild-to-moderate intellectual disability. The main domains of students’ life were explored (school, family, friends, nutrition, sports, substance use...). Simultaneously, comparable data was collected among students in mainstream junior high-school. Analysis concern 700 ULIS and 7023 mainstream students.

Results: Tobacco and alcohol experimentation overall rates are similar between the two samples (tobacco 23.2% in ULIS and 27.8% in mainstream; alcohol respectively 62.9% and 64.4%) but rates are significantly different among students ≥14, where those enrolled in mainstream classes report experimentations more often than those in ULIS (except for alcohol among 14 years-old girls), this is also the case for cannabis experimentation, ut here the difference is striking (9.1% in ULIS and 20.9% in mainstream), in both genders. In multivariate models among ULIS students, well-being and life satisfaction, divorced/separated parents and high perceived academics demands were related to higher rates of tobacco experimentation. Bullying, not liking school very much and attending schools outside a deprived area were associated with alcohol experimentation. Higher rates of cannabis experimentation were found among those who already had sexual intercourse and those who do not perceive their health as excellent. Having already dated someone is associated to the three substances experimentation in both genders.

Conclusions: Substance experimentation among disabled students enrolled in ULIS is as high has as among their non-disabled peers even if it seems delayed, except for cannabis that is twice lower. Prevention policies targeted and adapted to the cognitive specificities of adolescents with mild intellectual disabilities are required.

ID: 296 / POSTER: Presentation 38
POSTER: Chronic Conditions
Keywords: ECMMO, extracorporeal membrane oxygenation, follow-up

CHILDHOOD ECMO SURVIVORS: PARENTS HIGHLIGHT NEED FOR STRUCTURED FOLLOW-UP AND SUPPORT AFTER HOSPITAL DISCHARGE

Aparna Hoskote1, Neil Shah1, Shawmian Singagireson1, Natalie Ramjeeawon2, Suzan Kakat1, Aarti Patel1, Maura O’Callaghan1, Timothy Thiruchelvam1, Jo Wray1  
1Great Ormond Street Hospital; 2Imperial College London; 3The University of Sheffield

Objectives: To study the experiences of parents of ECMO survivors in order to understand the problems their children faced and the support received after hospital discharge.

Methods: Parents of all children supported on ECMO from December 1992 - April 2013 in Great Ormond Street Hospital for Children NHS Trust (GOSH) and currently alive were sent an anonymised postal questionnaire, comprising forced choice questions, rating scales and free text. Questions focused on the follow-up their child had received, their concerns and satisfaction with follow-up arrangements.

Results: Parents of 89/473 (21%) survivors (n= 51 supported for neonatal respiratory failure, 19 paediatric respiratory failure, 5 neonatal cardiac failure, 14 paediatric cardiac failure) responded. Sixty-six (74%) reported that they had developmental concerns about their child, the most common being speech and language (36%), concentration (31%) and movement or physical difficulties (29%), 46 (52%) indicated that their child had difficulties across multiple domains. Of these 66, 20 (30%) were not receiving any follow-up. However, 81 (91%) and 30 (34%) parents replied that they had contact with GOSH in the first year and thereafter respectively. Fifty-seven (64%) attended the GOSH 1 year follow-up clinic and 54/57 (95%) found it very useful. Education was an area of concern, with (28/89) 32% of the children receiving learning support at school. Parents’ comments provided further insight: ‘the school is concerned but no one in the medical profession seems to want to help’, ‘my son has had a lot of catching up to do with physical milestones and speech’, ‘would like further info and would be interested to know if any other children since been on ECMO have experienced any health or behaviour issues’, ‘One central support professional to help advise on services with ECMO experience, community services don’t have experience of ECMO patients’, an ECMO support group or somebody who specialises in ECMO to be available to contact for support and advice, our local hospital and community nursing team were very unaware of what ECMO was’.

Conclusions: Children, who have received ECMO, need structured follow-up after discharge to identify any early developmental issues, to intervene and refer early, and provide support to families. The GOSH 1 year follow-up clinic was perceived by parents to be useful. Education and sharing of information about ECMO with GPs, community professionals and schools is essential.
THE BEHAVIORAL PATTERNS, SELF-REPORTED HEALTH AND LIFE-SATISFACTION IN ARMENIAN ADOLESCENTS WITH CHRONIC CONDITIONS: DATA OF HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN (HBSC) 2013/2014 SURVEY

Yevas Movsesyan, Sergey Sargsyan, Marina Melkumova, Ara Babloyan
Arabkir Medical Centre-Institute of Child and Adolescent Health, Armenia

Introduction: Unhealthy habits and risky behaviors are among common problems faced by adolescents today. HBSC Survey was conducted in Armenia in 2013/2014, in collaboration with international research network with the aim to study behaviours of adolescents, reveal key determinants impacting health, assess role of family, socioeconomic, and other factors.

Purpose: to study health behaviors of schoolchildren and association between presence of chronic illness, self-reported health and well-being.

Materials and Methods: Cross-sectional study, based on standard methodology and anonymous questionnaire. Probability proportional-to-size method for sampling: 82 schools were selected countrywide; final sample consisted of 3679 11- and 15-year-old children. Additional survey included 1436 students of 17 y. from 64 high schools. Data was analyzed on SPSS soft.

Results: Main sample included 48% boys, 52% girls; mean age=13.2±1.6 y. According to results, Armenian adolescents have specific behavioral patterns: low prevalence of substance use, good communication with parents and friends, school liking, high life satisfaction. Notable is prevalence of physical fights among boys. Multiple complaints more than once a week were present in 30% of 11-15 and 45% of 17-year-olds. Despite these complaints, students reported overall good health status and life satisfaction. Long-term illness/disability was reported by 6% of 11-15 and 7.9% of 17-year-olds. Analysis showed that children with long-term illness were much more likely to have signs of depression, assess poorly own health and quality of life. Frequent psychosomatic health complaints were mentioned by half of children with chronic illness, more in girls. 65.7% of children with long-term illness vs. 80% of healthy peers reported high life satisfaction (≥8 out of 10). Children with chronic diseases more often participated in physical fights and were bullied. Besides they had worse academic achievement, felt more pressured by schoolwork and reported less school liking in all age groups. Up to 20% of children with chronic conditions reported uneasiness to talk to their parents and less emotional support in family. The similar findings were among 17-year-olds with chronic illness; nevertheless, older students reported lower life satisfaction (mean=7.5), less school liking and rare cases of fighting with significant gender differences.

Conclusions: Children with chronic diseases have much in common and at the same time are different from their healthy peers. Issues revealed require future analysis and targeted interventions, particularly psychosocial support from specialized services and school staff to improve well-being and quality of life of children with special needs.

GENERALISED LYMPHADENOPATHY AS A PRESENTING FEATURE IN PEDIATRIC SYSTEMIC LUPUS ERYTHEMATOSUS

Munazza Hayat, Rashid Mahmood, Naveed Akbar Hotiana
Sir Ganga Ram hospital Lahore, Pakistan

Introduction: Lymphadenopathy is a common presenting complaint in pediatrics. When it is extensive and followed by fever, the differential diagnosis are tuberculosis, acute lymphoblastic leukemia and lymphoma in Southeast Asian population. Lymphadenopathy is one of the signs of Systemic lupus erythematosus, SLE a multisystem chronic autoimmune disease, but rarely a presenting manifestation of this disease in the absence of other major manifestations. So we report a case of SLE who initially presented with lymphadenopathy.

Purpose: To include lymphadenopathy as a sole manifestation of Systemic lupus erythematosus, this should be included in the differential diagnosis of extensive generalized lymphadenopathy.

Case Report: A 10 years old Pakistani boy presented with 3 months of generalized lymphadenopathy involving cervical, supraclavicular, axillary and inguinal lymph nodes followed by high grade fever for 1 month with night sweats, he was investigated for tuberculosis, prevalent in this region. During which period he developed erythematous, maculopapular, non photosensitive rash on face, arms and legs, leaving behind hyper pigmented skin (fig.2). This brought SLE in the differential diagnosis. His further investigations revealed a high Erythrocyte sedimentation rate (ESR) of 103 with normal C-reactive proteins, positive antinuclear antibodies and anti double stranded antibodies of 251.6 iu/ml. During this course of his illness, he started developing other features of SLE as well, including pedal edema and oral painless ulcers (fig.1). His urine complete examination revealed albuminuria and microscopic hematuria, however his renal functional profile was in the normal range. His serum total proteins and serum albumin were 5.3gm/dl and 2.0gm/dl respectively. Treatment with oral steroids led to considerable improvement in patient’s condition (fig. 3).

Results: Pediatric systemic lupus erythematosus can present with extensive generalized lymphadenopathy as a first manifestation of disease.

Conclusions: This case of lymphadenopathy brings our attention to the fact that although a very rare presentation, SLE should always be in the list of differential diagnosis for extensive lymphadenopathy in pediatrics and investigated thoroughly even in populations where tuberculosis is the first differential diagnosis for enlarged lymph nodes. It should also be taken in account that presentation of SLE needs to be further studied in different ethnic groups.

Acknowledgment: I am grateful to Dr. Hayatullah for support and encouragement. I am also thankful to patient Bilal for the cooperation.
**TREATMENT OF WEST SYNDROME IN CHILDREN WITH DOWN SYNDROME: A CASE REPORT**

Zara Bowling, Maybelle Wallis  
Sandwell and West Birmingham Hospitals NHS trust, United Kingdom

**Introduction:** West Syndrome is characterised by spasms, EEG hypsarrhythmia and developmental delay. It is a severe form of epilepsy which constitutes the most frequent seizure type in children with Down syndrome.

**Purpose:** Outcomes in this subgroup depend on early diagnosis and initiation of medication. Studies show infants treated within 2 months of diagnosis have lower epilepsy relapse rates and are less likely to suffer developmental problems.

**Materials and Methods:** After consent was gained, information was obtained from medical notes, EEG reports, and family discussions. A review was performed with articles identified from PubMed using the terms “West Syndrome”, “Down Syndrome”, and “Treatment”. Results: West Syndrome in a 13-month-old girl with Down syndrome. At 6 months parents witnessed flushing, rapid eye movements and flexor spasms. The episodes lasted 1 minute, occurred infrequently and stopped. Initial impression was colic. The patient was re-referred at 13 months for repetitive flexor spasms. Episodes were not posture or feeding related. On examination, the child had Down syndrome facies with severe hypotonia. She was unable to focus on faces, had not started smiling and could not hold objects. EEG showed hypsarrhythmia, characteristic of West Syndrome. The patient was treated with ACTH with prednisolone. Repeat EEG 2 weeks later showed persistent hypsarrhythmia and Vigabatrin was started. At 18 months old, her developmental delay was categorised as severe but her spasms had improved. A literature review has shown a shorter treatment lag for infantile spasms is associated with earlier response and reduced effects on development in Down syndrome.

**Conclusions:** The case highlights the difficulties in early diagnosis of infantile spasms and the consequences this can have on development. The importance of early treatment in West Syndrome appears key and raises the question as to whether there is an intervention, which could aid earlier diagnosis.

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**USE OF COMPLEMENTARY/ALTERNATIVE MEDICINE IN CHILDREN WITH CANCER**

Gülhan Yeter¹, Figen Isik Esenay²  
¹Mersin University Hospital, Pediatric Hematology Oncology Unit, Mersin, Turkey; ²Ankara University, Faculty of Health Sciences, Pediatric Nursing Dept, Ankara, Turkey

**Introduction:** The use of complementary/alternative medicine (CAM) is increasing.

**Purpose:** The aim of the study was to characterise the use of CAM among patients in a pediatric hematology oncology department in Turkey.

**Materials and Methods:** All patients’ (aged 0-18 years, out-patients or hospitalised) parents at Mersin University Hospital, Pediatric Hematology and Oncology Unit during a 3 month period in 2012 were asked to participate. In total, 85 (92%) parents participated. The data were collected by a questionnaire with face to face interview with the parents.

**Results:** Of all patients, 40% had tried CAM at least once. There was no correlation between use of CAM and sociodemographic features (gender, age or if the patient was outpatient or hospitalised etc.). Among CAM, herbal medicine and religious implementations was the most popular. The most frequent users of CAM were patients with constipation and pain symptoms. Majority of the parents reported positive effects and had no side-effects from CAM they used. Few parents (%8.2) reported CAM as ineffective.

**Conclusions:** Pediatric health care team should be aware of patients’/parents’ CAM use. Pediatric patients’ parents should be informed about their use of complementary/alternative medicine with regard to side-effects.

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**AN UNUSUAL PRESENTATION OF FAMILIAL MEDITERRANEAN FEVER: A CASE REPORT**

İsmail Islek¹, Ozlem Temel¹, Ozlem Erkede², Erdal Sarı¹, Burak Deliloglu¹, Ahmet Sami Yazar¹  
¹Department of Pediatrics, Umranıye Training and Research Hospital, Istanbul, Turkey; ²Department of Pediatrics, Zeynep Kamil Maternity and Children’s Diseases Training and Research Hospital, Istanbul, Turkey

**Introduction:** Familial Mediterranean Fever (FMF) is an autosomal recessive multisystemic disorder characterized by recurrent episodes of fever and polyserositis. The involvement of skin, muscle, pericardium, and tunica vaginalis are less frequently seen. Here we report a patient predominantly presenting with prolonged fever, diffuse erythematous rashes and myalgia.
Case report: A 6-year old girl was admitted to emergency department with fever and abdominal pain. Physical examination was normal. She was diagnosed with urinary tract infection and oral antibiotic therapy was administered. Two days later she was hospitalized with symptoms of fever, diffuse severe myalgia, bilateral cervical lymphadenomegaly, abdominal pain, bufliss edema, neck stiffness and diffuse erythematous skin rash (Figure 1,2,3). Family history except consanguineous marriage was unremarkable. Erythrocyte sedimentation rate (ESR: 64 mm/h) and CRP (19 mg/dl) levels were elevated. Serum creatinine, CPK, transaminases, alkaline phosphatase, uric acid, total protein and albumin levels were all within normal limits. ANA, anti dsDNA, p-ANCA, and c-ANCA were negative. Serology for EBV, CMV, mycoplasma, HCV, HIV, TORCH and parvovirus were negative. Abdominal ultrasonography and echocardiography were normal. Blood, urine, cerebrospinal fluid and throat cultures were sterile. Hemophagocytosis and malignancies were not detected in bone marrow aspiration which was consistent with autoimmune inflammation. Although the patient was treated with intravenous antibiotics for 6 days, the presence of fever and severe myalgia with normal CPK (maximally acute phase 1), which was considered an allergic reaction secondary to antibiotics. Despite antihistaminic administration the clinical status quickly deteriorated with generalized edema, lymphadenopathies (LAP) and hepatosplenomegaly. Laboratory tests showed WBC: 4300/mm³, lymhocytes: 1300/mm³, Hb: 11.2 gr/dl, Plt: 120.000/mm³, %10 eosinophilia on peripheral blood smear. After four days he was readmitted with fever and cough. Chest X-ray revealed the left lower lobe pneumonia and pleural effusion. We considered pneumonia unresponsive to oral antibiotics, on the 12th day cefotaxime and clindamycin treatment was administered. The clinical and radiological findings were improved within 10 days. On the 12th of day of hospitalization, the patient was discharged with oral prednisolone on the 7th day of the steroid treatment. Prednisolone was gradually stopped in 1 month. FMF gene analyses were performed but it resulted in 2 months, as heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. On the second day, the symptonms disappeared and treatment continued with 2 mg/kg/day methylprednisolone. She improved clinically and was discharged with oral prednisolone on the 7th day of the steroid treatment. Prednisolone was gradually stopped in 1 month. FMF gene analyses were performed but it resulted in 2 months, as heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation.

Conclusions: Pediatricians should be aware that prolonged fever, severe myalgia and diffuse erythematous rashes may be the first manifestations of FMF. Detailed history and FMF mutation analysis should be performed in such patients especially among individuals of Mediterranean descent.

A CASE REPORT OF DRUG REACTION WITH EOSINOPHILIA AND SYSTEMIC SYMPTOMS (DRESS) SYNDROME ASSOCIATED WITH CEFOTAXIME AND CLINDAMYCIN USE IN A 6 YEAR OLD BOY

Burcu Karakayali, Ahmet Sami Yazar, Deniz Cakir, Aysen Cetelen, Mandana Kariminkoo, Burak Deliloglu, Sirin Guven, Ismail Islek
Umranliye Training and Research Hospital, Istanbul, Turkey

Introduction: Drug reaction with eosinophilia and systemic symptoms (DRESS) syndrome is a rare, potentially life threatening idiosyncratic drug reaction presenting with extensive rash, fever, lymphadenopathy, hematologic abnormalities (eosinophilia and/or atypical lymphocytosis) and internal organ involvement. A long latency period (>2-3 weeks) between initiation of the drug and onset of symptoms helps distinguish it from simple allergic drug reactions.

Purpose: Although it has been described in association with more than 50 drugs, to the best of our knowledge cefotaxime was not reported previously in children and clindamycin was reported only in a few adults. In this report, we aimed to present a child with DRESS syndrome developing after cefotaxime and clindamycin treatment.

Case report: A 6 years old boy was admitted to our clinic for fever and cough. The diagnosis of the left lower lobe pneumonia and pleural effusion was made. Parenteral cefotaxime and clindamycin treatment were started, the patient improved clinically and discharged on the 7th day with oral amoxicillin clavulanate. After four days he was readmitted with fever and cough. Chest X-ray revealed the left lower lobe pneumonia and pleural effusion. We considered pneumonia unresponsive to oral antibiotics, on the 12th day cefotaxime and clindamycin treatment was administered. The clinical and radiological findings were improved within 10 days. On the 12th of day of hospitalization, the body temperature was 39°C, we considered antibiotic fever and antibiotics were suspended. Then he developed generalized maculopapular edema, on the second day, the symptoms disappeared and treatment continued with 2 mg/kg/day methylprednisolone. She improved clinically and was discharged with oral prednisolone on the 7th day of the steroid treatment. Prednisolone was gradually stopped in 1 month. FMF gene analyses were performed but it resulted in 2 months, as heterozygous V726A mutation. Detailed history showed that she had recurrent attacks of arthralgia, fever, abdominal pain during previous years. She was started on colchicine treatment. Mutational analysis of the MEFV gen from her brother and father demonstrated heterozygous V726A mutation.

Conclusion: To our knowledge, we report the first child case of DRESS syndrome after treatment with cefotaxime and clindamycin. Pediatricians should be aware of this potential complication associated with these commonly prescribed antibiotics.

CASE OF MUNCHHAUSEN BY PROXY SYNDROME IN RECURRENT ENCEPHALOPATHY ATTACKS

Ayfer Arduç Akçağ, Burcu Karakayali, Ahmet Sami Yazar, Pinar Eker, Sirin Güven, Ismail Islek
1Department of Pediatrics, Umranliye Training and Research Hospital, Istanbul,Turkey; 2Biochemistry Laboratory, Umranliye Training and Research Hospital, Istanbul,Turkey

Introduction: Munchhausen by Proxy Syndrome(MBPS) is a special child abuse. Family or guardian pretends as if the child has a disease or creates a disease. Death rate is 9-10%. A case diagnosed as MBPS and monitored with encephalopathy and recurrent sleep attacks is reported.

Conclusion: To our knowledge, we report the first child case of DRESS syndrome after treatment with cefotaxime and clindamycin. Pediatricians should be aware of this potential complication associated with these commonly prescribed antibiotics.
Abstracts

Case Report: A 5-year-old boy referred to our department with state of sleep lasting over a couple of days. Physical examination revealed state of stupor and pinpoint pupils. History revealed two similar attacks of loss of consciousness in the last five months for which he was hospitalized and treated for meningococcal meningitis. Each time a lumbar puncture(LP) was applied resulting with normal cerebrospinal fluid (CSF) findings and the patient regained consciousness on the third day. Infection markers were negative, electrolytes, blood gas analysis and brain magnetic resonance imaging were normal. Ammonia and lactate levels were normal, LP was applied, empirical treatment of meningococcal meningitis was initiated. CSF findings were normal. The patient had fever; hallucinations and agitation were monitored. Antibodies for autoimmune encephalitis were negative. Electroencephalography was applied to the patient with preconvulsive behaviour and state of sleep; epileptic encephalopathy was excluded. On the third day of admission the child was awake and conscious until the next day when loss of consciousness, flushing and tachycardia developed. The patient’s mother who was previously on psychiatric follow-up was referred to psychiatric evaluation which revealed tantrums resulting in the patient’s abuse. Patient’s urine sample was examined for toxic metabolites and diazepam products were highly detected. Legal procedures were initiated with the diagnosis of MBPS. The patient was taken away from the mother and admitted to intensive care unit where he fully regained consciousness in twelve hours.

Conclusions: In MBPS, the child with ‘disease’ is referred to the physician; the physician unintentionally join the scenario with unnecessary invasive examinations and prescriptions. LP was applied several times to exclude possible etiological causes of recurrent encephalitis, unnecessary and expensive further evaluations were carried out in both hospitals. In a research, anticonvulsant drugs were shown to be most frequent agents in MBPS cases and mothers mostly responsible. In our case, it seems most likely that the mother was responsible for the MBPS with a diazepam-like medication. Our case proves that when a patient has alternating consciousness and the etiological examinations are normal, MBPS should always be kept in mind.

ID: 147 / POST2: Presentation 46
POSTER
Topics: Chronic Conditions, Medicine use, General Pediatrics
Keywords: epilepsy, valproic acid, adverse effect, hemorrhagic disorders, child

A CASE REPORT OF HYPOFIBRINOGENEMIA AND INTRA-ARTICULAR HEMORRHAGE INDUCED BY VALPROIC ACID

Burcu Karakayali, Duygu Ozturk Ozdal, Ayse Yasar, Ahmet Sami Yazar, Sirin Guven, Ismail Islek
Department of Pediatrics, Umraniye Training and Research Hospital, Istanbul, Turkey

Introduction: Valproic acid (VPA) is commonly used in the treatment of childhood epilepsy. Bleeding and hematopoietic disorders including thrombocytopenia, abnormal platelet function, hypofibrinogenemia and decreased concentrations of protein C, factor VII and von Willebrand factor may occur after VPA administration. Although VPA associated coagulopathies are common, serious bleeding complications are rare. In the majority of studies, correlation between fibrinogen concentration and dose, blood levels, or duration of VPA therapy was not reported. We present a patient with hypofibrinogenemia, menometorrhea and hemorrhrosis during treatment with oral VPA.

Case presentation: A 13-year-old girl was admitted to our clinic with swelling and pain of the right knee. The patient had a history of epilepsy for which was on VPA monotherapy for last two years. Recently she had complaints of menometorrhea. Complete blood count and biochemistry tests were within normal limits. Knee ultrasound revealed minimal effusion. Arthrocentesis was performed and hemorrhagic fluid was observed. Coagulation functions were normal except for low fibrinogen levels (0 mg/dl). Blood VPA levels were within therapeutic range. Cryoprecipitate was administered to the patient. She had no prior history of bleeding except for her recent menometorrhea complaints. Family history of any bleeding disorders were negative as well. VPA induced hypofibrinogenemia was considered and VPA therapy was discontinued. At follow-up fibrinogen levels gradually increased to normal levels, clinical symptoms of bleeding were not observed again.

Conclusion: VPA is associated with a variety of idiosyncratic hematological effects including thrombocytopenia, inhibition of platelet aggregation and fibrinogen depletion. Among these effects the pediatricians are most commonly aware of VPA associated thrombocytopenia but less familiar to VPA associated hypofibrinogenemia. Even not severe, pediatricians should be aware of bleeding complications induced by VPA. We suggest that during treatment with VPA, platelet counts and coagulation tests should be carefully monitored.

ID: 174 / POST2: Presentation 47
POSTER
Topics: Chronic Conditions
Keywords: Bicuspid aorta, coarctation, isolated heart conditions

CHAOTIC AORTA !

Nada Boutrid, Hakim Rahmoune, Belgacem Bioud
University of Setif-1, University Hospital of Setif, Algeria

Introduction: The bicuspid aortic valve and aortic coarctation are two relatively common but rarely spontaneously associated heart disease.

Purpose: We report the associated (and may be related) to aortic conditions and depicts possible outcome and hypothetical pathophysiology

Materials and Methods: A 3 year old boy is casually diagnosed with a bicuspid aortic valve associated with coarctation of the ascending aorta. He has neither dyspnea nor any cardiorespiratory sign; except a heart murmur. A full body malformation scan is negative. Prophylaxis is explained to the parents, he addressed the National Reference Center for possible heart disease of childhood surgical emergency programming

Results: The bicuspid aorta-association to coarcted is rare: 07% have a bicuspid aortic coarctation. The risk of expansion and dissection is then very high and requires surgery. The value of B-blockers and cardiac MRI is discussed.

Conclusions: The bicuspid aortic and coarctation are often regarded as localized lesions. More and more evidence about the possibility of a true arterial disease are emerging and require meticulous attention.
**HLA RELATED DISEASES IN PEDIATRICS: A SINGLE CENTER EXPERIENCE**

Nada Boutrid, Hakim Rahmoun, Belgacem Bioud
University of Setif-1, University Hospital of Setif, Algeria

**Introduction:** The HLA system, as described by Dausset, and the pioneer of predictive medicine. We expose his role in pediatric explorations through two patients

**Purpose:** We report a single center experience in HLA typing for several conditions: autoimmune, autoinflammatory, neurological.

**Materials & Methods:** A retrospective cohort of HLA typing applications for juvenile arthritis suspicions found one boy as HLA DR4 and 4 children with HLA B27. A 14 year old child is explored for partial villous atrophy with positive serology gliadin HLA typing is not found risk haplotype DQ2 / DQ6, releases the regime. A 14 year old girl was admitted for narcolepsy: several years of misdiagnosis, HLA then confirms the pathology

**Results:** The HLA system is associated with a set of diseases in varying degrees: negative predictive value is already registered since the 2000' in the USA to rule out celiac disease; while its interest in spondyloarthritis B27 (+) makes the leitmotif of predictive medicine. Other applications for child health conditions (uveitis, IBD, diabetes, reactive arthritis) are increasingly recognized.

**Conclusions:** In pediatrics, HLA is a set of closely related genes and controlling the various stages of the immune response, is a treasure trove that must be 'uncovered'.

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**FREQUENCY OF SERUM ELECTROLYTE PANEL ABNORMALITIES IN DEHYDRATED CHILDREN WITH ACUTE GASTROENTERITIS**

Teuta Hoxha¹, Luan Xhelli²
¹University Clinical Centre of Kosovo, Prishtina; ²Department of Pediatrics, University Hospital Centre “Mother Teresa”, Tirana, Albania

**Background:** Acute gastroenteritis (AGE) is one of the most common diseases in children. It can cause a variety of fluid volume, acid-base and electrolyte abnormalities. The aim of the study was to describe the frequency of electrolytic abnormalities in children with acute gastroenteritis.

**Material and methods:** The study was performed at the Pediatric Clinic of the University Clinical Centre of Kosova. All children with acute gastroenteritis, who were between 1 month to 5 years without any underlying diseases were enrolled in the study. Historical data, physical examination, degree of dehydration, and all laboratory results were recorded.

**Results:** Two hundred children 1 month to 5 years, admitted to pediatric ward with diarrhea, vomiting or both were enrolled in the study. The mean age was 15.62±9.03 months (57.5% were male), half of them were less than 24 months old. Among the laboratory findings metabolic acidosis was present in 54 (27%) of the patients. Serum bicarbonates less than 15 mmol/L had 39 (19.5%) patients while base excess beyond -10 represented the most common individual serum electrolyte panel abnormality, occurring for 94 (47%) of patients. There were 36 (18%) patients with hypokalemia whereas hyperkalemia was present in 5 (2.5%). Elevated blood urea nitrogen levels occurred for 33 (16.5%) of patients. About 8 (4%) patients had hyponatremia whereas 4 (2%) had hypernatremia.

**Conclusion:** Metabolic acidosis and hypokalemia are common electrolyte abnormalities in children with acute gastroenteritis and dehydration, while base excess beyond -10 represented the most common serum electrolyte panel abnormality in the study.

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**STATUS OF AUDITORY FUNCTION IN DIFFERENT PERIODS OF CHILDHOOD IN PATIENTS OPERATED ON CONGENITAL CLEFT LIP AND PALATE IN THE FIRST YEAR OF LIFE.**

Elena Yurievna Radtsig¹, Alla Vladimirovna Bogoroditskaya², Marina Evgen'evna Sarafanova³, Andrey Georgievich Prityko²
¹Pirogov Russian National Research medical university, Russian Federation; ²Physician and Practical Center for Medical Care for Children with Craniofacial anomalies and Congenital diseases of the Nervous system;

**Introduction:** The frequency of children born with congenital cleft lip and palate (CCLP), auditory function in different periods of childhood in patients operated on for CCLP in the first year of life

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Abstracts

Poster session 2

Patients after maxillofacial disorders and its detection rate is not reduced after the surgery conducted on the CCLP. Various middle ear diseases occur quite often accompanied by hearing loss and varying degrees of severity. Status of auditory function directly affects the speech and mental development of the child and, consequently, the quality of life and life satisfaction for patients and their families.

**Purpose:** Evaluate a state of auditory function in different periods of childhood in patients operated on for CCLP in the first year of life.

**Materials and Methods:** The study included patients operated on CCLP in the first year of life. Comprehensive survey included endoscopy of nasal cavity and nasopharynx, video otoscopy, tympanometry and transient evoked otoacoustic emissions and carried out all pre-preschool children (1 to 3 years) and preschool (3 to 5 years) periods. The results were compared and evaluated by us.

**Results:** Full re-examination took place on 28 patients (17 boys and 11 girls). The frequency of otitis media increased by 18% in pre-school period and 50% in pre-school. Complaints of hearing loss imposes 18% in pre-preschool, and 21% in the preschool period. As a result of tympanometry normal type (A) of the curve is fixed at 67.9% in pre-preschool, and only 18% of patients in the preschool period.

**Conclusions:** According to our data, the frequency of otitis media and conductive hearing loss increases with time after surgery. The above calls for dynamic monitoring of patients operated on for CCLP in the first year of life, in different periods of childhood.