Abstracts

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SPEAKERS' ABSTRACTS

SP01

Amy Berrington de González, DPhil, Senior Investigator, Radiation Epidemiology Branch, Division of Cancer Epidemiology & Genetics, National Cancer Institute, Maryland, USA

RADIATION RISK TO PAEDIATRIC PATIENTS FROM MEDICAL IMAGING

Around the world radiation exposure from medical imaging has doubled in the past 10 to 15 years. Much of this increase is due to the dramatic rise in computed tomography (CT). These procedures provide great medical benefits, but the associated radiation exposure is typically about ten times higher than from conventional X-rays. There are concerns, therefore, about the potential future cancer risks from the increases in CT scans and other higher dose medical imaging tests including nuclear medicine and interventional radiography. These concerns are greatest for children because they are more radiosensitive and because the radiation dose per procedure is often higher, and more organs may be exposed. We conducted the first cohort study examining cancer risks after CT scans in childhood. In this study of 200,000 children in the UK who were followed up for 10-20 years after their first CT scan we found an increased risk of leukemia and brain tumors with a clear dose-response relationship. The results suggested that in children the dose to the red bone marrow from 5-10 head CTs could approximately triple the risk of leukemia, and the dose to the brain from 2-3 head CTs could approximately triple the risk of brain tumors. Despite these large relative risks, because these cancers are relatively rare the absolute risks are small: about one excess cancer per 10,000 scans. Clinical benefits should outweigh these small absolute risks providing the scan is clinically justified. However, this first direct evidence of potential cancer risks after CT scans emphasizes the need to keep radiation doses as low as possible and to consider alternative procedures, which do not involve ionising radiation, if appropriate. As well as presenting the results from this new study I will describe the trends in medical imaging around the world and discuss the potential cancer risks according to the type of procedure and the age of the patient.

SP02

Marie-Noël Bruné Drisse, Department of Public Health and Environment, World Health Organization, Geneva, Switzerland

CHILDREN'S ENVIRONMENTAL HEALTH: TAKING ACTION

About 3 million children of less than five years of age still die every year due from diseases and affections that could be prevented by healthier environments. These include respiratory infections, pneumonia, diarrhea and malaria. Children are uniquely vulnerable to toxic chemicals, heavy metals, unsafe water, air pollution. Global environmental conditions are also changing and we are exposed to the risks posed by climate change, potential endocrine-disrupting chemicals, or new kinds of wastes, such as electronic waste, distributed to and recycled in different parts of the world. Some environmental pollutants can have effects that may be linked to hormonal and developmental problems, as well as to certain types of cancer. There is a higher awareness that early-life exposures can have an impact on our risk of developing future non-communicable diseases, such as cardiovascular disease, obesity and diabetes.

The World Health Organization has been working with partners in a number of activities on children's health and the environment. These include publications for health professionals, awareness-raising and advocacy, training activities for pediatric doctors and nurses, promoting collaborative research and coordinated long-term studies. Health professionals can have a special role by being able to better identify, diagnose and treat diseases and conditions related to the environment, but also by reaching communities with preventive messages, reaching policy-makers, creating a difference. Healthier children lead to healthier families and communities. By creating healthier environments health can be improved.

SP03

Felip Burgos, MSc, RPFT, RN, Respiratory Diagnostic Center (Lung Function Laboratory), Respiratory Department, Hospital Clínic, University of Barcelona, IDIBAPS,Spain

HOW TO USE SPIROMETRY IN PRIMARY CARE

Forced Spirometry (FS) is currently being promoted as an indispensable tool for primary care doctors and nurses to diagnose and monitor chronic airways disease. Several previous studies indicate that primary care spirometry increases rates of diagnosis for chronic respiratory disease and may also lead to improvements in its treatment. The use of FS could help detect cases at an early stage when intervention may prevent further progression of the disease. However, good quality FS requires comprehensive training of staff, reliable equipment, and well-standardised measurement procedures. This may be difficult to achieve in primary care practice, especially when tests are rather infrequently administered.

Although children's and their parents' reporting of asthma symptoms is important in staging and managing paediatric asthma, many children and parents do not perceive asthma symptoms adequately. In addition, physical findings seem to be inadequate for assessing obstruction that may be present despite a normal physical examination. Despite a large body of evidence showing that airway obstruction in children with asthma is associated with ongoing respiratory morbidity and a reduced FEV_1 in adulthood, FS is not routinely performed by physicians who treat children with asthma as an objective measure of airway obstruction. According to the Asthma Insights and Reality Europe Study (a survey that assesses the current level of asthma control in Western Europe), a large proportion of children with asthma are treated without lung function measurements, and physicians base their treatment decisions on symptom reports and auscultation. Ideally, FS should be available on-site in primary care practices. Portable, lightweight and cheap spirometers that can be connected into a computer are now available, making FS technically feasible at the primary care level.

References:

- Rabe KF, et al. Clinical management of asthma in 1999: the Asthma Insights and Reality in Europe (AIRE) study. *Eur Respir J*. 2000;16:802–807
- Fuhlbrigge AL,et al.FEV1 is associated with risk of asthma attacks in a pediatric population. *J Allergy Clin Immunol*. 2001;107:61–67
- Kitch BT, et al. A single measure of FEV1 is associated with risk of asthma attacks in long-term follow-up. *Chest*. 2004;126:1875–1882
- Zanconato S, et al.Office spirometry in primary care pediatrics: a pilot study. Pediatrics. 2005 Dec;116(6):792-797
- Miller MR, et al. ATS/ERS Task Force. Standardisation of spirometry. Eur Respir J. 2005 Aug;26(2):319-38

SP04

Andrew Bush, Professor of Paediatric Respirology, Imperial College & Consultant Paediatric Chest Physician, Royal Brompton & Harefield NHS Foundation Trust, UK

HOW TO EVALUATE AND TREAT WHEEZING IN THE PRESCHOOL CHILD

The first step is to exclude serious diagnoses, and to ensure that the family are truly describing wheeze and not another, less specific respiratory noise. Next, the symptom pattern is described: 'episodic viral wheeze' (EVW), such children only wheezing in association with usually clinically diagnosed viral colds, and 'multiple trigger wheeze' (MTW), where wheezing is also present even in between viral colds [Eur Respir J. 2008; 32: 1096-1110]. Although the pattern of wheeze may change over time, current wheeze pattern should be used to guide current treatment. Firstly, attention should be given to the environment, in particular tobacco smoke exposure. Importantly, no treatment, including inhaled corticosteroids (ICS), has been shown to prevent the progression of pre-school wheeze to asthma, so treatment on the basis of current symptoms is appropriate. EVW is treated with intermittent therapy in a stepwise progression; (1) intermittent β-2 agonists; (2) intermittent montelukast; (3) intermittent ICS. Prophylactic ICS are ineffective at preventing EVW. There is mounting evidence that all but the most severe cases of acute viral pre-school wheeze do not require therapy with oral prednisolone [NEJM 2009; 360: 329-38]. If a trial of prophylactic ICS is contemplated for MTW, a three stage protocol is advised: (1) commence ICS at a moderate dose for 6-8 weeks; (2) irrespective of response, then stop therapy. If the child is symptom free, it is not known if this is due to treatment or the passage of time, whereas if symptoms persist, ICS are ineffective and alternative diagnoses need to be pursued. (3) Only restart and continue ICS at the lowest effective dose if symptoms recur. Finally, attention to the details of medication delivery is essential.

SP05

Samy Cadranel, Professor, Department of Gastroenterology, Queen Fabiola Children's Hospital, Free University of Brussels, Belgium

DIAGNOSIS AND TREATMENT OF H. PYLORI INFECTION IN THE DEVELOPED AND DEVELOPING WORLD

Until 1982-83 the stomach was considered sterile and chronic peptic ulcer was a psychosomatic disease due to stress. The discovery, by Warren and Marshall, of the Gram negative, spiral-shaped, microaerophilic bacterium with unipolar flagellae identified as Helicobacter pylori (HP) dramatically changed the whole picture although a few years were necessary to convince the non-believers that this microorganism that infects almost 50% of the human population is responsible for the majority of peptic diseases and recognize its role as co-carcinogen. Soon after HP was identified in the pediatric population with strong evidence of its early acquisition of the infection in childhood.

The prevalence differs dramatically between the developing world where, at the age of 10 years, about 90% of the children are infected in marked contrast with a much lower prevalence in the industrialized world. The influence of improving hygiene and general conditions of life in the developed world is reflected by a cohort effect. Nevertheless the mechanism of transmission remains poorly understood.

Although many questions are still unanswered about the relationship between symptoms of dyspepsia and HP infection, the harmful role of HP in the adult stomach has been proven whereas, in children, many studies have shown that HP infection has little to do with the frequent symptom of recurrent abdominal pain. However, in the developing world, HP infection can play a role in growth retardation together with other deficiencies. Several non invasive techniques of diagnosis, very helpful in children, have been developed.
The role of the virulence of the strains has been a subject of extensive studies.

An emerging serious problem is due to the growing resistance of HP strains the current treatments which associate PPIs with two antibiotics following diverse schemes in relation with the type, dose and duration. Other drugs and cheaper different schemes should be investigated.

SP06

Stella Canna Michaelidou, President of the National Committee on Environment and Children's Health, Nicosia, Cyprus

SP06. 1

PREVENTION AND PRECAUTION THE ONLY CHOICES TO MAKE THE ENVIRONMENTS OF CHILDREN SAFE- THE CYPRUS ACTION PLAN CY-CEHAP

Concerted actions are needed at national and international level to protect children from established, new and emerging risks of toxic chemicals and factors in particular neurotoxicants, mutagens, carcinogens and endocrine and cell signaling disrupters. The special vulnerability of fetus and child when exposure occurs during "critical windows of development" and "plasticity periods" , even at very low levels (ppt or ppq) is of particular concern. Therefore Prevention, Precaution and minimization of Exposure has to be applied in order to protect children's health. In line with WHO/CEHAPE a National Committee on the Environment and Children's Health has been appointed since 2004 in Cyprus with the task to develop, promote and coordinate the National Action Plan on "Environment and Children's Health", Cy-CEHAP 2007-2010, 2010-2014. **The Cy-CEHAP concept** is based on three principles: **Precaution, Prevention and Integration** and is aiming at the maximum synergy of goals, multi sectorial targets and activities. The ultimate goal is to minimize the burden of avoidable environmentally linked diseases and disabilities (e.g asthma cancers, congenital malformations, neuro-developmental disorders**),** through the reduction of children's exposure to chemicals and other hazardous factors
The presentation is aiming to share the experience (success, challenges and problems) from applying Cy-CEHAP and to show:

a) Why Prevention and Precaution are the only options to protect Children from multiple environmental risks and
b) How can effective and sustainable policies be applied through active commitment of parents, professionals and politicians/legislators and investment on children,

Finally to present case studies from the implementation of the Cyprus Action Plans (Cy-Cehap 2007-2014) e.g. antismoking and other awareness raising campaigns, training etc.

SP06. 2

WE CAN PROTECT OUR CHILD FROM TOXIC TOYS BY KNOWING THE RISKS

There are around 80 million children under 14 years in the EU. Toys and games are vital tools for child development and must be safe. Children, from the prenatal period through adolescence are particularly vulnerable to chemicals because, they can have high exposures per body weight and their systems are still developing, often making them less able than adults to metabolize, detoxify, and excrete toxins. The enhanced rate of cell division and the longer life span during which cancers and other chronic diseases initiated in childhood can develop, is also a determinant factor. Of particular concern are potential effects of carcinogenic, neurotoxic and endocrine disrupters, especially when exposure occurs during "critical windows of development". Despite the progress made in EU towards child protection, still the EU-wide Toys Directives and the European chemicals legislation, REACH, do not sufficiently protect our children because many hazardous chemicals are still allowed. Also, toy manufacturers are not required to list all the chemicals used in toys, even if hazardous chemicals are present. As a consequence 27% of dangerous products found by RAPEX the EU rapid alert system on hazardous consumer products in 2011, were Toys. Despite the constrains of improper information provided, still parents can make better choices if they are aware and informed.
In the presentation key issues on specific risks associated with toys will be discussed and guidance to parents for better choices to avoid or at least minimize risks will be provided.

SP07

Aaron E. Carroll, MD, MS, Associate Professor of Pediatrics, Vice Chair for Health Policy and Outcomes Research & Director, Center for Health Policy and Professionalism Research, Indiana University School of Medicine, Indianapolis, USA

SP07. 1

TOP 10 PAEDIATRIC ARTICLES OF 2012

Although it is getting easier to access published manuscripts through the use of technology, it's simply impossible to stay on top of the thousands of peer-review articles published each year. Dr. Carroll regularly reviews the top articles in paediatrics each week for the EIP website. In this talk, he will present the best of the best, describing the top ten manuscripts published this year. They cover a wide range of topics and domains, describing changes and advances in the practice of medicine, the conduct of research, and the way in which we work.

SP07. 2

MEDICAL MYTHS

Even though we have the ability to access medical and scientific information more easily than at any other time in human history, we still believe many, many things that aren't true. Some of our most commonly held beliefs about medical processes and health are often completely unsupported by facts. Worse, they are sometimes disproven by high-quality scientific research. Although many of these beliefs may appear unserious or light-hearted, they belie our willingness to accept many medical beliefs on faith without a critical scientific eye. Reviewing the scientific evidence behind some popular medial myths will not only make clear why these specific beliefs are wrong, it will allow us to realize that improving medical knowledge is not only about learning new things. It also involves a continual, critical appraisal of what we already "know" to be true. We must learn to examine our medical beliefs more critically consistently, asking not only "what" is true, but how we know it to be so.

SP07. 3

TOP 10 MEDICAL APPS FOR CLINICAL PRACTICE

While mobile devices have been around for some time, the advances they've made in the last few years are nothing short of remarkable. Medical apps available for such devices can truly change the way physicians practice and patients care for themselves. Ranging from reference databases to diagnostic tools to patient aides, such apps can help paediatricians in all aspects of practice. Reviewing some of the best of these apps will not only inform paediatricians as to how they can use these specific apps, but also give them ideas as to how to look for other apps in similar areas to make their practice, and their patients' care, closer to optimal.

SP08

Roger Damoiseaux, General Practitioner, University Medical Center Utrecht, The Netherlands

ANTIBIOTICS FOR AOM IN INFANCY, NOT FOR EVERY CHILD

In treating an episode of AOM the discussion remains whether we should treat symptoms or signs. The Cochrane collaboration is clear in their review on AOM that we should focus on patient-relevant outcomes. They considered the most important outcomes for patients are severity and duration of pain; adverse effects of antibiotics; serious complications of AOM; recurrent attacks; and hearingproblems from the middle ear fluid. The same review shows little effect of antibiotic treatment for AOM. Looking at the prognosis of an episode of AOM it is known that children less than 2 years of age have a chance of 50% that pain and/or fever remains for longer than 3-7 days. It is also this group that has the most effect of antibiotic treatment. But still there is a NNT of 4 and the difference disappears after 8 days. Two recent studies showed a similar effect, but the outcome included otoscopic appearances. Looking only at the resolution of symptoms these studies showed little effect of antibiotics. It is also known that antibiotics do not prevent recurrent attacks of AOM, nor do they prevent the persistence of effusion in the middle ear.

With the present knowlegde there is no ground to treat all children less than 2 years with antibiotics. One can consider treating children less than 2 years with bilateral otitis.

Before you consider treating a disease that mostly resolves spontaneously you have to keep in mind the resistance problem.

SP09

Anders Fasth, Professor of Pediatric Immunology, Department of Pediatrics, University of Gothenburg & The Queen Silvia Children's Hospital, Sweden

WHEN TO WORRY ABOUT IMMUNODEFICIENCY? APPROACH TO THE CHILD WITH RECURRENT INFECTIONS

During childhood the child experience many infections, mainly of the respiratory tract and of viral etiology. This is normal, but the high infectious rate during the preschool period might raise the question that something is wrong. A primary immunodeficiency (PID) is a rare explanation, but must not be missed owing to its severe consequences for the future of the child: Organ damage and possible early death.

How to approach the child with repeated infections? The first is a thorough history and a good knowledge of type of infections and infectious rate in different age groups. Infections in single organs usually points to a local problem. I.e. urinary tract infections are not typical for PID, repeated pulmonary infections can be PID but asthma, cystic fibrosis and other disorders must be excluded. Knowledge of typical presentation of different PIDs is necessary. For example: Antibody defects preferentially give bacterial infections of the respiratory tract, while T-cell defects is suspected with severe viral and fungal infections. Also, not all PID presents early in life, with common variable immunodeficiency (CVID) as an obvious example.

In infancy the most severe PIDs present, such as SCID. As T cells constitute about 70% of lymphocytes, the most useful screening is an absolute lymphocyte count (ALC). T cells are high during first 2 years of life and a persistent ALC $\leq 2x10^9$/L should prompt referral to a tertiary center.

From six months of age and during preschool age an increased frequency of bacterial infections are the most common cause for investigation of a possible PID. The investigation should include immunoglobulins, antibodies to vaccination antigens, and an absolute neutrophil count (ANC) plus screening for complement deficiency.

During school and adolescence infection rate diminish substantially, but single young persons again start to have repeated severe bacterial infections and a CVID must be excluded.

To be remembered is also that autoimmunity is a common presentation of PIDs. For some PID it is even the major finding. Finally, warning signs when to suspect PID have been published by Jeffrey Modell Foundation and are translated to many languages.

SP10

Tanya Froehlich, MD, MS, Assistant Professor, Division of Developmental and Behavioral Pediatrics, Cincinnati Children's Hospital Medical Center, USA

SP10.1

DIAGNOSIS AND MANAGEMENT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) IN PRIMARY CARE

This workshop will provide an overview of best practice recommendations for identifying and diagnosing ADHD in the primary care setting, including discussion of important comorbid or mimicking conditions and special considerations for particular age groups (e.g., preschool children and adolescents). The fundamentals of ADHD medication management will also be covered, including the distinguishing features of the major ADHD medication classes (stimulants, atomoxetine, alpha-2 adrenergic agonists), adverse effects/clinical cautions, and the available information on long-term effects of stimulant treatment. Finally, the role of behavioral and school-based interventions will be discussed.

SP10.2

UPDATE ON ENVIRONMENTAL RISK FACTORS AND ADHD: CLINICAL IMPLICATIONS OF CURRENT RESEARCH

There have been dramatic recent advances in our understanding of how environmental factors contribute to the development of ADHD. This session will review current evidence on the role of multiple emerging environmental risk factors for ADHD, including heavy metal exposures (e.g., manganese), synthetic chemical exposures (e.g., pesticides and plastics), and nutritional deficiencies (e.g., low zinc and low omega-3 fatty acid intake). Exposure routes, brain-based mechanisms by which these factors may lead to ADHD-related behaviors, and the results of epidemiologic studies will be presented.

SP10.3

ADHD: WHAT PARENTS SHOULD KNOW

This session will provide families with essential bullet points on important ADHD-related topics, such as 1) causes of ADHD (not poor parenting!), 2) the role of medication treatment, 3) the importance of behavioral interventions and lifestyle changes, 4) working with the school, and 5) finding support and being kind to yourself and your child.

SP11

Ron Gray, MB ChB, MPH, FFPH, FRCPsych Consultant Clinical Epidemiologist & Honorary Consultant in Public Health, National Perinatal Epidemiology Unit, University of Oxford, UK

FETAL ALCOHOL SYNDROME AROUND THE WORLD

First described forty years ago in children of alcoholic mothers, fetal alcohol syndrome (FAS) is a leading cause of intellectual disability and potentially preventable. The quantity of alcohol and the frequency of consumption required to cause FAS remain unclear: there may be critical periods in development and individual susceptibility varies and so alcohol in pregnancy is best avoided. Clinical features include characteristic facial anomalies, growth retardation, and neurodisability. The neuropsychological deficits affect educational, social and family functioning with an increased risk of mental illness and antisocial behaviour in adulthood. Children exposed to heavy alcohol consumption during pregnancy may present without the characteristic facial features and hence not meet diagnostic criteria for fetal alcohol syndrome; however, they display qualitatively similar deficits to FAS children on neuropsychological testing. Up to 70% of children of children exposed to heavy prenatal alcohol exposure will show neurobehavioural deficits on testing. Management of a child with FAS needs to be multidisciplinary and multiagency. Global interest in FAS has grown considerably in recent years with prevalence studies being conducted or planned in a number of countries. However, prevalence may vary significantly within countries: FAS is not an ‘equal opportunity’ birth defect. For example, FAS prevalence varies 10-fold between the United States and South Africa. Within countries, it is commoner in poor marginalized populations particularly indigenous groups. Preventive strategies need to focus as much on the causes of heavy drinking in these vulnerable groups as on clinical identification of at risk pregnancies.

SP12

Steffen Husby, MD, PhD, Deptartment of Paediatrics & Hans Christian Andersen Children's Hospital, Odense University Hospital, Denmark

UPDATE ON CELIAC SPRUE

New diagnostic guidelines for celiac sprue or celiac disease (CD) from the European Society for Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) have recently been published (Husby et al. J.Ped.Gastro.Nutrition, January 2012). The perception of CD has during the last decades changed from a rather uncommon enteropathy to a common multiorgan disease with autoimmune features. An ESPGHAN working group has as others (Ludvigsson et al. Gut, 2012) suggested new definitions of CD. The ESPGHAN working group developed new diagnostic criteria based on the Delphi process. A systematic literature search on antibody tests for CD in pediatric patients covering the years 2004 -2009 was the basis for evidence-based recommendations on CD specific antibody testing. The literature search revealed that IgA TG2 antibodies including IgA endomysium antibodies have a high accuracy. Two algorithms were developed: 1) In symptomatic patients the diagnosis is based on symptoms, positive serology and histology consistent with CD. If IgA TG2 antibody titers are very high (suggested as >10 times the upper limit of normal) the option is given to diagnose CD without duodenal biopsies, by applying a strict protocol with further laboratory tests. In symptomatic children without the high antibody concentrations in serum duodenal biopsies and histological evaluation is needed. 2) In asymptomatic children the diagnosis of CD should be based on HLA, positive serology and histology. HLA-DQ2 and DQ8 testing is valuable in the exclusion of CD, as their absence makes the diagnosis of CD unlikely. The aim of the new guidelines is to achieve a high diagnostic accuracy and to reduce the burden for the patients and their families.

SP13

Robert D. Newman, MD, MPH, Director, Global Malaria Programme, World Health Organization, Geneva, Switzerland

MAINTAINING THE MOMENTUM IN MALARIA CONTROL AND ELIMINATION

Over the past decade, malaria control has been reinstated as a global priority. International funding commitments have risen from <$100 million (2003) to ~$2 billion (2011), allowing for rapid scale-up of life-saving interventions, including long-lasting insecticidal nets, indoor residual spraying, universal diagnostic testing of suspected malaria, and treatment of confirmed cases with artemisinin-based combination therapies (ACTs).

As a result, malaria cases and/or deaths have fallen by >50% in 43 countries; malaria mortality rates have declined by >25% globally, and >33% in the WHO African Region.

However, malaria remains responsible for an estimated 216 million cases (range 149-274 million) and 655,000 deaths (range 537,000-907,000) annually. Most deaths (86%) occur in children <5 years of age. Four African countries account for >50% of malaria-related deaths worldwide. In Asia and the Americas, *Plasmodium vivax* remains a major challenge.

P. falciparum resistance to artemisinins has emerged as a major threat, and will likely spread beyond the Greater Mekong sub-Region without aggressive, timely, and coordinated action. The WHO Global Malaria Programme (WHO-GMP), working with Roll Back Malaria (RBM) partners, launched the *Global Plan for Artemisinin Resistance Containment*, which aims to protect ACT effectiveness.

Anopheline resistance to insecticides represents another major challenge. While current tools remain effective, resistance to ≥1 insecticide has been documented in 64 countries. WHO-GMP, working with RBM, released the *Global Plan for Insecticide Resistance Management*, to ensure continued effectiveness of malaria vector control.

Universal diagnostic testing for suspected malaria remains an untapped opportunity, especially when coupled with effective treatment and timely & accurate surveillance. Therefore, WHO launched the *"T3: Test, Treat, Track"* initiative on World Malaria Day 2012.

If political will and financial commitments can be sustained to fully fund global malaria efforts, malaria control can be a leading wedge to strengthen primary healthcare services and achieve the health-related MDGs by 2015.

SP14

Antonio Nieto, Vice-President of the Spanish Pediatric Association-AEP & Paediatric Allergy Unit, Hospital Infantil La Fe, Valencia, Spain

INTERACTIVE CASES ON ALLERGY

Allergic diseases constitute the most common chronic diseases in infancy and childhood, and their prevalence is increasing around the world.

They induce huge direct (health care resources use, medicines, etc.) and indirect costs (loss of school days, loss of work days by parents…), and their impact on personal and familiar quality of life is very relevant.

In the first half of the past century skin prick tests (SPT) were the tool used for the diagnosis of allergy. In the early seventies a noteworthy step took place with the appearance of in vitro test to detect specific IgE.

However, and even thought the two-abovementioned methods permitted us to identify the specific allergenic source, they do not give information about the precise allergens responsible for the problem in a given patient.

The Molecular Diagnosis (MD) has dramatically changed the outlook of the allergy diagnosis, because beyond the identification of allergenic sources, it allow us to identify the particular proteins responsible for the allergic reactions, and to reach crucial clinical implications, not only from a therapeutic, but from a prognostic viewpoint as well.

Since MD is also able to identify the allergens responsible for cross-reactivity due to the structural similarities between proteins present in different allergenic sources, such as pollens and vegetables, we have the possibility to anticipate the risk related with the exposure to unsuspected allergenic sources and, therefore, to implement preventive strategies to avoid possible adverse reactions.

In this workshop the basis of MD are explained, and several cases of allergy to food and inhalant allergens are presented. The clinical, therapeutic, preventive and prognostic implications depending on the diagnostic approach are discussed.

SP15

Michael BH Smith, MB BCh FRCPC FRCPCH, Consultant Paediatrician, Department of Paediatrics, Craigavon Hospital, Craigavon, Northern Ireland

FAST EVIDENCE – FINDING THE BEST INFORMATION WHEN YOU NEED IT

During the course of daily clinical practice, clinicians raise numerous questions about patient management. Faced with these questions, and in ideal circumstances, we would complete a comprehensive literature search, critically appraise the retrieved information, and apply the evidence to provide the highest quality patient care. In addition, we would record this process both for future reference and to comply with continuing professional development requirements. However, following these steps has become increasingly difficult given the scarcity of time, clinical circumstances and patient expectations.

Recognizing these limitations, this session has been designed to help physicians answer their clinical questions effectively using the principles of evidence-based-medicine and information management. During this interactive workshop we will examine some common paediatric issues and discuss how to turn clinical problems into questions that can be answered by the medical literature. We will learn how to search efficiently for high quality evidence on sites that provide critically appraised literature. Finally we will review some techniques to enable us to translate that evidence to clinical practice using newer technologies, and also suggest some strategies for dealing with information overload.

This session will be conducted in a room with Wi-Fi Internet access to provide those who bring laptop computers the opportunity to practice these techniques.

SP16

Angela Thomas, Consultant Paediatric Haematologist, Department of Haematology, Royal Hospital for Sick Children, Edinburgh, UK

MANAGING SICKLE CELL DISEASE IN THE DEVELOPED AND DEVELOPING WORLD

Sickle cell disease (SCD) is a term for a group of disorders including homozygous sickle cell anaemia (HbSS), sickle cell haemoglobin C disease (HbSC) and sickle cell thalassaemia disease (HbS/thal). Phenotype varies with genotype but all result in a chronic haemolytic anaemia and most patients suffer veno-occlusive episodes which may ultimately result in death from acute organ failure or chronic organ damage.

SCD is caused by a point mutation of the ß globin gene resulting in a valine→glutamine substitution. The mutant sickle haemoglobin polymerises under certain conditions including deoxygenation, dehydration, infection, acidosis and exercise. The polymerised HbS causes irreversible distortion of the red cell leading to vaso-occlusion, the principle complication of SCD. Vaso-occulsion leads to infarction of small vessels which causes ischaemia and necrosis of the affected tissue. Those with SCD suffer from recurrent painful veno-occlusive crises commonly affecting the bones. These episodes are often managed at home by rest, hydration and analgesia but some require admission to hospital. Sickling can occur in the lungs causing severe hypoxia which may require ventilation, or in the abdomen which can result in intestinal obstruction. Hepatic and splenic sequestration may lead to acute, life-threatening anaemia. Children with SCD are at significant risk of stroke and in the UK, cerebral blood flow is monitored using Doppler techniques and if compromised, a transfusion programme is recommended Patients with SCD commonly have functional hyposplenism which increases the risk of infection and requires vaccination and life long penicillin. Chronic complications include renal failure, leg ulcers and cardio-respiratory problems.

Care is aimed at preventative measures such as vaccination and Doppler studies but education of the patient and family is paramount so that precipitating factors can be avoided and complications and crises recognised early and treated promptly and comprehensively.

SP17

Diego van Esso, MD, Primary Care Paediatrician, Primary Care Centre "Pare Claret", Institut Catala De La Salut, Barcelona, Spain

RAPID DIAGNOSTIC TESTS & SCREENING PROCEDURES IN PRIMARY CARE: A HANDS-ON WORKSHOP

In this workshop most useful rapid diagnostic tests that can be performed at primary care office will be explained and visual screening procedures will be discussed.

Primary care pediatricians are faced, when diagnosing infants and children with infectious diseases, with few tools to make an etiologic diagnosis right on the spot. In recent years several rapid diagnostic tests have been marketed and proven useful in clinical practice. Knowing the etiology of a given process alows paediatricians explain to parents the risks and probable evolution of the disease enhancing satisfaction of parents who know what disease their child is suffering instead of receiving a diagnosis of “probable viral disease”.

For each test data on specificity and sensibility will be discussed as well as potential usefulness in primary care practice. Most of the tests are easily performed on sticks or cards and do not require special instruments, except for quantitative PCR that requires an instrument to read the sample.The practical procedure to perform each test will be shown to the participants.

In samples of human stool a chromatographic immunoassay for the rapid detection of viral antigens of rotavirus, adenovirus, astrovirus as well as protozoan parasites like *Giardia lamblia* and *Cryptosporidium parvum* can be performed.

Pharyngeal swabs allow detection of Streptococcus A. On nasopharingeal swabs influenza A+B con be detected. In samples of nasal lavage: RSV.

Capillary blood samples allow us to perform a test to diagnose infectious mononucleosis and quantitative PCR, useful to distinguish between bacterial and viral disease.

Non infectious diseases rapid diagnostic test are currently available to screen for celiac disease and allergy.

The procedures for visual screening will also be shown and discussed.

SP18

Tony Waterston, Consultant Paediatrician, Institute of Health & Society, Newcastle University, United Kingdom

THE IMPACT OF CLIMATE CHANGE ON CHILD HEALTH AND HOW WE CAN TAKE ACTION

Climate change was stated in the Lancet[1] to be the greatest global health problem of the 21st century, and yet it is still not highly rated as a problem by many health practitioners including paediatricians. In this presentation I shall examine the impact on child health and then consider the imperative for action.

The evidence for climate change hardly needs to be restated but we need to understand its strength, and where to turn if we meet climate sceptics. For me it is enough to see the graph on p.3 of the summary of the fourth report (2007) of the Inter governmental Panel on Climate Change (IPCC)[2], and further evidence is cited in the Lancet report[1] and on the website of the Climate and Health council[3].

Climate change will impact on child health in the following ways:

Direct effects of climate change on child survival

- Diarrhoea and water-borne diseases
- Malaria and other vector-borne diseases
- Food insecurity, hunger and malnutrition
- Increasing frequency of disasters

Indirect effects of climate change on child survival include migration and displacement, loss of food sources and weakened health systems.

Already, children's health is being severely affected in many countries in the world. But not yet in Europe, though the recent very severe flooding that we have seen in the UK is likely to be an effect of climate change.

So, what is the role of paediatricians in taking action? We can join the Climate and Health Council, an international lobbying group for climate action, which points out the health improving benefits of cutting carbon. Importantly, we can present the evidence for the harm being done to children, and combat the mis-information being spread around as well as examining the reasons for this.

Finally we can set a good example, as doctors have done in relation to tobacco control. Doctors who smoke are now a rarity. Should not this be the case with doctors who are carbon guzzlers? Areas of personal action to reduce carbon emissions include transport, energy use in the home and sources of food, examples will be shown in all these fields.

References

1. Costello A. et al. Lancet 2009, 373: 1693-1733
2. http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf
3. www.climateandhealth.org

SP19

Robert W. Wilmott, MD, Department of Pediatrics, Saint Louis University School of Medicine, St. Louis, MO. USA

HOW TO EVALUATE AND TREAT WHEEZING IN THE PRESCHOOL CHILD

Most preschool children with wheezing have viral induced wheezing or early asthma. However, some will have other respiratory diseases such as cystic fibrosis, gastroesophageal reflux, immune deficiency, inhaled foreign body or anatomical abnormalities of the airways.

In this era of systematic screening for cystic fibrosis (CF) we should still be alert to the possibility that a preschool child with wheezing may have been missed by newborn screening which has a false negative rate of 2-8% (1). The diagnosis of CF in such a child starts with clinical suspicion of the diagnosis, which may be based on typical symptoms or on physical abnormalities.

Clinical suspicion of CF should lead to appropriate laboratory investigations such as a quantitative pilocarpine sweat test, genetic testing for CFTR mutations and a chest radiograph. The sweat test may be borderline in individuals with CF who have certain mutations such as 3849 + 10 kb C→T or A455E (1); fortunately these are uncommon mutations. If a diagnosis of CF is made, the child should be referred to an interdisciplinary CF center for state of the art care including pancreatic enzyme replacement therapy, vitamin supplements, nutritional supplements, chest physiotherapy and antibiotics. Newer therapies such as dornase-alpha (Pulmozyme), azithromycin as an anti-inflammatory agent and CF corrector therapies are available through CF centers. Current therapy has led to significant reductions in the morbidity and mortality of CF.

1. Comeau AM, Accurso FJ, White TB, Campbell PW 3rd, Hoffman G, Parad RB, Wilfond BS, Rosenfeld M, Sontag MK, Massie J, Farrell PM, O'Sullivan BP. **Guidelines for implementation of cystic fibrosis newborn screening programs: Cystic Fibrosis Foundation workshop report.** Pediatrics. 2007;119:e495-518.

SP20

Stefan Wirth, Professor, Director of the Center for Child and Adolescent Medicine, Dean of the Faculty of Health, University of Witten / Herdecke, Germany

DIAGNOSIS, PROGNOSIS AND TREATMENT OF HEPATITIS C INFECTION IN CHILDREN

Vertical transmission has become the most common mode of transmission of hepatitis C virus (HCV) in children. The rate of perinatal transmission from an HCV infected mother to her child ranges from 1 to 6%. The prevalence of HCV in children in developed countries is estimated between 0.1% - 0.4%. Spontaneous viral clearance seems to be dependent on the genotype and was reported between 2.4-25%. For chronically infected children, diagnosed by positive quantitatively determined HCV RNA, treatment with recombinant peg-interferon alfa-2b and daily ribavirin has now also been approved as standard treatment for patients less than 18 years of age. In five large prospective studies 318 children and adolescents with an age from 3 to 17 years were treated either with subcutaneous peg-interferon alfa-2b at a dose of 1 – 1.5 µg/kg or 60 µg/m^2 once a week in combination with oral ribavirin (15 mg/kg x day) or peg-interferon alfa-2a with ribavirin. Subjects with genotype 1 and 4 received the medication for 48 weeks and individuals with genotype 2 and 3 mainly for 24 weeks. Overall sustained viral response (SVR) was achieved in 193/318 (60.7%) of treated patients. Stratified for genotype 120/234 (51%) with genotype 1, 68/73 (93%) with genotype 2/3 and 6/11 (55%) with genotype 4 showed SVR. Overall, treatment was well tolerated; however remarkable side effects were present in approximately 20 %.

According to recent experiences in the treatment of chronic hepatitis C in children and adolescents, combination of peg-interferon alfa with ribavirin was found to be highly efficacious particularly in individuals with genotype 2/3. Thus, it can be recommended as standard of care until still more effective treatment options will become available for genotype 1 patients.

SPEAKERS INDEX

MEETINGS ON THE OCCASION OF EiP

LWE1 - THE USE OF EVIDENCE-BASED PHYTOMEDICINES IN THE TREATMENT OF RESPIRATORY INFECTIONS

LWE1.1

Dr. Michael Hubmann, MD, Paediatrics, Specialist in Neuropaediatrics, Zirndorf, Germany

CAN PHYTOPHARMACEUTICALS IN THE TREATMENT OF UPPER RESPIRATORY TRACT INFECTIONS AVOID INAPPROPRIATE USE OF ANTIBIOTICS?

Upper respiratory tract infections are one of the most frequent reasons for the consultation of pediatric primary care doctors. The aetiology is in more than 90% a viral infection. In spite this viral aetiology, the treatment includes very often an antibiotic prescription. According to data provided by the Research Institute of Compulsory Health Insurances (Wissenschaftliches Institut der AOK, WIdO) there were almost 40 Mio. antibiotic prescriptions in the ambulatory care setting in Germany in the year 2009 corresponding to more than 750 Mio. €. Notably, the proportion of drugs considered second choice in the ambulatory care setting (cephalosporins, fluoroquinolones) has continued to increase substantially. In addition, important and unexplained regional differences in antibiotic use density have persisted with lower antibiotic use in eastern and higher use in western federal states. The most prescribed antibiotics remained amoxicillin (80Mio. DDD), doxycycline (54.6 Mio. DDD) and cefuroxime (21.9 Mio. DDD) in the year 2008. (GERMAP 2010).

This leads to emerging bacterial resistance over the last twenty years. But there are also examples of reducing resistance:

The German CAP clinical network (CAPNETZ) collects data on respiratory pathogens, their drug resistance and drug use. Among 7.400 patients with CAP recruited during 2002–2008 pathogen identification was possible in one third. The most frequent pathogen was *Streptococcus pneumoniae* (~30%) followed by *Haemophilus influenzae*, *Mycoplasma pneumoniae*, respiratory viruses and *Legionella pneumophila*. Macrolide-resistant pneumococci decreased from 28% to < 5% during the observation period which correlated with decreasing macrolide prescriptions (minus 10%) and increasing amoxicillin prescriptions (plus 20%). Amoxicillin-resistant strains, however, were only exceptionally isolated (GERMAP 2010).

New phytopharmaceuticals are evidence-based and can help you in the daily practice to avoid unnecessary prescriptions of antibiotics.

This lecture rules out, how important your personal communication skills are and how this skills help you to reduce antibiotic prescriptions.

In an cluster-randomized intervention study Altiner et al shows the reduction of antibiotic prescription to an OR of 58% after training the communication skills of primary care doctors (Journal of Antimicrobial Chemotherapy (2007) 60, 638–644).

LWE1.2

Prof. Leyla Namazova-Baranova, Director, Scientific Research Institute of Prophylactic Pediatrics and Rehabilitation, Scientific Center of Children's Health, Russian Academy of Medical Sciences, Moscow, Russia

NEW DATA FROM A PAEDIATRIC CLINICAL TRIAL WITH THE GOAL OF REDUCING THE OVERUSE OF ANTIBIOTICS FOR THE TREATMENT OF ACUTE BRONCHITIS

Acute bronchitis is one of the most frequent infections encountered in general practice and a common childhood disease. Although up to 95% of the cases are caused by viruses (RSV, coxsackie's-, influenza-, parainfluenza, adenoviruses), one-third up to 90% of patients are prescribed antibiotics. Antibiotic treatment of acute bronchitis is controversial. The duration of the disease is not substantially shortened by antibiotic treatment

A therapeutic alternative is the first-line treatment of acute bronchitis with Bronchipret syrup, a herbal medicinal product containing fluid extracts from thyme herb and ivy leaves. Bronchipret syrup is an evidence-based phytomedicine which proved its efficacy and safety in a randomized, double-blind, placebo-controlled, multicentre trial in adults and showed similar results in a non-observational study in children 2-17 years of age.

In a recently conducted clinical trial in Russia the efficacy and safety of Bronchipret syrup was compared to antibiotic treatment (amoxicillin) and to a combination of Bronchipret syrup and amoxicillin in children 2-6 years of age suffering from acute bronchitis with the goal of future reduction of antibiotic overuse.

The study was designed as a randomized, double-blind, active-controlled, multicentre trial. 182 children were randomized at 9 of 16 initiated sites all over Russia. The patients were treated for 7-10 days, depending on the course of the disease. Procalcitonin level in serum at baseline was restrospectively analyzed at study end. Elevated procalcitonin levels are an indicator for bacterial infection of the lower respiratory tract.

Bronchipret syrup showed to be non-inferior to amoxicillin treatment regarding responder rate assessed by the investigator after 7 days of treatment. This lecture summarizes the most important outcomes of the study.

LWE1.3

Dr. Peter Kardos, MD, Internal Medicine (Respiratory, Sleep and Allergy Unit), Maingau Hospital, Frankfurt a. M., Germany

A NEW DIMENSION IN THE TREATMENT OF ACUTE RHINOSINUSITIS WITH PHYTOMEDICINES: EVIDENCE HAS BEEN REACHED

The treatment of a wide variety of diseases using plant-based medicines is steadily gaining importance. In terms of their pharmaceutical efficacy, safety and quality today modern researched phyto-medicines have to follow allopathic principles and have to find their place in evidence-based medicine. Fulfilling these requirements researched plant-based medicines can be the preferred alternative to chemical and synthetically produced medicines.

Sinupret, a herbal product, was first marketed in Europe in the 1930s and proved to be a valid symptomatic reliever, with antiviral, antibacterial, anti-inflammatory and secretolytic effects demonstrated in vitro. Most of the clinical data have been generated between 1970 and 1990, showing benefit as add-on therapy to antibiotic treatment and safety. However, treatment approaches to ARS and study concepts have been immensely changed in the last decade, and a state-of-art study for Sinupret in ARS was urgently needed.

A double-blind, placebo-controlled, multicentre Phase III study including several hundred outpatients with acute rhinosinusitis (ARS), has now been performed, assessing the efficacy and tolerability of Sinupret vs. placebo. Patients with a Major Symptom Score (MSS; in accordance with European EPOS guideline) ≥ 8 and ≤ 12 points (range: minimum 0, maximum 15 points) were randomly assigned to a 15-day treatment (2 coated tablets three times a day) with either the herbal product or placebo. Control visits were scheduled to take place 3, 7, 10, and 14 days after randomisation / baseline examination (Visit 1 / Day 0). The primary outcome criterion for efficacy assessment was the mean MSS assessed by the investigator at the end of treatment (Visit 5 / Day 14). The main secondary outcome measures included the change in symptoms and emotional and social consequences of ARS assessed by the patient (interference with sleep, daily functioning and general well-being, Sino-Nasal Outcome Test-20) and the investigator's assessments of treatment response (responder rates). The clinical development was further monitored by ultrasonography of the paranasal sinuses.

The average MSS improved significantly by a mean of 7.38 ± 0.21 to 2.38 ± 0.18 with the herbal product and by a mean of 6.32 ± 0.26 to 3.41 ± 0.24 with placebo. The group difference at Visit 5 (primary endpoint) of 1.03 ± 0.24 was statistically highly significant (p=0.0008) and considered medically relevant in favour of Sinupret.
MSS diary data revealed that a 2-day's faster relief of symptoms in the course of healing compared to placebo was achieved. The results were confirmed by ultrasonography showing a significantly more pronounced remission of signs of acute rhinosinusitis in verum treated patients at the end of treatment.

This study is the first trial with a herbal drug, which is performed to meet all the current quality standards of a DBRPC trial. Its publication certainly will answer to a great demand from doctors and patients.

MO1 - THE WAY TO SUCCESSFUL WEANING: A MATTER OF ADEQUACY, SAFETY AND APPROPRIATE FEEDING PRACTICES

MO1.1

Raanan Shamir, Institute for Pediatric Gastroenterology, Nutrition and Liver Diseases, Sackler Faculty of Medicine, Tel-Aviv University

COMPLEMENTARY FOODS: APPROPRIATENESS FROM A NUTRITIONAL AND SAFETY PERSPECTIVE

Complementary feeding (CF) embrace all solid and liquid foods other than breast milk or infant formula and/ or follow-on formula. CF is needed since the volume of human milk with exclusive breast feeding at around 6 months becomes insufficient to meet nutritional requirements of the infant, as well as possible benefits such as the prevention of non communicable diseases. Appropriate introduction of CF includes timely introduction (not before 17 weeks of age, with all infants started on CF by 26 weeks of age), meeting nutritional needs, meeting safety requirements, and properly fed. However, one must recognize that diets of infants and young children in most populations in low-income countries are consistently deficient in some nutrients, including iron, zinc and vitamin B6.

The need for safety cannot be overemphasized. Children should be fed using hygiene practices that will eliminate the risk of infection, with food that does not pose risks such as aspiration or chocking and assuring that the CF does not contain contaminants in unsafe levels (methyl mercury and pesticides in fish, antimicrobials used as animal food additives and genetically modified organisms to name a few). In that context, it is important to remember that infants and toddlers have smaller bodies, a less diversified diet, and a higher sensitivity to contaminants, threshold for contamination levels should be much lower than for older children and adults.

Thus, health care providers, including pediatricians and regulatory bodies (such as the CODEX, FDA and EFSA) should establish scientifically based guidelines and recommendations to ensure the delivery of safe CF as well as providing education programs to enable consumers to act safely and make safe choices for CF.

MO1.2

Dr. Johanna Kuenzel, Nestlé Research Center, Switzerland

THE INFLUENCE OF EARLY VARIETY ON FOOD ACCEPTANCE IN BABIES AND TODDLERS

Healthy eating habits (i.e. a balanced diet) and food preferences start developing even before birth and continue through infancy. Both exposures to different flavors in the amniotic fluid and through breast feeding (via flavors carried in the milk) have been shown to influence children's acceptance of a variety of foods after weaning. It has for example been shown that children of mothers who regularly consumed carrot juice during pregnancy and lactation were more willing to accept carrot juice at the time of weaning (Menella et al 2001), and similar results have been shown for other flavors.

When introducing developmentally appropriate solid foods, exposure to a variety of healthy foods both within and between meals remains an important factor in influencing healthy eating habits (such as acceptance of vegetables) and a varied diet. Offering a variety of different foods from the time of weaning onwards has reliably been shown to increase the acceptance of new foods from different categories later in life (Maier et al, 2008; Menella et al, 2008). However, even if children initially reject specific foods, techniques like repeated exposure to the food (i.e. offering the food five to eight times) haven been shown to improve acceptance of these foods, also in the long term (Maier et al, 2007; Hausner Olsen, Møller, 2012).

Healthy eating habits acquired during infancy do indeed persist into childhood, and are present at primary school age. Research shows that children's preference of foods at school age is strongly predicted by their preferences at four years (Skinner et al, 2002).More specifically, acceptance of a variety of different fruits, vegetables, meats and dairy in the first 2-3 years of life predicts the variety of foods consumed in school-aged children and beyond (Nicklaus 2009, Skinner at al, 2002).

In summary, these studies show that early exposure to a variety of different foods positively influences acceptance of a variety of foods later in life, and as such plays an important part in establishing a healthy, balanced diet. These findings can contribute to provide a solution for the current obesity and public health problems. They emphasize the importance of early feeding practices on healthy eating habits, and the importance of healthcare providers in supporting parents on this journey.

MO2 - VACCINATION: IMPORTANCE OF TIMING

MO2.1

Prof. Marc Van Ranst, Laboratory of Clinical and Epidemiological Virology, Rega Institute for Medical Research, University of Leuven, Belgium

ROTAVIRUS GASTROENTERITIS: THE FIRST SIX MONTHS

Rotaviruses are among the most recently identified viral human pathogens 1 and an important cause of severe diarrhea worldwide. Vaccination against rotavirus is recommended in many European countries, 2 as this is practically the only way of helping to prevent rotavirus gastroenteritis.

Timing is especially important for rotavirus vaccination as humans are exposed to the pathogen very early in life. The first infection isknown to be generally the most severe, so early protection is key. 3 Oral rotavirus vaccines were developed to mimic thenatural infection, and are licensed for use as 4 weeks of age - protecting the infant before an exposure to the natural pathogen.4 The recent discovery of porcine circoviruses (PCV) in rotavirus vaccines triggered some additional research.5 Our data show that PCVs are ubiquitous and detectable not only in rotavirus vaccines but also in baby formula and in pork-containing baby meals.6 PCVs are therefore in contact with children very early in their development, and they are non-pathogenic. The European Medicines Agency continue to recommend rotavirus vaccination.7

The upper age limit (6 months for the human rotavirus vaccine) is another time-specific feature of the vaccine; as the incidence of intussusception rises markedly with increasing age during the first year of life. 8 Even though a link between intussusception and vaccination has been established, recent data show that this risk is substantially exceeded by the benefits of
vaccination.9,10

REFERENCES:

1. Bishop RF, Davidson GP, Holmes IH, Ruck BJ. Virus Particles in Epithelial Cells of Duodenal Mucosa from Children with Acute Non-bacterial Gastroenteritis. *Lancet*. 1973;2:1281–1283.
2. Rodrigo C, Salman N, Tatochenko V, Mészner Z, Giaquinto C. Recommendations for rotavirus vaccination: A worldwide perspective. *Vaccine*. 2010;28(31):5100–5108.
3. Velázquez FR, Matson DO, Calva JJ, et al. RotavirusInfections in Infants as Protection Against Subsequent Infections. *N Engl J Med*. 1996;335:1022–1028.
4. Grimwood K, Lambert SB. Rotavirus Vaccines: Opportunities and Challenges. *Hum Vaccin*. 2009;5:57–69.
5. Victoria JG, Wang C, Jones MS, et al. Viral Nucleic Acids in Live-attenuated Vaccines: Detection of Minority Variants and an Adventitious Virus. *J Virol*. 2010;84:6033–6040.
6. Wollants E, De Coster S, Van Ranst M. Porcine circoviruses can be found in pork meat, ham-containing baby meals, and hypoallergenic infant formula. *14th Asia Pacific Congress of Pediatrics (14th APCP 2012) and 4th Asia Pacific Congress of Pediatric Nursing (4th APCPN)*. 2012.
7. European Medicines Agency - News and Events - European Medicines Agency confirms positive benefit-risk balance of Rotarix. *EMA: European Medicines Agency*. Available at:
http://www.ema.europa.eu/ema/index.jsp?curl=pages/news_and_events/news/2010/07/news_detail_001059.jsp&mid=WC0b01ac058004d5c1. Accessed November 3, 2011.
8. Tai JH, Curns AT, Parashar UD, Bresee JS, Glass RI.Rotavirus Vaccination and Intussusception: Can We Decrease Temporally Associated Background Cases of Intussusception by Restricting the Vaccination Schedule? *Pediatrics*. 2006;118(2):e258–e264.
9. Desai R, Cortese MM, Meltzer MI, et al. Potential Intussusception Risk versus Benefits of Rotavirus Vaccination in the United States. Pediatr *Infect Dis J*. 2012. Available at: http://www.hubmed.org/display.cgi?uids=22929172
10. Rotavirus vaccine and intussusception:report from an expert consultation. *Wkly Epidemiol Rec*. 2011;86(30):317–321.

MO2.2

Prof. Julio Vazquez, Centro Nacional de Microbiología, Instituto de Salud Carlos III, Majadahonda, Spain

CONJUGATED MENINGITIS ACWY VACCINE FOR USE IN CHILDREN ONE YEAR OF AGE AND ABOVE

A number of vaccines are available to help protect children against disease due to Neisseria meningitidis. Monovalent conjugate vaccines have been used in many parts of Europe since the 1990s against serogroup C disease and have beenshown to be immunogenic and to have an acceptable safety profile. Polysaccharide quadrivalent vaccines against meningococcal serogroups A, C, W135 and Y have been available for some time, but their use has largely been limited to travelers.

Two quadrivalent conjugate vaccines are currently licensed in Europe.

This symposium talk will look at some of the epidemiology data relevant to meningococcal vaccines and their potential use in children. Safety and immunogenicity data generated as part of the clinical development programme of GSK's quadrivalent conjugate vaccine will be presented.

MO2.3

Prof. Tino Schwarz, MD, Stiftung Juliusspital Wuerzburg, Wuerzburg, Germany

HPV VACCINATION – THE ESSENTIAL ROLE OF THE PAEDIATRICIAN

Virtually all cases of cervical cancer are caused by a genital human papillomavirus (HPV) infection, a highly prevalent sexually transmitted infection. Effective and generally well tolerated vaccines have been developed to help prevent infection due to certain HPV types.

The immunisation programmes are supported by the availability of vaccines which have demonstrated their efficacy on preventing pre-cancerous lesions associated with a long term immunogenicity. Vaccination coverage in Europe varies significantly and school programmes are one of the critical success factors of implementation. Paediatricians play a key role in HPV vaccine delivery because girls in the age grouptargeted for the vaccination are likely to visit paediatricians. Paediatricians' recommendations for immunization have a powerful influence on parents' and adolescents' decisions about vaccination. Effective delivery strategies via paediatricians are valuable for public health HPV vaccination implementation.

ORAL PRESENTATIONS

ADOLESCENCE MEDICINE

OP01

THE PROBLEMATIC AND RISKY INTERNET USE SCREENING SCALE (PRIUSS): A NEW TOOL FOR ASSESSING PROBLEMATIC INTERNET USE IN ADOLESCENTS

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Introduction: Problematic Internet Use (PIU) is a growing health concern among adolescents, however, a validated assessment tool is lacking.
Purpose: This study aimed to develop and validate a theoretically grounded assessment tool for PIU.
Material and Methods: An item pool was developed using concept mapping and administered to 714 undergraduate students age 18-25 from two US universities. Exploratory factor analysis (EFA) was used to construct a reliable preliminary scale. The scale was then administered to a separate sample of students (n=330) along with general Internet use questions and measures for related mental health conditions. Confirmatory factor analysis (CFA) was used to assess scale validity. A Receiver Operating Characteristic (ROC) curve was computed to estimate a risk-based scoring cut-off. Odds ratios were calculated to compare the likelihood of reporting symptoms of other mental health conditions between PIU risk categories.
Results: EFA produced an 18-item scale with three subscales: Social Consequences, Emotional Consequences, and Risky/Impulsive Internet Use (Cronbach's alphas: 0.89, 0.90, and 0.88). CFA of the 3-factor model indicated an acceptable fit (GFI=0.89, RMSEA=0.07). The ROC curve indicated a cut-off of 25 (sensitivity=0.80, 95%CI: 0.47-0.99; specificity=0.79, 95%CI: 0.73-0.84) for identifying those at risk for PIU. Compared to those not at risk, those at risk for PIU had significantly greater odds of reporting symptoms of ADHD (OR=3.77, 95%CI: 2.09-6.83), depression (OR=4.59, 95% CI: 2.60-8.11), or social anxiety (OR=6.15, 95%CI: 3.57-10.58).
Conclusions: The Problematic and Risky Internet Use Screening Scale (PRIUSS) is a novel assessment tool with strong psychometric performance, which may be valuable in future prevention efforts.

ALLERGY-IMMUNOLOGY

OP02

IMPACT OF CHANGE OF ENVIRONMENTAL FACTORS ON CHILDREN WITH ALLERGIC RHINITIS

Nino Adamia [1]; Nona Katamadze [2]; Irma Ubiria [1]; Ketevan Barabadze [3]; Eka Lilueshvili [4]; Nana Nareklishvili [4]; Ketevan Gotsadze [3]; Tinatin Gigauri [5]; Vakhtang Zerekidze [6]; Lali Saginadze [6]; Mariam Ghughunishvili [1]

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[4]*M. Guramishvili Pediatric Clinic, Republic of Georgia;*
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[6]*Paghava Institute of Pediatrics, Republic of Georgia*

Tbilisi State Medical University, Department of Pediatrics, M. Iashvili Pediatric Clinic Goal of the work. Evaluation of impact of various characteristics in the conditions of dwelling on the population of children with allergic rhinitis in Tbilisi.

Materials and methods: Study was conducted in the population of Tbilisi schoolchildren, on the basis of questioning of random and representative groups consisting of 1356 children of 4-14 age. Interior risk factors were studied via interviewing. For reliability of epidemiological studies two-stage risk assessment model was applied.

The alergization characteristics of dwelling were analysed Case-control method was applied for evaluation of risk factors. “case” group of the studied population (1356 children) the case group comprised of children with allergic rhinitis identified via epidemiological study (236), while control group included healthy population (without allergic rhinitis) by age and sex. Tetrachoric coefficient of relative risk (EP) and correlation was calculated. Statistical processing of the materials was provided on the basis of SPSS V.12.5 software.

Obtained results: analysis of the risk factors identified presence of humidity and mould, active tobacco consumption and frequency of firewood and kerosene heating, dust collectors in dwelling. Frequency of the identified variable was reliably high ($p<0.05$) in the families of children with allergic rhinitis, compared with the healthy population. In the patients with allergic rhinitis with the environmental problems in dwelling the heritable load with the allergic diseases was confirmed in 81.2% of cases, while among healthy population this parameter was 9.8% ($p<0.001$). ¼ of children with allergic rhinitis had heritable load from both parents.

Conclusion: regarding obtained results, the conclusion could be made that the environmental factors of dwelling, together with genetic predisposition significantly impacts the frequency of sensibilization towards domestic allergens and development of allergic rhinitis.

CARDIOLOGY

OP03

WITHDRAWN from Oral & transferred to PP012A

DERMATOLOGY

OP04

PROPANOLOL TREATMENT FOR HAEMANGIOMAS

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[2]*Department of Dermatology,Princess of Wales Hospital, Bridgend, UK*

Introduction: Infantile haemangiomas are the most common benign tumours of infancy. Typically not present at birth, they undergo a growth phase for up to twelve months before stabilisation and eventual regression. The majority regress spontaneously without long term sequelae.1 However in specific cases it may be necessary to initiate treatment to accelerate this regression to avoid the risk of site-specific complications or painful ulceration. Propanolol is a non-selective beta blocker which has been shown to be effective at shrinking haemangiomas, whilst having fewer side effects than previously established treatments. The proposed mechanisms of action include vasoconstriction, induction of endothelial cell apoptosis and inhibition of angiogenesis.1
Purpose: We would like to demonstrate our experience of this treatment with a case series of patients and present a locally developed care pathway. Material: We retrospectively looked at all patients treated with propanolol for infantile haemangiomas since 2009 in the Princess of Wales Hospital.
Methods: We evaluated the sex of the infant, age at initiation, side effects and outcome of treatment. The care pathway was developed as a joint project between the departments of Dermatology and Paediatrics after an extensive literature search and examining the standard practice of major paediatric centres in the UK.
Results: 11 patients were identified and all showed good response within a few weeks, as documented by measurement, photographs and healing of ulceration. No major side effects were noted.
Conclusions: From our experience propanolol appears to be an effective and safe treatment for haemangiomas. The care pathway will enable propanolol to be used safely in an ambulatory setting.
References: 1. E Starkey, H Shaidullah “Propanolol for infantile haemangiomas: a review.” Arch Dis Child 2011;96:890-893, 28 May 2011. 2. M Glover, A Giardini, J Harper, J Linward, H Kennedy, S Syed. “Propranolol for the treatment of haemangiomas.” GOS Pathway, December 2010. 3. M Hogeling, S Adams, Orli Wargon “A randomised controlled trial of Propanolol for Infantile Haemangiomas.” Pediatrics 2011;128;e259, July 25, 2011.

GASTROENTEROLOGY, NUTRITION & METABOLISM

OP05

RISK FACTORS ASSOCIATED WITH OBESITY IN CHILDREN 6 TO 11 YEARS OLD IN SAN LUIS POTOSÍ MÉXICO

Jose Fernando Velasco Chavez ; Angelica Roman Diaz ; Rafael Nieva de Jesus; Enrique Albarran Fernandez ; Gerardo Gaviño Curi
Instituto Mexicano del Seguro Social (IMSS), Mexico

Introduction: Overweight and obesity are a growing public health problem worldwide. México has a 26% of prevalence of obesity in children to 5 -11 years old, it ranks as leader.
Purpose: To identify risk factors associated with obesity in children aged 6 to 11 years old.
Methods: Cross-sectional design. We included 377 children of primary education. We describe anthropometric variables, lifestyle, structure and family history.
Results: Overweight and obesity for BMI was in 14% and 36% respectively. Breastfeeding longer than 4 months in 53%. Children watch TV from 1 to 3 hours daily 52% and 18% use of video games more than 3 hours a day. 15% no physical activity. 40% with family history of obesity (OR = 3.01 p = 0.002) 3% for cardiovascular disease, diabetes mellitus 16%.
Conclusions: Several risk factors that could be modified in the future and prevent chronic degenerative diseases.

OP06

ACUTE PANCREATITIS IN CHILDREN

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Introduction: Acute pancreatitis (AP) has previously been thought to be uncommon in the pediatric population.
Purpose: All cases of AP between May 2002-May 2012 at Hospital de Braga,Portugal were reviewed to determine the etiologic factors,the number of cases per year and the clinical,laboratory and imaging features of this pathology.
Materials/Methods: A 10-year retrospective study was conducted at our hospital.Patients,<18 years of age were identified by searching the hospital's electronic discharge records for the International Classification of Disease, Ninth Revision(ICD-9)code 577.0(AP). All diagnoses were confirmed by review of admission histories, laboratory values and imaging findings. Acute recurrent pancreatitis (ARP)was defined as:≥ 2 distinct episodes of AP with intervening return to baseline.
Results: Thirty-one patients(83.8%)with AP and six patients(16.2%)with ARP were studied. The most prevalent etiologies were biliary stones(24.3%),trauma(16.2%),and drug ingestion(10.8%).A case of pancreas divisum, a heterozygous I507del+IVS8 (5T) cystic fibrosis patient and a solid pseudopapillary neoplasm of pancreas were rare etiologies related with ARP.We reported two to six cases per year and the patient median age at presentation was 15 years (range, 7-17 years).The median duration of hospitalization was 6 days(range 2-89 days).Unequal variance t-test analysis of laboratory data was applied to our pediatric population. Admission elevated white blood cell count(WBC;p=0.011),48-h trough calcium(p=0.007)and 48-h rise in blood urea nitrogen(BUN;p=0.025)correlated significantly with disease severity.Nine(24.3%)patients developed severe complications.
Conclusion: This is the first Portuguese case series study about childhood pancreatitis. Better scoring systems are needed.

GENERAL PAEDIATRICS

OP07

REFRACTIVE DEFECTS AND STRABISMUS IN PEDIATRIC PRIMARY CARE: NEED FOR A MORE INTEGRATED APPROACH?

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Introduction: The therapeutic approach to refractive defects (RD)and strabismus is usually restricted to the ophthalmological aspect, although many surveys have shown the negative psychological impact of such defects.
Purpose: To verify the perception of the problem and the therapeutic approaches held necessary by family pediatricians (FP) in pediatric primary care.
Material: Every FP in the Pordenone and Udine Provinces, Italy (836.606 inhabitants) was offered a questionnaire asking for their evaluation concerning RD and strabismus.
Method: The questionnaire was a 13-question survey requiring the following information: importance given to RD and strabismus, opinion about the emotional impact of those defects and the necessity to integrate treatment with psychological help and evaluation of the reading and writing abilities.
Results: 70 FP of 73 filled out the questionnaire. Most of these FP deemed RD and strabismus to be important.48 thought RD and particularly strabismus can negatively affect children causing insecurity, hostility and depression. With regard to the therapeutic approach 53 FP considered standard ophthalmological/orthoptic treatment adequate but 21 FP thought that, as in chronic diseases, psychological help could be useful. Furthermore, 51 FP judged a reading/writing evaluation to be helpful and 38 thought that RD and strabismus can lead to difficulty in reading/writing ability.
Conclusions: In spite of the high frequency and strong impact of such defects, at a psychological and scholastic level, it is not rare for them to be diagnosed and treated late and their treatment is almost exclusively ophthalmological/orthoptic. Our survey confirms the concern of FP for RD and strabismus and their opinion concerning the opportunity of a psychological support.

GENETICS

OP08

NQO1 gene polymorphism is associated with an increased risk of bronchopulmonary dysplasia in preterm neonates

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Introduction: Bronchopulmonary dysplasia (BPD) development is complex and involves genetic and environmental factors. Although oxygen is the most commonly used therapy, exposure to oxygen can damage the pulmonary epithelium through the generation of reactive oxygen species (ROS). Cellular defence mechanisms rely on detoxification enzymes, involved in the activation and elimination of ROS. Genetic polymorphisms are single nucleotide alterations that result in reduced activity or inactivation of encoding enzymes. Polymorphisms of genes encoding enzymes involved in ROS metabolism are likely to modify the risk of DNA damage and BPD development. The detoxification enzyme NAD(P)H:quinone oxidoreductase (NQO1) is involved in the cellular response to oxidative damage. The enzymatic activity of the homozygous variant genotype (T/T) is almost undetectable, and that of the heterozygous variant genotype (C/T) is low-to-intermediate.
Purpose: To investigate the potential role of NQO1 609C→T inborn polymorphism in Greek preterm neonates who developed BPD. Material: This case-report study enrolled 119 Greek premature neonates with gestational age <32 weeks. The cases population was 42 babies <32 gestational age who developed BPD. The control population was 77 babies ≤32 gestational age who did not develop BPD. Methods: The NQO1 gene was amplified by Real-Time Polymerase Chain Reaction (PCR) detecting the 609 C→ T substitution.
Results: BPD neonates had an increased frequency of heterozygosity and homozygosity for the mutant allele (combined C/T + T/T) compared to the controls (p=0.026). No neonate less than 1,000g from the control group carried the mutation (p<0.001).
Conclusions: Preterm neonates carrying the NQO1 polymorphism may have an increased risk for BPD development.

INFECTIOUS DISEASES

OP09

ASEPTIC MENINGITIS OUTBREAK IN SOUTH BULGARIA, SUMMER 2012

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Background: Echovirus 30 is one of the most common causes of aseptic meningitis in children. It follows an epidemic mode of transmission, causing large and prolonged outbreaks.
The purpose of this study was to assess the clinical, laboratory and epidemiological features of an aseptic meningitis outbreak emerged in summer 2012 in Plovdiv region, Southern Bulgaria.
Materials and methods: We conducted a study of 140 children with aseptic meningitis admitted to the Infectious Diseases Department at St. George University Hospital, Plovdiv, Bulgaria. A case of aseptic meningitis was defined as illness characterized by acute onset, meningeal irritation, cerebrospinal fluid pleocytosis (WBC count > 106/l) and negative bacterial culture. To identify the etiologic agent, a total of 55 specimens from 41 patients were tested by isolation on cell culture RD and/or RT-PCR with primers toward 5'UTR region of enterovirus genome. Standard microneutralization assay with RIVM enterovirus antibody pools was performed on all isolated enterovirus strains for serotype identification.
Results: One hundred and forty patients (64% males, 36% females) aged between 3 months and 18 years with aseptic meningitis were hospitalized from June, 1st to August, 31st, 2012. The main clinical manifestation involved headache, vomiting, and fever, but signs of meningeal irritation were only moderate expressed in less than one half of the cases. In 30(21%) children persistent headache was the only indication for spinal tap, revealing pleocytosis. Thirty-four (24%) of the patients had preceding loose stools, and a 12-year-old boy exhibited a concomitant flaccid facial palsy. Spinal fluid findings during lumbar puncture on admission showed mononuclear predominance in 67% of the cases. Stool (n=30), cerebrospinal fluid (n=21) and nasopharyngeal swab (n=4) specimens from a total of 41 patients were tested by cell culture isolation and/or molecular techniques. Materials of 28 cases (68%) showed an enterovirus-like cytopathic effect and/or a enterovirus-specific PCR product. All of the enterovirus isolates (n=26) were identified as echovirus serotype 30. More than a half of the patients with aseptic meningitis reported for attendance of a swimming pool, and a quarter–contact with an ill person. Initial therapy consisted of an empiric antibiotic regimen until the bacterial culture results were available. All children involved in the outbreak recovered uneventfully.
Conclusion: Detection of a single serotype enterovirus strongly suggests that echovirus 30 was the etiologic agent in this outbreak. Considerable medical resources could be saved if rapid and adequate clinical, virological and epidemiological investigations were made in parallel.

OP10

RESISTANCE OF STREPTOCOCCUS PYOGENES TO MACROLIDES AND PENICILLIN, IN OUR PEDIATRIC POPULATION

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Introduction: Pharyngitis is common in children and the Streptococcus pyogenes is the main bacterial agent involved. Penicillin is the drug of choice but macrolides are an alternative and recent studies showed a decrease in the resistance to these drugs. Since the antibiotic is mostly chosen empirically, its consumption and the emergence of resistances need to be monitored regularly.
Purpose: Study the resistance of Streptococcus pyogenes to macrolides and penicillin.
Material and methods: Observational study that included the children diagnosed with pharyngitis in the ER of Évora Hospital, between February/2010 and January/2011. Throat swabs were collected for strep test and throat culture. An inquiry was conducted on demographic and epidemiological data.
Results: 640 patients were included, 120 had positive throat culture for Streptococcus pyogenes. Resistance to penicillin, erythromycin, clarithromycin and azithromycin was, respectively, 0%, 0%, 1% and 12.5%. Strep test had 92% sensitivity and 82% specificity. The correlation between positive throat culture results and previous antibiotherapy is statistically significant (P=0.022). The average age of children with positive throat culture was 6.8 years vs. 5.74 years in those with a negative result (P<0.001). There's a statistically significant correlation between gender and azithromycin resistance profile (P=0.039), which is higher in males. We didn't found a correlation between antibiotic resistance and the number of previous antibiotics.
Conclusions: The results confirm a sensitivity of 100% for penicillin, justifying its use as first-line treatment. The obtained macrolide resistance is consistent with recent studies, so it's important to understand if this remains true over time and when should we use these drugs

NEONATOLOGY

OP11

INFLUENCE OF EARLY MATERNAL SKIN TO SKIN CONTACT FOLLOWING NORMAL DELIVERY ON INCIDENCE OF HYPOTHERMIA IN NEONATES MORE THAN 1800 GRAMS AT BIRTH: RANDOMIZED CONTROL TRIAL

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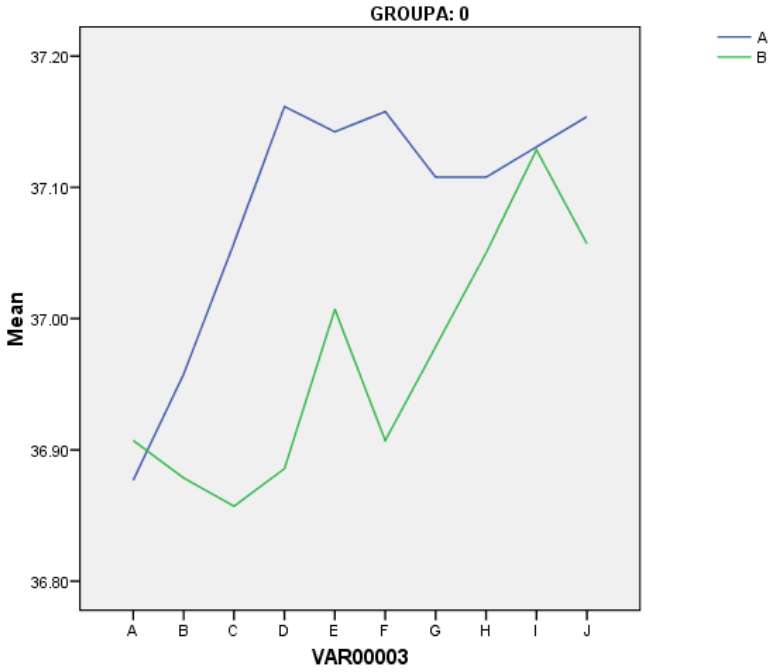
INTRODUCTION: Hypothermia is known risk factor for neonatal mortality during first week of life. Immediately after birth newborns are most vulnerable to hypothermia.
PURPOSE: We estimated influence of Early skin-to-skin contact (SSC) shortly after birth on incidence of hypothermia in healthy newborn baby within 48 hr of life.
MATERIAL: We recruited newborns with weight >1.8kg, delivered vaginally in our hospital without maternal complications. Babies were randomized into Early SSC (Intervention group) and Routine neonatal care (control group). SSC group babies were kept in SSC with mother beginning 30 min to 1 hour after birth, to receive SSC for first 24 hr with minimal interruption. Temperature and heart rate of baby were recorded before starting of SSC (30mins), 1hr, 2hr, 3hr, 4hr, 5hr, 6hr, 12hr, 24hr and 48 hours of life. Same measurements were done for controls.
METHOD: Randomized Control Trial of 100 neonates. Interim analysis of 40 neonates is presented.
RESULT: The mean (SD) BW was 2578.78(416.23) grams whereas mean (SD) GA was 37.63(1.35) weeks. The baseline heart rate and temperature was in normal range for all neonates. SSC group had 26 participants whereas controls had 14. Baseline characteristics of 2 groups were similar. There were 9 episodes of hypothermia (temperature <36.5) in controls and no hypothermia was observed in SSC group. All neonates in SSC group attained normal temperature within 3 hours and maintained it while controls required almost 12 hours to reach normal temperature after initial fluctuations. Heart rates were not different in the two groups.
CONCLUSION: Early SSC for 24 hr prevents hypothermia in newborns even for the next 24 hr when not given. Early SSC needs to be aggressively promoted to achieve decrease in neonatal deaths.



NEPHROLOGY

OP012

USEFULNESS OF SERUM PROCALCITONIN LEVEL IN PREDICTION OF VESICOURETERAL REFLUX IN PEDIATRIC URINARY TRACT INFECTION

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Introduction: Procalcitonin (PCT) is a sensitive biomarker for bacterial infections. Recent studies show a correlation between serum PCT level and renal parenchymal scarring and high grade vesicoureteral reflux (VUR).
Purpose: The aim of this study is to evaluate the predictive value of procalcitonin in diagnosis of VUR in children with febrile urinary tract infection (UTI). Material: One hundred and eight children at the age of 2 month to 12 years who admitted in Children's Hospital of Tabriz/Iran with febrile UTI were evaluated.
Methods: Serum PCT was measured by chemoluminometric assay before initiation of antibiotics. Standard voiding cystourethrography (VCUG) was performed in all children as gold standard for detection of VUR. Sensitivity and specificity of high PCT level was evaluated using roc curve.
Results: Forty four percent of patients had VUR at least in one kidney. Grading of reflux were grade 1-2 in 12 patients (11.1%), grade 3 in 16 patients (14.8%) and grade 4-5 in 20 patients (18.5%). Renal DMSA scan revealed scars in 49 (45.4%) patients. Range of PCT level was 0.05-13.6 ng/ml. Mean PCT level increased significantly with increasing the grading of reflux ($P<0.001$). Considering VCUG results as negative or positive, Roc curve showed a sensitivity of 97% and specificity of 75% at PCT level of 0.59 ng/ml. There was a direct significant correlation between PCT level and leukocytosis ($rs=0.72$, $P<0.001$) and ESR ($rs= 0.54$, $P<0.001$). Mean PCT level was significantly higher in patients with positive CRP in comparison with patients with negative CRP.
Conclusion: PCT level higher than 0.59 ng/ml may be used for predicting of all grades of VUR in children with febrile UTI and low PCT level may be used for avoidance of unnecessary VCUG in some low risk patients.

POSTER PRESENTATIONS

ADOLESCENT MEDICINE

PP001

EFFECTIVENESS OF A DUTCH OUTPATIENT PREVENTION-INTERVENTION PROGRAMME AFTER ADMITTANCE FOR ALCOHOL INTOXICATION

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Introduction: Alcohol abuse, particularly binge-drinking, is associated with neurocognitive brain damage, school- and psychosocial problems. Despite the known dangers and increased media attention, numbers of admitted children are still increasing in the Netherlands. Alcohol has become the most dangerous and widely used drugs amongst adolescents. In the Netherlands a multidisciplinary outpatient department prevention-intervention programme was developed.
Purpose: To educate, screen and prevent relapse.
Material: In January 2009 a protocol was implemented in four major non-academic hospitals in the Netherlands. Screening for underlying psychosocial, and cognitive problems was done by the paediatrician and child-psychologist. Information on alcohol use was given to adolescents and their parents.
Methods: Data was retrospectively and anonymously collected from medical records for the years 2009 and 2010. We included patients < 18 years old, with alcohol intoxication and reduced consciousness as main reason for admittance.
Results: A total of 350 children were invited to the program, of which 204 were screened. Average age was 15,6 years, 48% were girls, average ethanol concentration was 1,90 g/L. Of the < 16-year-old adolescents 61% stopped drinking, and 88,5% stopped binge-drinking. In 82,5% parents had implemented specific alcohol rules at follow-up. In 41,2% there were psychosocial problems, and in 34,3% school problems.
Conclusion: A prevention-intervention programme for adolescents admitted with alcohol intoxication is effective, in particular for binge-drinking. Parents play an important role in their children's alcohol use, and were effectively educated as well. Because of its success the central government decided to support a nationwide implementation of this programme.

PP002

SNOOZE THE ALARM OR SURF THE WEB?: DAILY INTERNET USE BEHAVIORS AMONG COLLEGE STUDENTS

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Introduction: Internet use is an integral part of college life. While some research suggests frequent use may interfere with sleep and academics, little is known about college students' daily internet behaviors.
Purpose: The purpose of this study was to examine daily internet use behaviors among the college population.
Materials: None.
Methods: Students at one large, US state university completed in-person interviews where they were asked to recount details of their internet use on a recent "typical" day. Log on time, duration of log on, device used, and websites visited were recorded for each time the participant logged on to the internet that day.
Results: A total of 72 students participated. The participants were 18 or 19 years old, 55.6% male, 91.7% Caucasian and spent an average of 3.1 hours (SD=2.3) online throughout the day. Participants logged on an average of 4.1 times per day (SD=1.9, Range: 1-10) for an average of 46.2 minutes (SD=64.2, Range: 0.5-480) per log on event. Time between log ons was 3.80 hours (SD=2.25) and a majority logged on with either a laptop or phone. Participants initial log ons were as early as 6:30AM and as late as 2:00AM. Most participants initially logged on between 8-9:59AM (36.11%) and last logged on between 10-11:59PM (36.1%). The most commonly viewed websites for first and last log on were Facebook, email and school related sites. There were no gender differences in use behaviors.
Conclusions: College students logged on frequently for long durations throughout the day. Given that many of these log ons involved Facebook, internet use may interfere with necessary activities like sleep or academics.

PP003

FRIENDING ADOLESCENTS ON SOCIAL NETWORKING SITES: A NOVEL RESEARCH TOOL

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Introduction: Social networking sites are increasingly used for research. As users of social networking sites trend towards increased online privacy, the friending function of these websites may be a useful research tool.
Purpose: To report on two studies examining the feasibility of friending adolescents on social networking sites for research purposes.
Materials: None.
Methods: Study 1 took place on www.MySpace.com. Public profiles belonging to 18-year-old adolescents were sent a friend request from a physician who was unknown to the recipient. Study 2 took place on www.Facebook.com. College freshmen from two large US universities who were already enrolled in a research study received a friend request from a known researcher's profile. Acceptance and retention rates of friend requests were calculated in both studies.
Results: Study 1: 127 participants received a friend request; they were 18 years old, 62.2% male and 51.8% Caucasian. The friend request acceptance rate was 49.6%. After 9 months, 76% maintained their online friendship with the study profile, 12.7% defriended the study profile and 11% deactivated their profile. Study 2: 338 participants received a friend request; they were 18 years old (SD=0.1), 56.5% female and 75.15% Caucasian. The friend request acceptance rate was 99.7%. Over 12 months, 3.3% defriended the study profile and 4.1% deactivated their profile. Many of these actions were temporary as the overall friendship retention rate after 12 months was 96.1%.
Conclusion: The friending function on social networking sites is a feasible tool for interacting with adolescent research participants. Differences in these two studies suggest friending teens from a familiar profile may be more effective for retaining online friendship with research participants.

PP004

CYBERBULLYING AMONG COLLEGE STUDENTS

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Introduction: Bullying remains an important public health problem. However, some of this behavior has migrated to an online platform. Cyberbullying is still not well understood, especially among older adolescents and college students.
Purpose: The purpose of this study was to explore the phenomenon of cyberbullying among diverse groups of college students.
Materials: None.
Methods: Participants were recruited through purposeful sampling during the 2011-2012 academic year from a large US Midwestern university. Eligible participants were current undergraduate students between 18 and 22 years of age. A trained facilitator conducted semi-structured focus groups. Questions were designed to explore students' views and experiences with cyberbullying. All data was transcribed and analyzed manually by three researchers using the constant comparative method.
Results: A total of 29 students participated in 4 focus groups. The sample was 69% female, 90% Caucasian, average age was 19.5 (SD=1.12) years, and participants came from a wide range of majors and extracurricular activities. At the start of nearly every focus group, college students began the discussion indicating that they consider cyberbullying to be largely restricted to middle and high school students. Once prompted, however, students indicated that these behaviors often occur in college. Commonly reported examples included hacking into others' online profiles, uploading embarrassing pictures without consent, and posting hurtful comments.
Conclusions: College students underestimate "cyberbullying" as a problem. While college students engage in these harmful behaviors, many do not believe that their actions are serious or punishable. Future work should focus on exploring prevalence and avenues for prevention.

P005

ANOREXIA NERVOSA – THE REALITY OF AN ADOLESCENCE UNIT IN VISEU, PORTUGAL

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Introduction: Anorexia nervosa (AN) is a psychiatric illness challenging for all health professionals, teenagers and families. It´s characterized by distorted body image, intense fear of weight gain and weight loss, joining the numerous complications directly related to calorie restriction and weight loss.
Objectives: To characterize the hospitalizations for AN in the Adolescence Unit of Tondela-Viseu Hospital Center.
Methods: Retrospective descriptive study, conducted by consulting clinical files of adolescents aged 10 or more years, hospitalized for AN, between January 2006 and December 2011.
Results: During this period, 29 admissions were made for AN, predominantly with restrictive type. Most were female (93%) with a mean age of 14.6 years. Predominantly, teens were referred from our outpatient unit (60%). 59% were hospitalized by difficulty of controlling the disease in outpatients and 24% had organic complications. At admission: 40% had a body mass index below the 5th percentile for age, mean weight was 44.2kg (minimum 27.6Kg) and average heart rate of 57bpm. The average length of stay was 25 days (maximum 96 days), with an average of 2Kg weight gain during hospitalization. At discharge, all youth were referred to an adolescent and child psychiatry consult and one adolescent was transferred to a Central Hospital.
Conclusion: Incidence of AN has been recently increasing, mainly affecting teenagers and young adults. Therefore, more and more pediatricians should be aware of this problem. Successful treatment relies on early diagnosis and guidance and multidisciplinary approach involving nutritional rehabilitation/weight gain, treatment of complications and psychotherapy. The hospitalization should be a complement to the approach in the outpatient clinic.

PP006

FACEBOOK DEACTIVATION IN COLLEGE FEMALES: AN EXPERIMENTAL STUDY

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Objective: For college students Facebook (FB) use is ubiquitous and can be time-consuming. This may become problematic affecting relationships, mood and functioning; yet, people hesitate to temporarily abstain from FB. Furthermore, general recommendations to minimize deleterious effects on daily life remain unknown.
Purpose: We aim to investigate how students react to a one-week break from FB with regards to mental health.
Material: None
Methods: Undergraduate females ages 18-23 from a U.S. public university were asked to deactivate from FB for one week. Participants described their feelings about the anticipated and actual experience, and reported activities that replaced FB use. Anxiety (GAD), depression (PHQ-9), and stress (PSS) were measured at 3 time points: before, during and after deactivation. Analysis included qualitative analyses and repeated measures ANOVA.
Results: 19 females completed the study. Participants predicted anxiety would increase during deactivation, however scores for anxiety and depression decreased significantly from baseline during deactivation and remained below baseline after reactivation: GAD pre 4.8, during 3.4, post 3.9 (p=<.001); PHQ-9 pre 4.6, during 2.8, post 3.2 (p=.001). Stress scores decreased during deactivation, but not significantly: PSS pre 14.4, during 12.2, post 11.5 (p=.1). In 5/19 participants FB time was replaced with social and productive activities and in 8/19 FB time was replaced with both Internet time and social and productive activities.
Conclusion: Results indicated anxiety and depression levels decreased with FB deactivation, despite participant predictions. Brief breaks from FB may improve short-term mental health and could be investigated as a possible intervention for problematic Internet use.

PP007

CATATONIA AFTER THE "TRIP"

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Introduction: Catatonia is a syndrome characterized by immobility that can be almost absolute with apparent unresponsiveness to external stimuli. It may be due to an underlying psychiatric, neurologic or medical disorder. Differential diagnosis is difficult and includes diffuse encephalopathy, non-convulsive status epilepticus, malignant neuroleptic syndrome, among others. In acute and severe presentations PICU admission is appropriate.
Case report: We present the case of a 14 year-old teenager admitted to the Pediatric Emergency Department with severe psychomotor agitation and self and hetero-aggression, followed by progressive depression of consciousness. Other history facts were unknown. He was unresponsive to external stimuli. Remaining physical exam was normal. Creatine kinase 10600U/L. All other blood and urine tests were negative, including the search for alcohol and substance abuse. Cerebral CT scan normal. During a short period of consciousness he reported having smoked a non-specified substance. He was transferred to the PICU. Lumbar puncture, cerebral MRI and EEG: normal. During hospitalization he had 2 episodes of psychomotor agitation and self and hetero-aggression that resolved with haloperidol, olanzapine and midazolam. Consumption of mephedrone ("Hell") was confirmed. He remained in a pseudo-comatose state with resistance to eyes and mouth opening and conjugated roving eyes movements for 6 days. The diagnosis of catatonia was considered, lorazepam was started, with a complete recovery 12 hours later. Afterwards he presented isolated episodes of hypnopompic hallucinations/psychotic activity.
Discussion: This case illustrates a severe manifestation, secondary to smoking a substance, easily acquired by Portuguese teenagers, given the free sale and low cost.

PP008

ROUTINE LIPID SCREENING IN CHILDREN AGED 9 TO 11 IN A PRIVATE PRACTICE CLINIC

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[2]*Paediatric Resident, Clinics Hospital, San Lorenzo, Paraguay*

Introduction: The expert panel on integrated guidelines for cardiovascular health and risk reduction in children and adolescents strongly recommends universal lipid screening between 9 and 11 years old because abnormal lipid levels in childhood are associated with increased evidence of atherosclerosis and, the early identification and control of dyslipidemia throughout youth and into adulthood will substantially reduce clinical cardiovascular disease risk beginning in young adult life.
Purpose: The purpose of this study is to evaluate the results of the lipid screening in this range of age and demonstrate its importance.
Materials: This study enrolled 169 children aged 9 to 11 years old who attended health child medical screening and were asked for laboratory measurements of lipid profile. Risk values taken into account were those recommended by the aforementioned panel: triglyceride ≥100mg/dL in <10 years old and ≥130mg/dL in >10 years old; non-HDL-cholesterol ≥145mg/dL; HDL-cholesterol <40mg/dL and LDL-cholesterol ≥130mg/dL.
Methods: Prospective, descriptive, cross-sectional study, non-probability sampling of consecutive cases. Data were expressed in percentages.
Results: The 30,2% of the patients showed an altered lipid profile. Elevated tryclicerides was the most common type of dyslipidemia, detected among 17,2% of the children, followed by elevated non-HDL-cholesterol found in 10,7% and low HDL cholesterol found in 9,5% of them.
Conclusion: Considering the high prevalence of dyslipidemia and undesirable lipid profiles in schoolchildren, it is strongly recommended to search for the underlying factors such as physical activities, eating habits, dietary patterns and screen time watching and detect all these factors as soon as possible.

ALLERGY-IMMUNOLOGY

PP009

ALLERGIC RHINITIS, BRONCHIAL ASTHMA, ATOPIC DERMATITIS

Nino Adamia [1]; Ketevan Barabadze [2]; Nona Katamadze [3]; Ivane Chkhaidze [1]; Irma Ubiria [1]; Darejan Khachapuridze [4]; Lali Saginadze [5]; Vakhtang Zerekidze [5]; Ketevan Gotsadze [2]; Mariam Ghughunishvili [1]; Tinatin Gigauri [6]; Mariam Kakhiani [4]
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[5]*Paghava Institute of Pediatrics, Republic of Georgia;*
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Goal of the work: Goal of our work included study of prevalence of allergic diseases and risk factors in the children's populations of Tbilisi, Kutaisi and Batumi, regarding geographical climatic conditions.
Materials and methods of research: Group to be studied included 7989 children from 3 to 16 (girls – 58.4%; boys – 41.6%). At the first stage of epidemiological study included screening of 7989 children through questionnaire with further specification through telephone interviews. On the second stage of epidemiological studies part of the patients with allergic diseases (928 children) were subjected to clinical-allergological study. At the same stage external respiratory function was studied, general IgE level in the blood and prick-testing was conducted, study of external respiration function. At the last stage of epidemiological and clinical-laboratory study mathematical-statistical data processing was provided by means of software SPSS/V12.5 (Statistical Package for Social Sciences).
Results: Screening showed general characteristics of the studied population. At the second stage of clinical studies, on the basis of prick-testing, average IgE, in our case, was 3-5 times greater than normal level. Results of study of allergens showed sensibilization to domestic dust (D.F. and D.P.) (64, 43%) ($p<0.05$). In 25.46% of cases there was stated sensibilization conditioned by cat and dog epidermal allergens
Conclusion: In development of allergic diseases share of controllable risk factors is quite high and this could provide basis for development of targeted and effective prevention measures in children's population.

PP010

APOPTOSIS MARKERS OF IMMUNE CELLS AT CHILDREN WITH BRONCHIAL ASTHMA (BA)

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Objective: to define clinical value of apoptosis markers of immunocompetent cells (IC) at children with an atopic bronchial asthma.
Materials and methods: In whey of blood of 96 children at the age from 5 till 16 years (15 healthy and 81 with an BA) by means of enzym-linked immunosorbent assay defined levels of the markers modulating processes of apoptosis: sCD30, sCD40, sCD95 (sAPO-1/FAS), soluble ligand FAS (sFASL), ligand TRAIL (Apo2L), enzyme Ñaspase-1/ICE (C1) and protein Annexin V (AV).
Results: Authentic differences of concentration of the investigated indicators at children with BA from their referential levels (ð<0,05), the most expressed are established at a heavy asthma, and also at an accompanying virus and bacterial infection. The revealed increase of concentration sCD30, sCD95, decrease sCD40, sFASL, Apo2L, Ñ1, AV at children with an BA a testify to process changes as FAS - and TRAIL-mediated of apoptosis IC at an BA, causing expressiveness and synchronization of allergic inflammatory process, and also development of secondary immune insufficiency in these children. The tendency to increase levels of activations markers of apoptosis Apo2L, sFASL, Ñ1, AV and to decrease in the maintenance of its inhibitions marker sCD95 after inhalation glucocorticosteroids or immunotherapy.
Conclusion: The level estimation soluble markers of activation and apoptosis IC can be used as additional diagnostic and prognostic criterion of weight and expressiveness of an atopic BA at children, to serve as a method of immunological monitoring and prognostic criterion of selection of patients for immunotherapy carrying out, and also an additional substantiation of timely and adequate appointment of anti-inflammatory therapy for the purpose of control achievement over BA symptoms.

CARDIOLOGY

PP011

CLINICAL AND SOME LABORATORY FINDINGS IN CHILD AND ADOLESCENTS WITH INFECTIVE ENDOCARDITIS AS A PREDICTORS OF MORTALITY

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Background: Despite of progress in the diagnostic and treatment of infective endocarditis (IE), overall mortality remains high. Prediction of individual risk mortality still extremely difficult and object of investigations.
Purpose: To find out clinical and laboratory markers that could be associated with fatal outcome in patients suffering from IE. Materials: 161 patients (age from 6 month -18 years old) with acute and subacute IE strictly fulfilled Duke criteria was studied from 1998 till 2011 years.
Method: The multivariative analysis was performed in order to find out factors, symptoms and laboratory's data associated with mortality was studied. Clinical, echocardiographic, bacteriological and haemostasiological parameter was estimated.
Results: Overall mortality was 39% and 8% population of acute and subacute IE accordingly. Leading reason of death – with multiple organ (firstly renal) failure (35%), septic shock (15%) ruptured intracranial embolization of brain vessels result in rupture aneurisms (50%). Independent markers of bad outcome was S. aureus as a causative pathogen and fact of intravenously drug –dependent (in-hospital mortality 60%). Multiple valve damage and localization vegetation on right leaflet mitral valve, size vegetation more than 10 mm, movable peduncles with combination of lowering level of fibrinogen and platelets and dramatically growing level of D-dimers (4 times and more) was associated with mortality 63%.
Conclusion: Intravenously drug using, S.aureus etiology, size, localization vegetation with character of them, renal damage and statement and dynamic of some parameter of haemostasis system as predictor of mortality of IE-patients.

PP012

REASON FOR REFERRAL: CARDIAC MURMUR

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Introduction: In children, a heart murmur is detected frequently. Despite this, most heart murmurs in this age group are considered innocent, not representing any pathological entity. However, it can be the only manifestation of heart disease. They are a common cause of referral, and it is therefore important to be aware the warning signs when evaluating a child with a heart murmur.
Purpose: Analyze the population referred to a Pediatric Cardiology Department with heart murmur.
Material and Methods: Retrospective analyses of children referred for cardiac murmur between January to March 2012 assessing demographic data and clinical history records, physical examination findings and the results of undertaken tests. The statistical validation was performed using the SPSS ® version 15.0 program.
Results: During the period reviewed, there were a total of 743 first consultations, in which 197 (26.5%) a heart murmur was the reason for referral. 51.3% were male and the majority (about 70%) were younger than 2 years. In almost all of the children the murmur was described as innocent and there were no other significant findings on examination. In about one third of cases anomalies were found with echocardiographic assessment. A significant relationship between non-innocent murmur and findings on physical examination and echocardiography pattern were found. There was also a positive correlation between children less than 1 year of age and ultrasound findings.
Discussion: Cardiac murmurs in children are a frequent reason for referral. Most murmurs are a benign condition and the clinical features allow for differentiation between an innocent and a pathological murmur. Changes found on physical examination and younger age are warning signs required a more detailed evaluation.

PP012A

EARLY DETECTION OF LEFT VENTRICULAR DYSFUNCTION BY DOPPLER ECHOCARDIOGRAPHY AND N-TERMINAL PRO B-TYPE NATRIURETIC PEPTIDE IN CHILDREN WITH CHRONIC KIDNEY DISEASE STAGES 2-4

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Introduction. Cardiovascular abnormalities have been considered as the major risk factor limiting the life expectancy of children with chronic kidney disease (CKD). Evaluation of N- terminal pro B-type natriuretic peptide (BNP) is a sensitive method for detecting left ventricular dysfunction (LVD). In patients with CKD, its use is confounded with concomitant volume overload and reduced renal excretion.
Purpose. To assess early LVD with echocardiographic parameters and BNP level in children with CKD stages 2-4. Materials. A total of 105 patients (mean age 9.8 ± 4.4 years) and 100 aged matched control subjects were included in this study.
Methods. Pulsed Doppler derived myocardial performance index (PWD-MPI) as a noninvasive index for assessing combined LV function was calculated. Systolic (sm) and early diastolic (Em) velocities of mitral annulus were measured by using tissue Doppler imaging (TDI) and E/Em ratio was calculated.
Results. The mean of GFR was 24±16 cc/min/1.73m2.The mean values of both PWD-MPI and TDI values of the patients were significantly different from those of the control subjects [PWD-MPI: 0.45±0.13 vs.0.32 ±0.03; ($p<0.003$); Em: 10.8± 2.8 vs. 2 ± 12 ($p<0.001$); Sm: 6.8±1.9 vs. 7.2 ±1 ($p<0.001$), respectively]. High LV filling pressure (E/Em>10) were detected in a total of 28(26.7%) patients. The mean value of BNP (2239 ±720 pg/ml) was increased above reference range levels. Its level was correlated with severity of the renal impairment($r =-0.29$). BNP was significantly correlated with high E/Em ratio ($r=0.36$). There was a negative correlation between BNP levels and LV Sm velocity as a marker of ventricular longitudinal systolic function($r= -0.47$).
Conclusions. Non-invasive diagnosis of LVD can be performed by measurement of PWD- MPI. Elevated level of BNP is related to LV dysfunction. BNP is a useful adjunct in early diagnosis of LVD in patients with CKD stages 2-4.

CHILDREN'S ENVIRONMENTAL HEALTH

PP013

CORRELATION BETWEEN LEAD CONCENTRATION IN BREAST MILK AND IN ONE MONTH ¡ S BREAST FED INFANT BLOOD

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Introduction: Lead is one of the most health threatening factors in the modern world because of its toxic effects on the vulnerable fetuses, infants and young children.
Objective: The purpose of this report is to provide some evidence on the exposure to lead of nursing one month infants via breast milk in the population of west of Athens.
Material: 150 women aged 15-40 years and their infants.
Results: Lead concentration in cord blood, in infant's blood and in breast milk was not correlated to newborn's sex, way of delivery, birth weight, number of birth, smoking habits and mother's age. There was an important correlation between ferrum and calcium intake during pregnancy and lactation and the concentration of lead in infant's blood. Lead concentration was lower in infants whose mothers took ferrum and calcium during both pregnancy and lactation than in infants whose mothers received ferrum or/and calcium only during gestation or only during lactation or received any at all. Another important finding was that lead concentration in infant's blood was 1,292 times higher in newborns coming from families living in urban areas than in rural environments, while none correlation was found between lead concentration in umbilical cord blood, in infant's blood and in breast milk and the age of the residence (new or old house).
Discussion: fetuses can be exposed to lead during gestation this way of exposure can be minimized if pregnant women take ferrum and calcium supplements during pregnancy.

PP014

RISK FACTORS FOR POISONING IN CHILDREN FROM BIHOR COUNTY, ROMANIA

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Introduction: Poisoning rate in children changed significantly.
Purpose: To assess risk factors for poisoning in children.
Material and method: All intoxicated children were submitted to retrospective cohort study and evaluated for risk factors by odds ratio (OR).
Results: They were admitted 132 poisoned children. Accidental poisoning is more frequent than intentional one ($p<0.0001$). Accidental poisoning is more common among toddler (OR 1.6) boys (OR 2.4) from countryside (OR 2.4), medium economical level families (OR 2.5) with graduated parents (OR 2.5). It is produced with mushrooms (OR 12), household corrosive substances (OR 27). Intentional poisoning is noted mostly in teenager girls (OR 2.6) from urban area (OR 2.4) poor families (OR 3). They use neurological drugs (OR 17), multiple drug ingestion (OR 25).
Conclusion: Risk factors for intoxication depend on poisoning way.

PP015

CORROSIVE POISONING PRESENTING SEVERE RESPIRATORY FINDINGS

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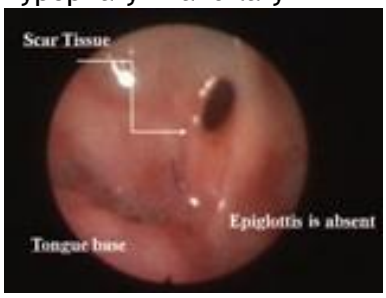
Introduction: Munchausen syndrome by proxy (MSBP) has been defined as a severe form of child abuse characterized by simulation, fabrication and induction of symptoms by a caregiver. The purpose of this article is to report a rare MSBP case representing with severe respiratory symptoms due to possible corrosive substance.
Case: A twelve-year-old boy was admitted with diagnosis of very severe pneumonia. On follow-up, dysphonia and dysphagia were observed unexpectedly. Rigid stricture in proximal section of the esophagus and possible diverticulum on the left side was detected in upper GI-series

Laryngoscopy showed that epiglottis was adherent to the posterior wall of the pharynx, closing hypopharynx and larynx



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The patient was operated on and epiglottis synechia was opened endoscopically. Tracheotomy was performed. At the end of the 2nd month of hospitalization, gastrostomy was done surgically. Possibility of intentional or unintentional poisoning by caustic or similar substances was denied conclusively by parents. After evaluations the clinical picture could not be explained with a medical disorder. All physicians who followed the child up shared the opinion that this could be caused by a corrosive material ingestion. A forensic report was prepared and the case was reported to Child Protection Services and prosecutor's office.
Conclusions: MSBP is difficult to diagnose because of varying symptoms. In order to protect abused children and prevent future severe outcomes, pediatricians and other health care providers must be aware of the possibility of MSBP when faced with seemingly inexplicable findings or treatment findings or treatment failures.

PP016

ACUTE POISONING IN PEDIATRIC EMERGENCY DEPARTMENT – WHAT SHOULD WE LEARN?

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Introduction: Pediatric poisoning is common and potential fatal. Surveillance regarding accidental and suicidal exposure, in each country, is needed in order to implement preventive measures.
Purpose: Characterize acute poisoning events from children observed in the emergency department (ED).
Material: Clinical information retrieved from emergency and admission charts from children aged 0-18 years observed in the ED.
Methods: Retrospective study, conducted from January 2009 to June 2012, with analysis of demographical data, clinical presentation, time and site of exposure, agents and workup of acute intoxications.
Results: A total of 154 children were observed, 80 girls and 74 boys. Preschool children contributed to 46.1% of the episodes, school-age children to 14.3% and teenagers to 39.6%. In preschool and school-age, drugs were the most frequent agents involved (70,4% and 59,1% respectively), among teenagers alcohol intoxication accounted for 50,8% events. 55,8% of children were admitted for a 24h-period and 5,8% required admission for over this period. In teenager group, 18 cases (29,5%) corresponded to suicidal attempts (88,9% were girls). There were no fatal cases.
Conclusion: Acute poisoning is responsible for considerable morbidity among children. Psychotropic drugs and alcohol were the most common agents of poisoning, reflecting easy access to these agents at home. Prevention is therefore paramount and could start by limiting access to caregivers' everyday medication and alcohol at home. Informing parents about the serious risks associated with acute intoxication is therefore crucial. As expected, teenagers were mostly involved in experimental behaviors. Pediatrician should also be aware of the high incidence of suicidal attempts in this group.

DERMATOLOGY

PP017

RASH AS CAUSE OF ADMISSION IN PAEDIATRIC OUTPATIENT CLINICS

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Introduction: Rash is a manifestation of many and different diseases. Purpose: Recording incidents that were presented in the outpatient department due to the appearance of rush. Material: The material of our study were 189 children aged one month to 14 years, 112 boys (59.3%) and 77 girls (40.7%) with rash.
Methods: A retrospective study of the records of the outpatient clinic for the year 2011 was made. The clinical presentation of the rash, the cause and the treatment were studied.
Results: In 19.6% the cause of the rash was infectious (hemorrhagic, scarlet chickenpox, herpes, impetigo), in 24% the rash was allergic / urticarial, while in 2.6% the cause was drug use. Bites were found in 20.1% of cases, allergic purpura in 1%. Parasitic prurigo was recorded in 25 cases (13.2%), atopic dermatitis / eczema / dermatitis in 18 cases (9.5%). Heat rash and intertrigo were 5.8% of cases. The cause of the rash remained unspecified in 8 cases (4.2%). The majority of cases occurred during June-August, with the months of April-May to follow in frequency. The treatment that mainly administered was antihistamines (2nd and 3rd generation combination in> 60%) and in about 5% steroids were co administered. Hospitalization for observation and treatment was needed in 5.3% of the cases.
Conclusions: Rash is frequent cause leading children to the pediatric outpatient clinic, which frightens parents and mobilizes pediatricians. However few are the cases that require investigation or is life threatening.

PP018

THERE IS SOMETHING ELSE BEYOND SKIN LESIONS…

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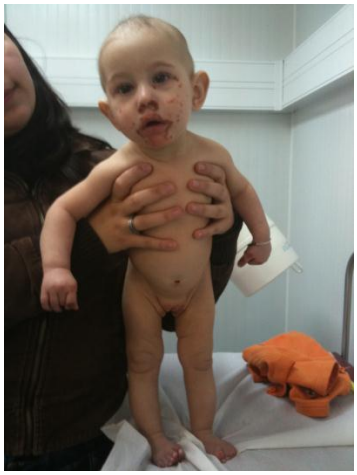
Introduction: Acrodermatitis enteropathica (AE) is a rare, autosomal recessive condition which causes structural modifications on the carrying Zinc (Zn) protein, leading to its poor absorption. Zn is a rudimentary element that acts as a co-factor to numerous enzymes.
The classic symptoms associated to this deficiency are acral and periorificial dermatitis, alopecia and diarrhea.
We report a 8-month-old female,no consanguinity between the parents and without any known family history of Zn deficiency.
Exclusively breast fed until 3 months old, time when the feeding was diversified. The maternal milk was given until the child was 6 months old. Internal admission at 5 months old due to erythematous exudative lesions on the diaper area suggesting a bacterial superinfection and failure to thrive crossed with percentiles (P50/P5).
Internal admission at 7 months due to skin lesion and poor poderal progression (P3), repercuted on the stature (P25-10). On physical examination were visible erythematous exudative lesions on the perioral, nasal and diaper area, assuming a dryed appearance and with scale on hands and foot, thinning and weak hair and acute media otitis bilaterally.

Admission was made for a immune deficiency study. The decreased serum Zn dosing (35,5ug/dL) stands out from the analytic evaluation. The diagnosis for AE was made and the supplementation of elemental Zn 3mg/Kg/day, from which was visible a clinical improvement from the 7th therapeutic day.
The genetic study revealed a c.192+19G>A mutation in homozygosity on the gen SLC39A4. Conclusion AE is a rare condition with severe systemical implications such as immunodeficiency and failure to failure to thrive.



The precocious diagnosis important considering that is essential to start the therapeutic zinc supplement.

PP019

PROPRANOLOL IN THE TREATMENT OF SEVERE INFANTILE HEMANGIOMA: A REVIEW OF SIX CASES

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[3]*Pediatrics Department, Hospital de Braga, Portugal*

Introduction: Infantile hemangiomas (IH) are the most common vascular tumors in children. Despite their benign self-limiting nature they can cause complications such as ulceration, significant functional impairment or disfigurement. Propranolol is a non-selective beta-blocker and several recent studies have shown that it's effective in controlling the growth of severe IH.
Purpose: To share our experience with the use of propranolol in severe IH and to evaluate its efficacy. Material and Methods: Patients who presented severe IH were prospectively enrolled in this study since November 2010. All subjects underwent treatment with propranolol and had periodic evaluations.
Results: Electrocardiogram and echocardiography were carried out in all patients before beginning treatment. Initiation of therapy was conducted during a 48-hour hospitalization to monitor vital signs and blood glucose levels. Propranolol was given orally every 8 hours, with an initial daily dose of 0.16mg/kg, with gradual increase up to a maximum daily dose of 2mg/kg. Six female patients were enrolled in this study, aged 6 days to 3 years. Reasons for treatment with propranolol were anatomic location, ulceration and/or disfigurement. No adverse effects were recorded, including bradycardia, hypotension or hypoglycemia. Only one patient completed the treatment, to date. Significant improvement was noted in 5 cases, regarding whitening and decrease in lesion volume.
Conclusion: Propranolol appears to be a promising therapeutic modality in the management of proliferative phase of complicated IH. Significant improvement was observed in the majority of patients and no adverse effects were noted. However, large multicenter well designed studies to confirm the safety and efficacy of propranolol are needed.

ENDOCRINOLOGY

PP020

INVESTIGATION OF THE GROWTH HORMONE REPLACEMENT THERAPY FOR METABOLIC CHANGES AND RENAL FUNCTION IN JAPANESE IDIOPATHIC SHORT STATURE CHILDREN WITH GROWTH HORMONE DEFICIENCY

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Introduction: Growth hormone (GH) plays significant role in the lipid metabolism. In this study we focused metabolic benefits of GH therapy in idiopathic GH deficiency (GHD), renal functions and body composition.
Material: The study population comprised 78 idiopathic short stature children (53 boys and 25 girls) with GHD without any other underlying disorder. They follow up including blood exam at least 3years after starting GH replacement therapy in pediatric department of Hyogo college of medicine. Mean calendar age was 7.8¤}3.4 years old and mean standard deviation score for standard hight was -2.53¤}0.68 at start.
Methods: They must examine serum total cholesterol(TC), high denstity lipoprotein cholesterol (HDL-C),¤@triglyceride, renal function(blood urine nitrogen (BUN) and creatinine), body mass index (BMI), percentage for standard body weight and body fat percentage at start of GH replacement therapy. Blood exam was done after 12 months, 24months and 36months.
Results: TC shows significantly decrease after 24 months. HDL-C increase. TG shows no significant change during 3 years. BUN significantly decrease after 1 month. Creatinine shows significant increase after 12 months. BUN / Creatinine ratio shows decrease after 1 month. BMI increase significantly after 12 months. Percentage for Japanese standard body weight is also increase. Body fat percentage is significantly decrease after 12 months.($P<0.001$)
Conclusion: Regardress of increase of BMI, body fat percentage is significantly decreased. Increase of creatinine may relevant to increase of muscle. GH replacement therapy is assumable not only to lipid metabolism but also muscle anabolic process. As GH replacement therapy is a long term treatment in growing phase, we should be more careful for the effects and usage.

PP021

EXERCISE IN ADOLESCENTS WITH TYPE 1 DIABETES MELLITUS

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Purpose: To characterize exercise performed by adolescents with type 1 Diabetes Mellitus (T1DM), evaluate self-monitoring and management and determine its impact on metabolic control. Material and **Methods:** Adolescents with T1DM for at least 3 months were recruited during outpatient appointment. Time spent exercising and type of exercise performed, self-monitoring and management data were collected by a questionnaire. Regular exercise (RE) was defined as exercise performed at least once a week for 30 minutes outside school. Clinical information was reviewed for BMI, blood pressure, HbA1c value and lipid profile. Statistical analysis was done using SPSS 19th ($p<0,05$).
Results: Complete data was available for 51 adolescents. Around 56,9% did RE 2,5+/-1,4 times weekly, leisure activities and competitive sports in 73,9% and 26,1%, respectively. Frequency and type of RE didn't correlate with BMI, blood pressure, HbA1c value or lipid profile. However, knowledge about management according to blood glucose levels before exercise was associated with lower HbA1c values ($p=0,046$). Monitorization of blood glucose levels was always/many times performed by 51,0% before, 17,6% during and 47,1% after exercise. Rapid acting insulin dosage was always/many times reduced in 64,7% before exercise. Long acting insulin dosage was always/many times reduced in 54,9% the night after exercise. Around 98,0% believed that exercise helped to control T1DM and 64,7% that contributed to their hypoglycemia episodes.
Conclusions: Only 56,9% adolescents with T1DM did RE. Frequency and type of RE didn't influence metabolic control. Knowledge about management according to blood glucose levels before exercise was associated with a better glycemic control, reaffirming the vital role of education in T1DM.

PP022

A NOVEL MUTATION IN GCK GENE IN A PORTUGUESE FAMILY WITH MODY TYPE 2

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Introduction: Maturity Onset Diabetes of the Young (MODY) is a genetically heterogeneous form of diabetes mellitus, with autosomal dominant inheritance. It accounts for 2–5% of all diabetes cases. Glucokinase-MODY (MODY type 2) is the second most frequent form, which has been shown to be the result of mutations in the glucokinase (GCK) gene. Mostly presents with mild hyperglycemia and usually, no diabetes related complications occur.
Case report: A 9 year-old female was admitted in Pediatric Endocrinology consultation for the evaluation of fasting hyperglycemia. Despite obesity, with body mass index 28kg/m2 (P>95), her physic examination had no other abnormalities. Exams showed a 6.3% Hemoglobin A1c, with normal standard oral glucose tolerance test, normal insulin and C-Peptide. Insulin autoantibodies and antibodies against glutamate decarboxylase were negative. She was prescribed metformin and adequate diet. Her family history was strongly positive for diabetes. The patient's mother, grandfather, great-aunt and great-grandfather on her mother's side were diagnosed with diabetes. Complete sequencing of coding exons and intron-exon boundaries of the GCK gene, carried out in the patient, identified a novel mutation c.1268T>A (p.Phe423Tyr) in exon 10 of the gene GCK in heterozygosity. Further studies revealed the same mutation in her mother and maternal grandfather.
Conclusion: Finding the same mutation in three different generations of diabetic patients, in the same family, is highly suggestive of its pathogenicity. As far as what is authors' knowledge, this is the first time it is described in the literature. Genetic study and correct classification of MODY's patients is important to predict the clinical course of the disease and to advise appropriate therapy.

PP023

FAMILIAL ISOLATED GROWTH HORMONE DEFICIENCY: A CASE REPORT

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Background: Growth hormone (GH) plays an essential role in postnatal somatic growth. The isolated GH deficiency (IGHD) is one of the uncommon causes of short stature in children with estimated incidence between 1/4000 and 1/10000 live births.
Cases report: Two brothers with IGHD are described. A 15 year-old boy born at full-term with adequate weight and length. He was admitted at Paediatric Endocrinology consultation with 13 years for short stature. Despite infantile face, his physic examination had no other abnormalities. His height was below 3rd percentile (CDC) and weight was between 25th and 50th, growth velocity was 1,5cm/year in the last year. Bone age - 7,5 years. His sister who is now 11 year-old, also was observed for short stature. She was born at full-term with adequate somatometry and also has an infantile face. His height was below 3rd percentile and weight was between 3rd and 15th, growth velocity was 2,5cm/year in the last year. Bone age - 6,5 years. The parents are unrelated and their mid height is 158cm. They have an older brother with normal stature. Both had clonidine and L-dopa stimulation tests consistent with GHD and normal hormone binding factors. Pituitary gland was unremarkable on MRI study. Treatment with growth hormone was started at the age of 13 years in the first case and at 9 years in his sister, with good response. First year growth velocity was 14,4cm/year and 7,6cm/year respectively.
Discussion: A small number of cases of GHD is familial. Reports include autosomal dominant, recessive and X-linked modes of inheritance. Since no other familial cases are known, this could be an autosomal recessive genetic disorder. We are waiting for the molecular studies. Both have good prognosis with favorable response to treatment and no side effects.

PP024

A CLINICAL STUDY OF BEHAVIORAL PROBLEMS AMONG CHILDREN WITH TYPE 1 DIABETES MELLITUS IN MINIA GOVERNORATE ,EGYPT

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Introduction: Egypt has an intermediate incidence of T1DM (5% - 9.99%) between Arab countries. Diabetes impacts the life style, personality, overall emotional & physical well being of the child. Children with a chronic disease are twice as likely as healthy children to have a psychological problem.
Purpose:to trace out the frequency of behavior disorders among children with TIDM and to correlate them with metabolic control.
Subjects and Methods: this study was a cross sectional study carried upon fifty child with T1DM who attended Diabetes outpatients' Clinic, Minia University Children's Hospital, Minia governorate. Another fifty children from the same families were taken as a control group ,age and sex matched to the diseased group.Informed consent was obtained from the guardian of every case to be enrolled in this study.All patients were subjected to: complete history taking, clinical examination, laboratory investigations and the Revised Behavior Problem Checklist (RBPC) to rate problem behavioral problems.
Results: based on RBPC ratings: the frequency of behavioral disorders was significantly higher in diabetics than the control (P=0.001).Motor excess was the commonest disorder followed by socialized aggression and attention problems. Males were more significantly affected than females as regards to conduct and socialized aggression subscales.
Conclusion: Behavioral problems were significantly presented in children with T1DM.

GASTROENTEROLOGY, NUTRITION & METABOLISM

PP025

CARDIOVASCULAR RISK IN CHILDS WITH OBESITY IN A SECONDARY CARE HOSPITAL IN SAN LUIS POTOSÍ MÉXICO

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Introduction: Childhood obesity increases the risk of cardiovascular disease in adulthood.
Purpose: To assess the CVR in the obese pediatric population, in an Hospital of secondary care.
Methods: A cross-sectional design. Alustiza scale used. The analysis was by each of the variables included in the scale:age, sex, BMI, family history, addictions, blood pressure, cholesterol.
Results: 100 medical records in 1 year. Ages 6-15 years (X = 11.17), 60% had 6-12 years of age. 52 women. Low CVR in 26%, medium in 14% and 60% higher. Had a positive history of obesity (26%), obesity plus diabetes 16%, obesity and dyslipidemia 13%. Hypertensión in 11%.The exercise was absent in all. 46 with impaired glucose. All variables were statistically significant at high cardiovascular risk correlate with X2 p <0.05.
Conclusions: Measure RCV in children is useful to prevent chronic diseases in adulthood.

PP026

HOW DO PROBIOTICS AFFECT GROWTH, QUALITY OF LIFE, AND PULMONARY EXACERBATION IN CHILDREN WITH CYSTIC FIBROSIS?

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Introduction: Patients with Cystic Fibrosis (CF) usually have abnormal intestinal microbial flora and dysregulated immune mediators due to massive exposure to antibiotics. Probiotics as immunomodulatory and anti-inflammatory substances are considered to improve both clinical and biochemical intestinal and pulmonary function in CF patients.
Purpose: To investigate the effects of probiotics on growth indicators, quality of life and pulmonary exacerbation in children with Cystic Fibrosis.
Method and Material : In a prospective, controlled clinical trial, 37 CF patients (2-12 years old) were randomly divided into two groups. 20 patients of case group were assigned to ingest probiotics as Protexin capsule, 2 per day, each containing 109 Colony Forming Unit (CFU) for 1 month while 17 patients of control group only took placebo capsules. Growth indicators including weight, height, head, and arm circumference, together with quality of life (by use of PedsQLTM4.0 questionnaire, both parent and child reports) were determined at the onset and after 3rd and 6th month of probiotic treatment. Rate of pulmonary exacerbation in case patients was also obtained during 3 months after intervention and compared to the same 3 months of the previous year. Results were analyzed using SPSS(18) using Mann-Whitney and t-tests. p<0.05 was considered significant.
Results: There was no significant difference in growth indicators between two groups after 3 and 6 months of probiotic supplementation. Significant improvement was noted in quality of life (parent report) among case patients in comparison with controls at 3rd month (p=0.01), but no significance at 6th month. Rate of pulmonary exacerbation was significantly reduced among case group (p=0.01).
Conclusion: Probiotics are considered as useful nutritional supplements on reducing number of pulmonary exacerbations and improving quality of life in patients with Cystic Fibrosis. Effects of robiotics seem to be temporary and probably continuous ingestion might have more stable improving effects on quality of life.

PP027

EVALUATION OF LIVER FUNCTION IN CHILDREN WITH DIAGNOSED CYSTIC FIBROSIS

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In children with diagnosed cystic fibrosis elevated levels of aminotransferases are observed as well as liver steatosis and cholestasis that may lead to liver cirrhosis and portal hypertension. The aim of this study was to evaluate liver function in children with diagnosed cystic fibrosis.
Patients and methods: The study involved 37 patients (14 girls - 38% and 23 boys -62%), aged from 1 month to 16 years (mean age 3.5 years) with diagnosed cystic fibrosis. In the investigated group of children we separated a subgroup of 18 patients with cystic fibrosis diagnosed at the age of 2 months during screening tests and a subgroup of older patients who were not involved in screening tests. In all the patients we measured the levels of aminotransferases, gamma-glutamyl transpeptidase, alkaline phosphatase and bilirubin; we also calculated the APRI score and performed abdominal ultrasound.
Results: Elevated levels of alanine aminotransferase were observed in 13/37 children, i.e. 35% (in 6/18 patients from the infant subgroup with cystic fibrosis diagnosed during screening tests). Elevated serum levels of aspartate aminotransferase were more frequently detected: in 23/37, i.e. 62% (only in 4 patients these values exceeded twice the normal limit). Increased GGTP concentration was observed in 8/37 children (21%). Abnormal results of the liver and bile ducts ultrasonography were obtained in 11/37 children, i.e. 30%, most often in the form of increased echogenicity and liver enlargement. The APRI score was only increased in 5 children (including 4 older children).
Conclusion: In children with cystic fibrosis a regular control of liver function parameters is necessary since the moment of diagnosis.

PP028

THE EFFECT OF TABACCO SMOKING ON THE OCCURRENCE OF INFLAMMATORY CHANGES IN THE GASTROINTESTINAL TRACT IN CHILDREN WITH ABDOMINAL PAIN

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Tabacco smoking is one of the documented factors affecting the inflammatory changes in the gastrointestinal tract but these studies mainly focuses on adult.
The aim of the study is to search for the association between passive / active tabacco smoking and changes in the mucous membrane of the esophagus and stomach in children with abdominal pain.
Patients and Methods: The study comprised 69 children (average age - 12.4 years) examined endoscopically. Parents in the questionnaire marked the fact of cigarette smoking. Verification of an interview was conducted by determining the concentration of nicotine metabolites (cotinine) in serum and urine of children admitted to diagnosis because of abdominal pain. On the basis of cotinine determinations, three groups were separated - group I of 22 (32%) children with no exposure to tobacco smoke, group II of 33 (47.8%) exposed to passive smoking and group III of 8 (11.5%) active smokers.
Results: Inflammation in the esophagus were found in 10 (14%) examined, gastritis were found in 26 (37%), duodenitis occurred in 25 (35%) cases including 14 with eosinophilic infiltration.There were significant statistical differences in the number of changes described in endoscopy between children in group I and III ($p = 0.022$). In group II and III, in 80% of examined cases more intensive changes dominated. Concentrations of cotinine in children with Hp infection, exposed to tobacco smoke was 415.6 ng / mg vs. 151.5 ng / mg ($p = 0.05$).
Conclusion: 1.Passive/active tobacco smoking can be a factor responsible for changes in the mucous membrane of the gastrointestinal tract and can cause abdominal pain. 2. To the fact reported by the parents of exposure to passive / active smoking should be approached with great caution.

NOURISHMENT DISORDERS IN OBESE CHILDREN

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Goal of our research is epidemiological research of functional dyspepsia associated with nutrition disorders.
Objectives: selection of the individuals with the upper gastrointestinal tract damage signs; identification of the individuals with functional dyspepsia among the selected group.
Materials and methods: Statistical processing was provided by crosssection method, with SPSS/V11.5. For the purpose of involvement into the research 4450 Georgian children up to age of 17 were questioned and 50% of the questioned had the set of signs associated with the damage of upper gastrointestinal tract with various intensities and frequencies: dizziness, vomiting, belching, pain and heaviness in the chest, abdominal distension and feeling of rapid satiation, related or not related to eating or to physical load. The diet mostly contained Georgian national meals (85%), dry, refined food and sparkling waters, it was irregular, mostly by evenings. Parents of 45% of the questioned individuals suffered from various gastrointestinal pathologies. For the purpose of exclusion of organic pathologies, together with the routine examinations, all children were subjected to FEGDS, ultrasonic study of abdominal organs, observation roentgenography, contrast pH-metry, measurement of lipase and amylase levels in blood and urine.
Results: Studies showed that 20% of children had various organic pathologies, among them, in 30% of cases, the gastric and duodenum ulcers, in 5% of cases – pancreatitis, reflux-esophagitis, in 15% associated with the ulcers, in 10% - diaphragm hernia and in 55% of cases – organic pathologies, recurrent diseases, congenital diseases. These individuals were excluded. The patients with functional dyspepsia diagnosis were unified in the group; they were subjected to relevant treatment, with ordering of the diet.
Conclusion: data of epidemiological research conducted among Georgian children do not show any significant difference from the data obtained in various countries of the world, with the characteristics of Georgian national meals as contributing factor.

PP030

DENTAL ALTERATIONS ASSOCIATED WITH HYPOPHOSPHATEMIC RICKETS.: A CASE REPORT

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Introduction: Hypophosphatemic rickets is a form of rickets that is characterized by low serum phosphate levels and resistance to treatment with ultraviolet radiation or vitamin D ingestion.

Oral findings include poorly mineralized dentin, enlarged pulp chambers and root canals, and periradicular abscesses in caries-free teeth.
Our aim was to verify oral manifestations of hypophosphatemic rickets in a 8-year-old patient.
Case report: A 8-year-old male patient admitted to our clinic with the chief complaint of pain in the upper front region. There was no eruption of the permanent central incisor after the shedding of the deciduous tooth since 1 year. General physical examination revealed that the height and weight were less as compared to the average height and weight of an age-matched Turkish boy. The patient had a dolicocephalic face, frontal bossing, and incompetent lips. On intraoral examination, mixed dentition was present, mandibular deciduous molars were mobile, and maxillar and mandibular permanent first molars had caries. The panoramic radiograph revealed the periapical radiolucencies of 74, 75 and 85. Additionaly the upper central and lateral incisors were severely malpositioned. The oral hygiene of the patient was fair. After the permission was received from the parents, mandibular deciduous molars were extracted and the permanent first molars were restored with amalgam. Detailed instructions on maintainance and of oral hygiene were given to the patient and her parents. The patient is under regular review with the aim of providing orthodontic treatment for him in the future.
Conclusion: Hypophosphatemic rickets is associated with well documented oral and dental findings. In these patients, the dentition is highly susceptible to dental caries or attrition.
As a result of that, after the diagnosis of the disease, the patient should be directed to dentist.

PP031

PATHOGENESIS OF RICKETS ASSOCIATED MYELOFIBROSIS

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Introduction: Anemia associated with vitamin D deficiency rickets is commonly iron deficiency anemia but occasionally may be due to myelofibrosis.
Purpose: To discuss the mechanisms by which myelofibrosis occur in vitamin D deficiency states.
Material: reporting the cases in literature in which myelofibrosis is associated with vitaminD deficiency. A pubmed search with kea words myelofibrosis and vitamin D deficiency, revealed 33 publications ,13 of them were having myelofibrosis and vitamin D deficiency rickets seven discussing renal osteodystrophy,one case Down syndrome and myelofibrosis ,the rest did not include myelofibrosis
Methods: discussing review and personal experience from study of cases of rickets seen over a period of six months in MMCH
Results: Myelofibrosis is diagnosed by presence of dacryocytes (teardrop-shaped red blood cells) , nucleated red blood cells and aniso-poikilocytosis. Myelocytes and promyelocytes are present in small proportions in most patients; blasts may also be seen. Platelets may be large or unusually shaped. In rare cases, the platelet count may be elevated.When these findings are associated with biochemical or clinical findings of rickets it can be considered rachitic myelofibrosis. Discussion: Association between myelofibrosis and hypocalcemia, possibly as a consequence of a disturbed vitamin D metabolism, but no other evidence to support a direct relation between low calcium and myelofibrosis was found. There are few reports discussing the role of hyperparathyroidism in causing myelofibrosis , giving this abnormality the upper hand in causing the myelofibrosis .
Conclusions: Myelofibrosis associated with rickets is a rare entity related to triad of hypocalcemia, hyperparathyroidism and hypovitaminosis D. Being difficult to pin point which of the three abnormalities is the triggering factor yet it seems it is most likely precipitated by hyperparathyroidism as it is the only abnormality that is consistent in the cases reported but further studies are needed.

PP032

AUTOIMMUNE HEPATITIS: TRUST IN TRANSAMINASES

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Introduction: Autoimmune hepatitis (AIH) is a non-common chronic and progressive hepatic necroinflammatory disorder of unknown cause. Clinical presentation is heterogeneous so laboratory and histology are essential for diagnosis. We present a type 2 AIH case, which investigation was triggered by unexpected result in routine lab test.
Case report: A 11-year-old girl was referred to our hospital due to a casual finding of elevated AST (144 UI/L;<35U/l) and ALT (237 UI/L;<39U/l). This was noticed two months earlier in a standard laboratory panel approach. She was completely asymptomatic and no physical signs of chronic or acute liver disease were found. Past medical history was innocent, except for a history of epistaxis two years earlier. At this time, laboratory results already revealed hepatocellular injury. Laboratory investigation showed normal coagulation profile, albumin, bilirubin and GGT. FA was slightly increased (256U/L) and serum IgG was elevated (3140mg/dL). Viral hepatitis screen was negative. Ceruplasmin, copper and alpha-1-antitrypsin levels were normal. Autoantibody profile was negative for ANA, SMA, AMA and anti-LKM1. Anti-LC1 was positive. Liver biopsy revealed an inflammatory lymphocytic infiltrate in portal areas and severe interface hepatitis; bile ducts were normal. Treatment was initiated with prednisolone (40mg/day) and azathioprine (1.5mg/kg/day). Aminotransferases and serum IgG returned to normal after 4 weeks of treatment. No relapse was noticed within 1 year of treatment.
Discussion: Persistent abnormal liver chemistry tests should be regarded because AIH can emerge with such an innocent presentation. Early diagnostic and treatment are essential to reduce liver inflammation and improve prognosis, but optimal treatment duration is unknown.

PP033

GLUTAMINE RANDOMIZED STUDIES IN EARLY LIFE: THE UNSOLVED RIDDLE OF EXPERIMENTAL AND CLINICAL STUDIES

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Introduction: Glutamine may have benefits during immaturity or critical illness in early life but its effects on outcome end hardpoints arecontroversial.
Purpose: Our aim was to review randomized studies on glutamine supplementation in pups, infants, and children examiningwhether glutamine affects outcome.
Material: The search methods for identification of studies consisted of searches of PubMed database using the search terms: “glutamine” “critical illness,” “sepsis,” “endotoxemia.” The search output was limited with the search filter for ages: pups, infants, and children. References in selected studies were examined also.
Methods: The title and abstract of all studies identified by the above search strategy were screened and the full text for all potentially relevant studies published in English was obtained. The full text of any potentially relevant studies was assessed by the two authors.
Results: Experimental work has proposed various mechanisms of glutamine action but none of therandomized studies in early life showed any effect onmortality and only a few showed some effect on inflammatory response, organfunction, and a trend for infection control. Although apparently safe in animal models (pups), premature infants, and critically illchildren, glutamine supplementation does not reduce mortality or late onset sepsis, and its routine use cannot be recommended inthese sensitive populations.
Conclusions: Large prospectively stratified trials are needed to better define the crucial interrelations of “glutamineheatshock proteins-stress response” in critical illness and to identify the specific subgroups of premature neonates and criticallyill infants or children who may have a greater need for glutamine and who may eventually benefit from its supplementation.
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PP034

METABOLIC CHANGES IN RESPONSE TO STRESS IN SEVERE SEPSIS IN CHILDREN

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Introduction: Lipoproteins were shown to neutralize LPS and to exert direct anti-inflammatory actions.Neutrophil CD64-expression (nCD64) was shown to be an early inflammatory sign.
Purpose: To examine whether plasma concentrations of high (HDL)- or low (LDL)-density lipoproteins are related to nCD64, triglycerides, glucose, severity of illness (PRISM, PELOD), length of stay (LOS) or mechanical ventilation (LOMV), and mortality in children with sepsis (S) and severe sepsis / septic shock (SS) compared to those with trauma (T) or healthy controls (C).
Material and Methods: 48 children were classified into 4 groups of SS, S, T, and C (12 each). Blood samples were collected on 3 consecutive days following admission.
Results: On day 1 HDL, LDL, and cholesterol were found to be significantly lower in SS and S compared to C (29.5±2.7 and 27.3±4.2, vs. 58.8±5.8 mg/dl, p< 0.001, 33.4±5.8 and 66.2±9, vs. 98.1±6.5 mg/dl, p< 0.001, 100.6±9 and 125.2±16, vs. 171.3±7 mg/dl, p< 0.001 respectively). Opposite trends followed triglycerides (209±61 and 151.7±25, vs. 71.8±10 mg/dl, p=0.007) and glucose (117±8 and 115±12, vs. 83±3 mg/dl, p=0.002). HDL and triglycerides differed between S or SS and T (p< 0.04). Cholesterol, HDL, and LDL were negatively related with nCD64, procalcitonin, CRP, glucose, LOS, and LOMV (p< 0.05), but not with severity of illness. Glucose was positively related to the LOS and PELOD (p< 0.05) and triglycerides with CRP (p< 0.05).
Conclusions: Lipoproteins and cholesterol are markedly reduced in severe sepsis, but not in trauma, and are inversely related to nCD64-expression, acute phase proteins, glucose, LOS, and LOMV.
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PP035

OBESE CHILDREN AND ADOLESCENTS WITH GREATER ADIPOSITY HAVE HIGHER PREVALENCE OF HYPERTENSION AND SKIN VASCULAR LESIONS

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Introduction: Obesity, defined as excess of adiposity, is associated with specific morbidity. Adiposity can be estimated by anthropometry, but is better assessed by more reliable methods of measuring body composition, such as air displacement plethysmography.
Purpose: To evaluate the relationship between adiposity, hypertension (HTN) and skin changes in obese children and adolescents.
Material/Methods: Cross-sectional study on obese children and adolescents (BMI, Cole criteria, 2000) with body weight >30Kg, consecutively admitted to a specialized clinic in a pediatric hospital. Adiposity was assessed by percentage of body fat (%BF) measured by air displacement plethysmography (Bod Pod®, Cosmed). Evaluated obesity-associated morbidities: systolic and/or diastolic HTN (>p95, NIH 2005), striae, cellulite, acanthosis nigricans and skin vascular lesions.
Results: Seventy patients were included, with age (mean ±SD) of 10.2 ±3.2 years, 38 females and 30 in puberty (Tanner). The %BF (mean ±SD) was 41.4 ±5.0, being higher in males: 42.9 vs. 40.2 (p=0.023). Twenty five (35.7%) individuals had HTN, six of them with both systolic and diastolic HTN. The %BF was higher in individuals with HTN: 43.2 vs. 40.45 (p=0.029) particularly in prepubertal boys: 46.7 vs. 41.9 (p=0.010). Forty four (62.9%) individuals had cellulite, 35 (50%) acanthosis, 16 (22.9%) striae and eight (11.4%) vascular lesions. The presence of skin vascular lesions was significantly associated with higher %BF: 45.1 vs. 41.0 (p=0.029). Acanthosis was significantly associated with the presence of HTN: 51.4% vs. 20.0% (p=0.006). At puberty, in the absence of HTN, cellulite or striae were significantly more frequent in females (p≤0.028).
Conclusions: Greater adiposity in children is associated with a higher frequency of HTN and skin vascular lesions, particularly before puberty. It is important to early identify pediatric obesity and act accordingly in order to achieve a better control of the associated morbidity.
Keywords: adiposity; hypertension; obesity; skin vascular lesions

PP036

PHLEGMONOUS GASTRITIS – A RARE CAUSE OF ABDOMINAL PAIN

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Introduction: Phlegmonous gastritis (Pg) is a rare cause of bacterial infection of the gastric wall and is associated to a high mortality rate.
Case report: a 7 year-old black male was brought to the emergency department due to nausea, vomiting and epigastric pain during two weeks associated to sub febrile body temperature, malaise and constipation. The symptoms had getting progressively worse, and occurred after an acute tonsillitis episode. Physical examination revealed poor general aspect, dehydration and a generalized abdominal pain more intense in the epigastric and periumbilical regions, with no tenderness. The laboratory revealed leukocytosis with neutrophilia and an elevation of ESR and CRP. A necrotic lymph node with heterogeneous aspect next to the aorta was detected by abdominal ultrasound and the CT scan confirmed that abnormality and showed a ticked gastric wall. The upper gastrointestinal endoscopy showed punctiform pearl plates with adjacent normal mucosa and linear ulcers in the esophagus and a gastric mucosa with hypertrophic folds, inflammation and ulceration. The histological examination showed lesions of acute gastritis with very intense activity and cryptic abscesses. The molecular analysis of the biopsy specimens of gastric mucosa was positive for Epstein-Barr virus and Streptococcus pneumoniae. The child was treated with antifungal therapeutic, broad-spectrum intravenous antibiotics and proton pump inhibitor. The clinical, imaging and analytical evolution were favorable and the endoscopic and histological controls confirmed the lesions remission.
Conclusions: The diagnosis of Pg is usually after surgery or autopsy. The authors highlight the importance of histological examination and a prompt diagnosis is the key factor for a successful treatment.

GENERAL PAEDIATRICS

PP037

THE SPECTRUM OF GENITAL MEDIAN RAPHE ANOMALIES IN NEONATES AND INFANTS UNDERGOING RITUAL CIRCUMCISION

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Background: This study was designed for collection of data from all babies coming to do ritual circumcision in our center at the outpatient clinic about any associated congenital anomalies in their genitalia
Objective: to evaluate the extent, spectrum of median raphe anomalies and its impaction on the normal baby life and its effect on the circumcision outcome.
Materials: 2880 babies were examined in a period of 5 years, from 2006 to 2011 by a junior pediatric surgeon and all doubtful cases were re evaluated by a consultant pediatric surgeon, and cases with GMR anomalies were enrolled in the study
Conclusion: It is crucial to examine every baby coming for circumcision to detect anycongenital genital anomalies, anomalies of median genital raphe are not so rare and some of these anomalies may necessitates surgical correction, and commonly accompanied with anal or renal anomalies.

PP038

RARE GENITOURINARY ANOMALIES

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Anomalies of the urogenital tract are among the most common organ system anomalies found in the fetus or neonate, it represent a significant cause of intrauterine fatal death and morbidity in infancy. In this presentation I will discuss rare cases like:- Hypospadius Fistula Posterior urethral valve Absent “Agenesis “ or arrest Rare types of fistula Duplication Split Notochord Isolated Epispadias Megalourethra Congenital Urethral Stricture Anterior Urethral Valve Scrotal transposition.
Conclusion: Genitourinary malformations form the major group of congenital anomalies and contribute a significant degree of morbidity in the overall management of the anorectal deformities.
These anomalies associated more with high anomalies, and more common in male than female.

PP039

DIFFERENT THERAPEUTICAL ATTITUDES AGAINST ENURESIS

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Introduction: Enuresis:functional anomaly or else clinical picture manageable by specific therapeutic approaches?
Purpose: The Authors intended to verify whether the differentiation of therapies can influence the clinical outcome.
Material and Methods: A total of 90 children suffering from nocturnal enuresis underwent a different treatment: 30 children were treated with a behavorial approach,30 children by alarm treatment and 30 children with desmopressin.
Results: In 29 of children treated with desmopressin the drug resolved their illness,while 10% treated by alarm and 23% treated with behavorial intervention persisted in symptom of enuresis.
Conclusions: The differentiation of therapies responds to peculiarities of children and their families.However the effectiveness of desmopressin suggests that the cause of monosymptomatic nocturnal enuresis lies in the structure of sleep.

PP040

A SURVEY OF JUNK FOODS CONSUMPTION IN ELEMENTARY CHILDREN

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Purpose: There is a danger that junk foods with low nutritional value will take the place of man foods.The researchers found it essential to carry out a study on elementary school children so that they could assess the junk food status among their diets
Method: The present study is a cross-sectional that performed on 580 elementary school children in Fasa (a city in Iran).The subjects were randomly selected and the data was collected by using a questionnaire.Items of questionnaire were answered by children's mothers
Results: Results revealed that during the study week, the children mostly consumed snake(%84).Result also indicate that there is a significant relation between consumption of junk foods and the amount of their money ($P<0.05$)
Conclusion: It seems vital that the education of nutrition be a part of school children curriculum so that parents could properly plan their children's diet.

PP041

PARENT'S PERCEPTION ON END OF LIFE CARE IN 2 BRAZILIAN PICUS

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Objective: Assess the parents perception of patients who died in the PICU about the care given by health staff.
Methods: Data collection in 3 steps: (1) Researchers contacted the parents by phone to invite them to attend to the hospital, (2) Doctors who assisted the children clarified doubts about therapy (3) Interview was carried out by researchers who had not participated of the children care
Results: Show that parents couldn't adequately carry out the goodbyes at the time of death of their children. They emphasized the solidarity provided by the nursing staff and the little involvement of the medical team. The opportunity to revisit the process of death was considered positive. Parents felt that they didn't have participation in decision taking.
Conclusion: The research shows that the difficulty of communication is a factor that impacts on the grieving processes.

PP042

UNDERSTANDING EVIDENCE BASED MEDICINE (EBM) AIMING IN TURNING RESEARCH INTO PEDIATRIC PRACTICE (TRIPP)

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Introduction: Although the skills of searching for medical evidence and critically appraising it are being mastered by a growing number of pediatricians, many still log behind. Consequently there is a widening gap between what we ought to do and what we as pediatricians actually do.
Evidence Based Practice requires new skills of the pediatrician, including efficient literature searching, and the application of formal rules of evidence in evaluating the clinical literature.
Purpose: To understand Evidence Based Medicine (EBM) as a vehicle in Turning Research Into Pediatric Practice (TRIPP). Material: Systemic review of published research studies.
Methods: Analysis of over 1000 systemic reviews from Cochran review.
Results: The Intervention was "Likely to be beneficial" in 44% of the reviews. The Evidence "did not support either benefit or harm" in 49% of the reviews. The intervention was "likely to be harmful" in 7% of the review. 96% recommended further research.
Conclusion: The process to identify, apply and integrate new knowledge into pediatric practice must be the aim of pediatricians if they want to provide high-quality care for their patients.

PP043

PROSPECTVE STUDY ON THE KNOWLEDGE OF THE MOTHERS ADMITTED IN PUERPERIUM ABOUT CHILDCARE AND SUDDEN INFANT DEATH SYNDROME

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Introduction: Taking care of a newborn is a challenge for the parents. Parents suffer great anxiety in the first days of your baby that needs constant attention and is totally dependent on the adults in charge of caring for him.
Purpose: Evaluate the knowledge of childcare and preventive measures of sudden infant death syndrome.
Material and Methods: We applied an inquiry by direct interview to the mothers admitted in puerperium, during the period of one month.
Results: 195 mothers responded to the inquiry, with a mean age of 29, 4 + / - 6.1 years. The majority (66.8%) had an education equal or less to the compulsory school (9th grade). Ten (6.7%) were smokers and 9 smoked during pregnancy. Only 44 (22.6%) attended the course of preparation for delivery, having been detected statistically significant differences (p< 0,001) between the number of correct answers and frequency in the course. Regarding sleeping position most (64.2%) responded that the lateral position was the safest. 169 (86.7%) mothers did not know that the newborn should keep their heads uncovered and sleep with your feet touching the bottom of the bed. 99.5% (194) answered they would carry the newborn in the car in retention device, but only 85.4% of whom said they should be installed in the opposite direction of the travel.130 (67%) thought that the baby can use pacifier since the first day of life. Were found statistically significant differences (p <0.001) between the mother's education and the number of correct answers.
Conclusions: The results allow us to conclude that it is fundamental to implement information campaigns targeting parents, as well as the incentive to attend course in preparation for delivery and enhancing teaching personalized in consultations of the child health surveillance.

PP044

HEAD TRAUMA IN CHILDREN: (RE) DEFINING CLINICAL STRATEGIES

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Introduction: Most head trauma in children is minor and not associated with brain injury.
The goal of the evaluation of children with head trauma is to identify those with skull fractures(SF) and traumatic brain injury(TBI) who may require acute intervention, while limiting unnecessary diagnostic exams.
Purpose: Review our institutional practices concerning the use of skull radiography and CT scans to assess head trauma; identify clinical parameters associated with a higher risk of SF and TBI.
Material and Methods: Retrospective study from clinical files of all children under 18 years of age, presenting to the emergency department of a secondary referral center in the year 2011 with closed head trauma.
Results: 473 study patients,median age 3 years. 468(98.9%) had GCS scores of 15. Skull radiographs were obtained in 330(69.8%) and mainly in asymptomatic children (n=213). Nine patients had a skull fracture. CT scans were obtained in 51(10.8%), five of whom had TBI needing neurosurgery referral.The main injury mechanism was fall from ground level (n=192, 40.6%); none of these children had SF nor TBI. SF and TBI occurred with fall from height (n=125, 26.4%), run into stationary object (n=48, 10.1%) and bicycle collision (n=26,5.5%). Vomiting was the most common symptom (n=87,18.4%) but it was only associated with TBI if it occurred repeatedly (n=23, p=0.022). Other symptoms associated with TBI included post-traumatic amnesia (p=0.001) and loss of consciousness (p=0.042).
Conclusions: the majority of children with head trauma doesn´t require differentiated medical attention; the correct application of accurate clinical guidelines should prevent children from unnecessary skull radiographs.Children identified as having a higher risk for TBI should be initially imaged with CT.

PP045

SUDDEN INFANT DEATH DUE TO CARNITINE ACYLCARNITINE TRANSLOCASE DEFICIENCY

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We report a female infant, the first born child of healthy non consanguineous Irish Caucasian parents without any significant family history, who died suddenly at 6 weeks of age with carnitine acycarnitine translocase deficiency CACT. A female infant was born by spontaneous vaginal delivery at 34+4 days of gestation with birth weight of 2.24kgs. She was admitted in SCBU with Prematurity, LBW, Respiratory Distress, Jaundice of prematurity and slow feeding required NG top ups for first 12 days of life and also had antibiotics for first 5 days of life and phototherapy for 3 days.
Subsequently feeding improved and baby was discharged home on day 16 of life. She was clinically well without need for any medical review from discharge from the neonatal unit. She presented to accident and emergency department 21 days later on day 37 of life in a collapsed state. Her parents reported that she had been slow to feed, pale and had decreased respiratory effort in the last few hours prior to presentation. Her blood glucose was 2.7mml/L,CK was 457 IU and ammonia of 1098nmmol/l.
She died 12 hours later. Organic acid, acylcarntinine profile and amino acid analysis were suggestive of a fatty acid oxidation defect. Enzymology on skin fibroblast and molecular genetic testing confirmed a diagnosis of CACT with a novel C.326t1delG mutation of SLC2SA20 gene.

PP046

AMBLYOPIA SCREENING IN PRE SCHOOL AND SCHOOL CHILDREN

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Introduction: Amblyopia is a common cause of visión loss in children and may be preventable with early detection and treatment. The Study of Vision in Pre Schoolers (VIP) evaluated several tools to perform vision screening in children and found that the Welch Allyn Sure Sight® has the potential to be screened effectively.
Purpose: This study was performed to determinate the prevalence of referral rate of detected amblyopia in a private practice clinic.
Materials: This study that enrolled 3.543 children from 3 to 16 years old who attended a private practice clinic between February and March of the years 2009 to 2012, before the beggining of the school year, and were evaluated with the Welch Allyn Sure Sight® in order to detect amblyopía and refer to the specialist as soon as possible.
Method: Prospective, descriptive, cross-sectional study, non-probability sampling of consecutive cases. Data were expressed in percentages
Results: Possible amblyopia was detected in 8,4% of patients in 2009, 16,2% in 2010, 17,1% in 2011 and 20,5% in 2012, with a statistically significant difference between the years 2009 and 2012, and were all referred immediately.
Conclusion: The high referral rate for ambyopia shows the importance of screening and early detection in the general pediatric clinic, because the delay in diagnosis has its consequences both in school performance and in daily activities and may worsen if not detected and treated.

PP047

CHILD ABUSE: 12 YEAR EXPERIENCE OF CHILDREN ARRIVING AT THE EMERGENCY DEPARTMENT IN THE HOSPITAL INFANTIL DE MÉXICO FEDERICO GOMEZ (HIMFG)

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Introduction: Child Abuse is a major public health problem. It includes different categories (neglect, emotional, physical or sexual abuse) that overlap. It is the responsibility of the physician to recognize it at first presentation to prevent significant morbidity and mortality.
Purpose: Describe the presentation and background of children under the age of 18, arriving at the emergency department with the final diagnosis of child abuse.
Material and Methods: Retrospective observational, cross-sectional and descriptive of a series of cases, with exploratory data analysis, descriptive statistics.
Results: 37 dossiers with the diagnosis made of child abuse with a predominance of female patients of 70%, half of the patients being infants under the age of two, followed by children between 6-12 years of age. Eight out of ten patients had no previous disease even though it's a tertiary referral care center. 60% had separate parents or a disfunctional family, 40% weren't taken care of by their parents. Nine out of ten had a low socioeconomic status. In 21 of 37 patients another initial diagnosis was made, nonetheless half of them presented injuries not according to the diagnosis or reason for consultation. 70% of patients had no apparent previous history of fractures or head trauma. 70% had more than two types of child abuse, predominantly physical and neglect, with 20% of sexual abuse. 9 out of 10 patients had risk factors for child maltreatment, and 27 of them had more than one type of risk factor (caregiver, child or family and environmental). There was a 5% mortality.
Conclusion: Up until 2011 and according to UNICEF, Mexico is the 2nd country with the biggest number of abuse against minors. Being violence so common in our environment sometimes it is difficult to identify.

GENETICS

PP048

THE ROLE OF CALCIUM AND PHOSPHOLIPASE A2 IN THE PATHOGENESES AND TREATMENT OF FAMILIAL MEDITERRANEAN FEVER PATIENTS

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Introduction: Familial Mediterranean Fever (FMF) is a hereditary inflammatory disease with autosomal recessive transmission. FMF is occurring in Mediterranean and Middle Eastern populations characterized by recurrent fever, accompanied by abdominal pain, chest pain, and joint pain. FMF is characterized by some biochemical changes.
Objective: The aim of study is to determine calcium and phosphor levels in the blood and phospholipase A2 activity in the erythrocytes membrane before and after colchicines therapy.
Patients and methods: 32 boys and 24 girls of different age (8-12 years) with non-complicated forms of FMF were observed during follow-up visits of patients. Determination of the activity of phospholipase A2, Ca and P was conducted by spectophotometric method. Doses of colchicines varied from 0,6-1,2 mg/day. The received data was compared with the control group that consists of 22 healthy children.
Results: The results of studies revealed decrease in Ca level on the background of colchicine therapy (before therapy Ca level was 2,3+0,02 mmol/l, after the colchicines -2,0+0,02, $P<0,05$). Thus the decrease in Ca level is accompanied by increase in P level (1,4+0,002 and 1,6+0,004 respectively, $P<0,01$). Clinically these changes are characterized by the increase in the number of carious teeth and in some cases with alopecia (in cases of high dosage of colchicine). As of the results of phosposlipase A2, by the patients suffering from FMF before and after colchicine therapy are as follows: 31,3+1,4 and 16,7+0,8 respectively, $P<0,01$ (in the circumstances of the phospholipase A2 nor existence that is 15,2+1,0).
Conclusion: Ca and phospholipase A2 play an important role in pathogenesis of FMF. Some changes of Ca level under colchicine therapy must be considered during follow-up of FMF patients and prescribe Ca drugs with cochicine therapy in cases where necessary.

PP049

MICRODELETION 7q36 WITH THE MICROFORM OF HOLOPROSENCEPHALY AND FEATURES OF CURRARINO SYNDROME: CASE REPORT

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Introduction: Holoprosencephaly (HPE) is a developmental defect of the cerebral midline structures due to incomplete forebrain cleavage. There are different types of holoprosencephaly according to the severety of the cleavage defect. HPE causes include teratogenic agents, single gene mutations, chromosomal abnormalities, and copy number variants. The SHH (sonic hedgehog) gene belongs to the four main genes involved in HPE. Hedgehog is a signaling pathway of a crucial significance for the brain dichotomization.
Material: Our patient presented at the age of 8 months with microcephaly, facial anomalies, retardation, and muscle hypotonia. Due to facial dysmorphic signs holoprosencephaly was suspected.
Methods: The cranial MRI displayed reduced brain volume with hypogenesis of the corpus callosum and loss of splenius. Array CGH testing revealed the microdeletion 7q36 including SHH and MNX1.
The homeobox gene MNX1 has been shown to be involved in the Currarino syndrome (sacral agenesis, anorectal/ urogenital malformations, teratoma). Spinal MRI presented a tethered cord and a cystic presacral formation highly suspective of a teratoma.
Results: Microdeletion 7q36 represents a syndrome with features of HPE and Currarino syndrome. 7q36 microdeletion syndrome presents extremely variable phenotypes. Most patients did not exhibit severe structural brain anomalies of the HPE spectrum. Currarino syndrome has been reported in over 50% in MNX1 heterozygotes due to 7q36 deletions.
Conclusions: The prognosis of children with microdeletion 7q36 depends on the brain defect severity and the presence of other malformations. Detailed diagnostics is necessary to clarify abnormalities of the internal organs or the presence of pelvic anomalies which affect expectancy and quality of life.

PP050

SOME OF CHRONOBIOLOGICAL ASPECTS OF FAMILIAL MEDITERRANEAN FEVER

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Introduction: Familial Mediterranean Fever (FMF) is an autosomal recessive disease and characterized by recurrent fever, peritonitis, arthritis, pleuritis, pericarditis attacks.
Purpose: The aim of our study is to determine FMF attack rate among FMF children depending on the season of the year, and to find out some clinical peculiarities typical for each season. Material: 234 FMF patients (133 boys, 101 girls, age from 12 up to 18 years) have been investigated in the "Arabkir" Medical Center.
Method: For each seasonal quarter FMF attack frequencies have been calculated. The connection between clinical symptoms and seasonal quarters has been determined. All statistical data are exact.
Results: Clinical observations illustrate, that FMF attacks are especially often during autumn months (21 %), and are accompanied by severe clinical symptoms such as early manifestation, abdominal pain, artropathy, and aseptic pleuritis. Above mentioned symptoms are also typical for spring months, with one particular quality of lower number of aseptic pleuritis cases than in autumn (14.4 %). Late manifestation and aseptic pericarditis are dominant during summer months (6.1%). No specific clinical peculiarities have been observed during winter months (10.1 %). FMF attacks of other patients were of no seasonal nature (48.4 %). All statistical data are exact. Endogene and exogenous biorhythm vibrations are the primary causes of frequent FMF attacks during autumn and spring months. Breach of Melatonin synthesis also can activate pathogenetic mechanism of FMF seasonal variation development.
Conclusion: The study of the biorhythms and their correlation to FMF can reveal new ways for FMF attack prevention, doses of colchicine therapy, and new efficient methods for patient follow-up procedure

HAEMATOLOGY & ONCOLOGY

PP051

STUDY OF INVERSION OF INTERON 22 OF FACTOR VIII GENE MUTATIONS AND ITS RELATION TO SEVERITY AND PRESENCE OF INHIBITORS INHEMOPHILIA A IN EAST DELTA OF EGYPT

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Introduction: Haemophilia A is recessive x-linked disease, it is a lifelong bleeding disease caused by deficiency of coagulation factor VIII. Intron 22 factor VIII gene inversion (Inv22) is the most common mutation causing severe haemophilia A.
Objectives: The aim of this work is to identify the prevalence of type of mutation which is inversion of Intron 22 of the factor VIII gene and its relation to severity of disease and presence of inhibitors in haemophilia A
Patients and Methods: This study included 24 hemophilic patients who were previously diagnosed by measuring of factor VIII level ,they were regularly attend to the Pediatric Hematology outpatient clinic of Zagazig University Hospital in Egypt. Their mothers and sisters were included.We studied Inv22 in 24 hemophilia patients and their mothers and sisters by Southern blotting. Data from the familial history of the disease and the inhibitor status were also included.
Results: We found Inv22 in 33.3 % of total cases of hemophilia, most of them of severe type. Six mothers [25%] showed factor VIII inversion mutation. While 4 sisters [16.7%] had inversion mutation. The results revealed that inhibitors developed in 4 cases [16.7%], 3 cases [12.5] of them had Inv22 mutation of factor VIII gene.
Conclusion: The mutations at intron 22 of Factor VIII gene are relatively common cause of severe hemophilia A in east delta of Egypt. There is relation between the development of factor VIII gene inversion mutation and development of inhibitors

PP052

DEALING WITH SICKLE CELL DISEASE: ARE WE DOING THINGS RIGHT? OUR EXPERIENCE THROUGHOUT 6 YEARS

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Introduction: Sickle cell disease is increasingly present in our environment. Proper management of these patients is of vital importance, as complications can be life threatening.
Purpose: Analyze the visits of patients with drepanocytosis to the emergency service of our hospital, emphasizing the reasons for consulting, evaluation and management.
Material: Retrospective review of emergency room visits of patients with drepanocytosis between January 2006 and August 2012; determining epidemiological features, clinical and laboratory findings, diagnostic test outcomes, complications and treatments.
Methods: We used SPSS program to analyze the data.
Results: We revised 178 different processes in 15 patients. The mean age was 32 months. The most frequent reason for consulting was fever followed by respiratory symptoms and bone pain. 30% of the visits were not related to the underlying disease. Recurrent visits due to the same process occurred in 13% of cases. Blood analysis was requested in 63% of patients. Hospital admission was required in 35% of the cases. Antibiotics were prescribed in 45%, 10% precised red blood cell transfusion, 40% fluid therapy and 42% analgesia (5% with morphine). The diagnosis at discharge was in order of frequency: 28% febrile syndrome, 20% vaso-occlusive crisis and 10% acute chest syndrome. Adherence to management protocols of these patients was not adequate in 13% of cases.
Conclusions: Febrile syndrome is the most frequent reason for consultation in children with sickle cell disease in our emergency department. The young age of our cohort explains the high rate of hospital admissions for management. The infrequent use of morphine in our cohort makes us think of undertreatment of pain. The increasing prevalence of drepanocytosis in our environment requires improving our knowledge on this pathology to avoid pitfalls in diagnosis and treatment.

PP053

GONADAL FUNCTION AND FERTILITY IN SURVIVORS OF CHILDHOOD ACUTE LYMPHOBLASTIC LEUKEMIA TEHRAN UNIVERSITY OF MEDICAL SCIENCES TEHRAN IRAN

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Introduction and purpose: Acute lymphoblastic leukemia (ALL) is the most common malignancy of childhood. As the continuing success of modern cancer treatment has pushed 5-year relative survival after leukemia diagnosis a lot more, long term complications of therapy, including fertility and gonadal function, take on greater significance for survivors. Radiotherapy and chemotherapy including alkylating agents can have a significant impact on gonadal function and fertility. The purpose of this study is to evaluate the correlation between these therapies and gonadal function in survivors of ALL.
Methods: We investigated gonadal impairment in 60 ALL patients. Our cases were in complete remission for at least one year, considering girls to be at least 13 and boys 14 year at the time of study, evaluated fertility by marriage and having a live child, and gonadal function by measuring LH, FSH, testosterone, sperm count and estradiol. We assessed the mean dose of alkylating agent (cyclophosphamide(CPA)), and radiation. Results: In 60 cases, 36.7% male, 63.3% females. Mean age at diagnosis was 7.6 and at study 19.6 years. 15% were married, four of which had children, 3 of 4 had undergone radiation, and all of them were Pre-Bcell ALL. All our cases had used CPA, 55% had undergone radiation. There wasn't any significant correlation between getting radiation and gonadal function in males & females. We compared T-cell ALL cases (10%), getting higher amounts of CPA, with pre-Bcell, which showed no significant correlation.
Conclusion: This study showed no significant correlation between getting radiation or higher amounts of CPA with impairment in gonadal function. Considering that dosage of CPA given to ALL is much lower than other childhood cancers, clinical confirmation is needed.

PP054

THROMBOCYTOPENIA…A LOT TO THINK ABOUT

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Introduction: Thrombocytopenia is the most common cause of defective primary hemostasis that can lead to significant bleeding in children. Patients may also be asymptomatic and, in these cases, thrombocytopenia is often detected unexpectedly on complete blood count.
Case 1: A 10 years old boy, under growth hormone therapy, diagnosed with thrombocytopenia and macrocytosis. The peripheral blood smear showed evidence of medullary aplasia. Bone marrow examination and osteomedular biopsy suggested Fanconi Anemia confirmed by diepoxybutane analysis.
Case 2: A healthy 13 years old girl referred for thrombocytopenia and false positive syphilis test. Family history of repetitive spontaneous abortion. The subsequent evaluation detected the presence of antiphospholipid antibodies that confirmed the Antiphospholipid Syndrome.
Case 3: A 13 years old girl, with frequent complaints of epistaxis, diagnosed with thrombocytopenia, leucopenia and elevated transaminases at the age of 11. Imagiologic studies showed homogenic splenomegaly, dilated splenic vein, repermeabilization of umbilical vein and heterogeneous hepatic echogenicity.
Case 4: An 8 years old boy diagnosed with thrombocytopenia on a routine complete blood count. The peripheral blood smear showed platelet agglomeration, suggesting pseudothrombocytopenia.
Conclusion: Thrombocytopenia can be caused either by decreased platelets production, as occurs due to bone marrow failure in Fanconi Anemia (Case 1), or increased platelets destruction, as occurs with autoimmune disease (Case 2) and with hypersplenism (Case 3). The management of thrombocytopenia should be guided by an understanding of its cause. Before undertaken extensive evaluation, platelet count should be confirmed as thrombocytopenia can also be due to artifact (Case 4).

PP055

FREQUENCY OF GLOMERULAR DYSFUNCTION IN CHILDREN WITH BETA THALASSEMIA

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Introduction: Reports investigating renal dysfunction in beta thalassemia major (â-TM) patients have been limited in number, mainly studying adult patients. Additionally most of them had not assessed early markers of glomerular dysfunction. Early identification of patients at high risk is of great importance as it may allow specific measures to be taken to delay renal impairment.
Purpose: to estimate the frequency of glomerular dysfunction in children with â-TM by using different markers and correlate these markers to serum ferritin and iron chelation therapy.
Subjects & Methods: This study included one hundred patients with â-TM (Group É) which was subdivided into; Group Ia,62 patients with chelation therapy(deferoxamine) &Group Ib included 38 patients without chelation therapy and Group II (control group) included fifty apparently healthy volunteers age and sex matched to the diseased group.All groups were subjected to; through history taking, clinical examination and laboratory investigations including: serum creatinine ,serum ferritin, serum Cystatin C, eGFR by both Schwartz formula and creatinine clearance, and and finally albumin/creatinine ratio in urine.
Results: Group Ia&Ib had significant higher levels of serum creatinine, serum ferritin, serum Cystatin C, albumin /creatinine ratio in urine than Group II.
Furtherly, they had significant lower eGFR and creatinine clearance than Group II where ($p<0.05$).
Moreover,Group Éa had significant lower eGFR and creatinine clearance than Group Ib.Cystatin C had highly significant negative correlation with eGFR and creatinine clearance and significant positive correlation with Serum ferritin.
Finally, Cystatin C had higher sensitivity and specificity than serum creatinine and creatinine clearance for small changes in GFR.

INFECTIOUS DISEASES

PP056

SEPSIS SECONDARY TO MELIOIDOSIS IN CHILDREN IN SINGAPORE

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Introduction: Melioidosis is a rare disease caused by Burkholderia pseudomallei, endemic in parts of Asia and Australia. Transmission is through inoculation or inhalation. It manifests mostly as cutaneous lesions, but may present as a multi-organ disease, with high mortality.
Purpose: To review a cohort of patients diagnosed with sepsis secondary to melioidosis.
Material and Methods: Retrospective review of case records of patients diagnosed with sepsis secondary to melioidosis at KK Women's and Children's Hospital, a tertiary paediatric hospital in Singapore, from January 2002 to 2012.
Results: A total of 3 cases were reviewed. They were aged 2, 12 and 15 yrs old. Ratio of male: female is 2:1. The girl is the lone surviving patient. She had Type 2 diabetes mellitus (DM), and only she remembered exposure to soil or contaminated water. The other two were brothers who contracted the disease 9 years apart and had suspected chronic graunulomatous disease (CGD). Diagnosis was based on blood cultures and blood melioidosis serology or polymerase chain reaction (PCR). All patients were treated with appropriate intravenous antibiotics during the intensive phase. In addition, 1 patient was given adjunct therapy of granulocyte colony-stimulating factor (GCSF) and intravenous immunoglobulin (IVIG). The 1 surviving patient was prescribed eradication therapy of oral trimetoprim-sulphamethoxazole and amoxicillin-clavulanate for a duration of 6 months. The 2 brothers who presented with septic shock succumbed to multi-organ failure secondary to melioidosis.
Conclusions: Melioidosis, although rare, is endemic in Singapore. Risk factors include immunodeficiency such as DM and CGD. Children who present with septic shock rather than localized infection have a higher mortality rate.

PP057

NEW PERSPECTIVES FOR DIAGNOSING OSTEOARTICULAR INFECTIONS IN YOUNG CHILDREN

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Introduction: K Kingae is considered the major cause of osteoarticular infections (OAI) in young children. However its detection and diagnosing OAI due to this germ still remain challenging.
Purpose: To investigate whether specific oropharyngeal swab PCR could predict K. Kingae OAI in young children.
Material: Specific PCR designed to detect two gene targets from the K. kingae RTX toxin locus
Methods: Children aged 6 to 48 months, presenting atraumatic osteoarticular complaints were prospectively enrolled from 2008 to 2012. Clinical evaluation, hematologic, and radiological investigations were performed; blood and oropharayngeal swab samples were tested with the K. kingae specific PCR assay. OAI was defined as the presence of pathogenic bacteria in bone, joint or blood samples, or magnetic resonance imaging consistent with infection despite negative microbiology. Positive culture or PCR for K. kingae in blood, bone or synovial fluid confirmed OAI due to this pathogen.
Results: From 123 enrolled children, 40 met the OAI case definition; 30 had K. kingae OAI, one had OAI due to another organism, and 9 had no microbiologic diagnosis. PCR assays on all 30 oropharyngeal swabs from the patients with K. kingae OAI, and on 8 swabs from the 84 patients without OAI or with OAI caused by another organism, were positive. The sensitivity, specificity, positive and negative predictive value of the oropharayngeal swab PCR assay for K. kingae OAI were 100%, 90.5%, 78.9%, and 100%, respectively.
Conclusions: Detection of K. kingae DNA in oropharayngeal swabs from children presenting clinical findings of OAI is highly predictive for K. kingae OAI. This test represents thus a valuable diagnostic tool, which could easliy improve the recognition of OAI in young children.

PP058

THE RISK OF FATALITY AMONG YOUNG CHILDREN HOSPITALIZED FOR SEVERE LRTIs, INCLUDING DUE TO RSV: A CANADIAN ADMINISTRATIVE DATABASE ANALYSIS

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Introduction: Although some data exist from small studies, large population-based estimates of fatality among infants hospitalized for lower respiratory tract infections (LRTIs), including respiratory syncytial virus (RSV), have not been presented; considering underlying risk for severe RSV.
Purpose: To characterize the risk of fatality among young children (<24 months of age) hospitalized for severe LRTI, including RSV LRTI, according to underlying risk for severe RSV.
Materials/Methods: A population-based analysis of all children born in 1996-1997 was conducted using the linked Regie de l'Assurance Maladie du Quebec physician billing and hospital discharge databases. Whether a child was at high-risk of severe RSV (i.e. premature [at <37 weeks gestation], with congenital heart disease (CHD) or bronchopulmonary dysplasia (BPD)), was hospitalized for LRTIs, or died due to LRTI, was identified from ICD-9 codes on hospital discharge records. Case fatality by high-risk status was determined by dividing the number of deaths by the number of children hospitalized within each high-risk group.
Results: Of the 145,429 birth cohort, 7,111 (4.9%) infants were hospitalized for LRTI and 230 (0.3%) for RSV LRTI. Of the 7,111, 1,131 (15.9%) were at high-risk for severe RSV. Eighteen (0.3%) children died with LRTI, and ten (56.0%) were at high-risk for severe RSV. Case fatality rates were 0.6%, 1.9% and 2.3%, among young children born prematurely, with CHD and with BPD, respectively. Two of the 18 deaths occurred among those with known RSV LRTI (0.9%); one of whom also had CHD.
Conclusions: Fatalities due to severe LRTIs were rare overall. These occurred more among young children at high-risk, including CHD or BPD, compared to those who were not at high-risk for severe RSV.

PP059

RESOURCE USE AMONG INFANTS WITH ASTHMA AND PREVIOUS HOSPITALIZATION FOR RESPIRATORY SYNCYTIAL VIRUS LOWER RESPIRATORY TRACT INFECTION IN QUEBÉC

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Introduction: Although children hospitalized for severe respiratory syncytial virus (RSV) lower respiratory tract infections (LRTI) before age 2 are at high risk of childhood asthma, little is known about the associated healthcare burden.
Purpose: To assess direct medical resource use among children with asthma hospitalized for LRTI before age 2.
Methods: A retrospective population-based analysis of all children born in 1996-1997 diagnosed with asthma between ages 2 and 10 was conducted using the Régie de l'Assurance Maladie du Québec databases. Of all children hospitalized for LRTIs, those hospitalized for RSV LRTI before age 2 comprised the RSV cohort; children without LRTI hospitalizations formed the comparison. Asthma cases between ages 2 and 10 were classified by ICD-9 codes on physician or hospital records. Differences in all-cause medical resource use (based on physician visits, hospitalizations, and in-hospital procedures) between the RSV and comparison cohorts were assessed from birth to age 10. Limited data prevented analysis of medication use.
Results: Of the 41,565 children with childhood asthma, 3,680 were hospitalized for LRTI and 115 for RSV. The cause of most (>97%) LRTIs was unspecified. The incremental mean resource use among the RSV cohort was: 8.6 general practitioner, and 47.9 specialist visits; 3.0 hospital and 0.5 intensive care unit admissions; and 2.1 in-hospital procedures. The mean incremental lengths of hospital stay were 12.2 and 3.0 days in the general and ICU wards, respectively.
Conclusion: Among children with asthma, medical resource use was substantially higher among those hospitalized for RSV LRTI before age 2. Assessing the costs of increased resource use would further quantify the burden in this vulnerable population.

PP060

PALIVIZUMAB IN REDUCING RESPIRATORY SYNCYTIAL VIRUS (RSV) HOSPITALIZATION IN PREMATURE INFANTS WITHOUT BRONCHOPULMONARY DYSPLASIA (BPD): A SUBGROUP EFFICACY ANALYSIS BY GESTATIONAL AGE IN WEEKS (wGA)

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Introduction/Purpose: Palivizumab is indicated for prevention of serious lower respiratory tract disease caused by RSV in pediatric patients at high risk of RSV disease. In the IMpact registration trial, efficacy was established in children with BPD and premature infants (born < 35wGA.
Decision-makers considering reimbursement for RSV prophylaxis often request efficacy results for specific gestational-age subgroups without BPD (which differ across countries). Since the IMpact trial had not previously reported subgroup results, our objective was to assess the efficacy of palivizumab in various gestational-age subgroups of premature infants without BPD that are evaluated by reimbursement bodies. Safety by wGA groups was not examined.
Material/Methods: IMpact was a randomized, double-blind, multinational trial in which subjects received 5-monthly doses of palivizumab or placebo during a single RSV season.
Infants born < 35wGA without BPD and < 6 months old were included in our analysis. Using IMpact trial data, RSV hospitalization (RSV-H) rates relative to placebo were expressed as relative risk reductions (RRRs). Prematurity subgroups of interest in different countries (<28wGA, <29wGA, 28-31wGA, 29-30wGA, 29-31wGA, 29-32wGA, 29-33wGA, 32-34wGA, 32-35wGA, 33-34wGA, and 33-35wGA) were analyzed.
Results: 724 premature infants <6 months old without BPD were analyzed (494 palivizumab, 230 placebo). In the UK, premature infants are categorized into gestational-age groups of <29wGA, 29-32wGA, and 33-35wGA. The RSV-H RRRs for these categories were 80.4%, 79.7%, and 73.2%, respectively. RSV-H RRRs for 29-31wGA and 32-35wGA (as categorized in Canada) were 64.5% and 82.1%, respectively. As categorized by WHO, the RSV-H RRRs were 67.9% for <28wGA and 73.0% for 28-31wGA. RSV-H RRRs for 29-30wGA, 29-33wGA, 32-34wGA, and 33-34wGA (other country-defined categories) were 100%, 79.8%, 81.8%, and 72.3%, respectively.
Conclusion: The study reports efficacy of palivizumab in reducing RSV-H in different wGA subgroups. This data will help to more accurately inform reimbursement decision-making models.

PP061

CLINICAL AND EPIDEMIOLOGICAL DATA OF PERTUSSIS IN ALBANIAN CHILDREN

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Background: Pertussis is still a prevalent disease presenting in epidemiological cycles each3 to 5 years and mainly affecting young infants. In five last years we have not seen any children admitted in our hospital with Pertussis Since May 2011 we have observed the reemergence of this disease, with very increased number in this summer and manly predomination in the infants under six months old.. The aims of the study was to see the factors that have influenced in the increased of incidence of these diseases in our country in the two last year and to study the epidemiological and clinical signs of these diseases in our patients.
Methods: This was a retro prospective study. We have analyzed the medical records of 30 children admitted in our hospital in the period May 2011 through August 2012.'The confirmation of diagnosis were based in the clinical signs:, close contact with a cougher adult; paroxysmal cough accompanied by difficult breathing, cyanosis apnea, ileukocitosis Only In two cases were performed serological test which result positive for Bordetella Pertussis.
Results: 86% (26) were under 6 months or younger (16 cases or 53% were ≤ 2 months); All the case live in the central region of Albania and 15 cases or 50% in rural area near our capital. 56% (17) had been in contact with a cougher adult; 70% (21) were unvaccinated, 16% (5) had incomplete vaccination schedules, had only received one dose. The most of cases 66% (20) were seen during May to August 2012 and 34 %(10) during June to September 2011 . All patients were in the paroxysmal stages. Most frequent clinical signs at admission were: paroxysmal cough 100% (30), difficult breathing 93% (27); cyanosis 73% (21), fever 26 (8), apnea 23% (7), seizures: 3% (1). Laboratory findings showed median leukocytes count 24,500/mm3, 16% (5) of the cases was admitted to ICU, 100% due to respiratory failure, the average of long-day of stay in hospital were two weeks. The mortality was 0.
Conclusion: Our study confirm that infants who are unimmunized against Pertussis due to young age are the most affected group. A booster dose of the available acellular Pertussis vaccine in adolescents and adults could help reduce the impact of this disease among unimmunized young infants.

PP062

VISCERAL LEISHMANIASIS WITH CLINICAL RELAPSE AFTER TREATMENT WITH ANTIMONY COMPOUNDS COMPLICATED WITH PLEUROPNEUMONIA AND ACUTE MYOCARDITIS

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Introduction: Visceral leishmaniasis (VL) is endemic in many areas of developed and developing Mediterranean countries including Albania.
Purpose: To show the effectiveness of liposomal amphotericin B (L-AmB) in the treatment of visceral leishmaniasis in cases of clinical relapse with antimony compounds, even complicated with other pathologies.
Material and methods : This is a retrospective case report of a 4 years old child hospitalized in the pediatric clinic of infectious disease.The child was sick with visceral leishmaniasis since ten months before recovery.She was not immunocompromised and HIV test was negative. After treatment with meglumine antimoniate for 28 days, her bone marrow aspirations resulted positive and her health conditions worsened and her clinical situation was complicated by pleuropneumonia and acute myocarditis.Considering all these datas, we thought to use liposomal amphotericin B (L-AmB) as treatment of choice with dosing 3mg/kg weight in days 1–5, 14 and 21.
Results: L-AmB was well tolerated by the child, no side effects were seen, bone-marrow aspirations taken after treatment resulted negative for VL and the child was considered cured after the laboratory findings.
Conclusion: L-AmB is considered the treatment of choice for visceral leishmaniasis caused by L.Infantum in cases of clinical relapse with antimony compounds, even complicated by other pathologies.

PP063

A CASE REPORT WITH CAT SCRATCH DISEASE

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Introduction: Cat scratch disease (CSD) is an infectious disease caused by Bartonella Henselae which is a gram negative bacillus. Depending on the immunity of the person it is presented in different clinical forms.
Purpose: To show the clinical presentation, diagnosis and treatment of this disease.
Material and methods: This is a retrospective case report of a 8 years old child hospitalized at our clinic in September 2010.She was suspected of cat scratch disease since the beginning, because of the clinical presentation with fever, nausea, vomiting, anorexia, cervical and inguinal lymph nodes and family history.The diagnosis was confirmed with serology for Bartonela Henselae antibody IgG positive and IgM negative. The child was treated with azythromycin for 5 days.
Results: Within 30 days after treatment the clinical situation was improved, laboratory findings were normal and the lymphonodes volume was reduced by 50 %.
Conclusion: We tried to shortlely present this case with CSD which is not so common in our country, in order that all pediatricians recognize it, in cases presented in the service of infectious diseases.

PP064

TYPHOID FEVER IN CHILDREN ,EPIDEMIOLOGICAL DATA,CLINICAL MANIFESTATION AND TREATMENT

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Background: To study some of epidemiological data, clinical manifestations, diagnosis and treatment of the children hospitalized in the pediatric infectious diseases ward.
Materials and methods: In the study are included 42 children from 1 to 14 years, hospitalized in Pediatrics infectious diseases ward during, January 2009 to Juli 2011. We studied important data as: distribution according to age, gender, residence, season and clinical manifestation such as fever, gastrointestinal signs, organomegaly. The diagnosis was confirmed by serologic examination.
Results: Forty two children resulted infected by typhoid fever during the study period. The distribution according to age group was as follows: 1-4 years 33%, 5-10 years 47%, 11-14 years 20%, Males were 57% of cases. Seasonal domination was in summer with 38%, followed by spring, winter, and autumn. Clinical manifestations: fever was present at 100% of the cases, hepatomegaly 55%, splenomegaly 10%, abdominal pain 31%. Diarrhea and vomiting were prescribed respectively in 38% and 14% of the cases. Laboratory examinations revealed leucopenia with lymphocitosis in 65%. The antibiotic used were: Ampicillin in (53%), ceftriaxone was prescribed in 28%, cefotaxime in 9.5%, while chloramphenicoli as monoterapy in 4 9.5%.
Conclusion: Typhoid fever still remains a frequent infection of children. Ampicillin resulted an effective drug at the treatment of infection.

PP065

IMMUNE MEMORY TO HEPATITIS B PERSISTS IN CHILDREN AGED 7–8 YEARS VACCINATED IN INFANCY WITH FOUR DOSES OF HEXAVALENT DTPa-HBV-IPV/Hib VACCINE

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Introduction: Vaccinating infants with hexavalent DTPa-HBV-IPV/Hib vaccine (Infanrix™ hexa; GlaxoSmithKline Vaccines) induces hepatitis B long-lasting immune memory and similar protection to priming with monovalent HBV vaccines.1
Purpose: Evaluation of HBV long-term immune memory in children aged 7–8yrs, primed and boosted in infancy with DTPa-HBV-IPV/Hib. Methods: An open-label study [112688] enrolled children aged 7–8yrs (in 12 German centres) primed and boosted with 4 doses of DTPa-HBV-IPV/Hib by 2yrs old. They all received one challenge dose of monovalent paediatric HBV vaccine (Engerix™-B Kinder; GlaxoSmithKline Vaccines). Blood samples were collected pre- and 1 month post-challenge. Anti-HBs antibodies (Abs) were measured using ELISA; concentrations ≥3.3 and ≥10mIU/mL were considered seropositive and seroprotective, respectively.
Results: 297 children (mean age 7.5 [SD: 0.52] yrs) received an HBV challenge dose, 284 were included in the According-to-Protocol cohort for immunogenicity. Pre-challenge, 80.6% and 35.6% of subjects had anti-HBs Abs ≥10mIU/mL and ≥100mIU/mL, respectively. These increased to 99.3% and 97.5% 1month post-challenge, respectively. An anamnestic response (i.e. ≥4-fold increase in Ab concentration vs pre-challenge in initially seropositive children or ≥10mIU/mL in initially seronegative children) was displayed in 97.2% subjects, a few (n=8) subjects were non-responders. Anti-HBs Ab Geometric Mean Concentration rose from 52.3 to 8792.5mIU/mL. In the 55 subjects considered to have lost seroprotective Abs pre-challenge (<10mIU/mL), 96.4% and 89.1% achieved concentrations ≥10 and ≥100mIU/mL post-challenge, respectively. The HBV challenge vaccine was generally well tolerated; no vaccine-related serious adverse events were reported.
Conclusion: Primary and booster vaccination with Infanrix™ hexa induced long-term seroprotection against HBV and immune memory in nearly all subjects.
Infanrix and Engerix are trademarks of the GlaxoSmithKline group of companies 1Zinke et al. Hum Vaccin2009;5:592–8

PP066

EPIDEMIOLOGJICAL CONSIDERATES OF CENTRAL NERVOUS SYSTEM INFECTIONS, IN SERVICE OF INFECTION DISEASES, TIRANA, ALBANIA

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The aim: This is a retrospective study to present epidemiological data of children with central nervous system infections, hospitalized in the infectious diseases service at the pediatric department during 2002-1011.
Background: Meningitis remain an important and frequent infection in the childhood. Their early diagnostication, antibiotics use with broad spectrum activity, their treatment under the relevant protocols and rigorous tracking and monitoring, has given very good results in the improvement and healing without complications.
Material and method: In this study are included children aged 1month - 14 years, hospitalized in our service, and treated for bacterial and aseptic meninigitis, meningococcemi, meningoencephalit and encephalit. The data interpretion is made in report with the age, sex, location, time.
Results: 259 hospitalized children, with central nervous system infections in infectious Service, form 1.23% of all hospitalizations. The bacterial meningitis takes the main place in the morbidity with 103 cases (39.8%), followed by seroz meningitis with 83 cases (32%), meningoencefalit with 32 cases (12:35%), 25 cases of meningococcemia (9.7%) and encephalitis in 16 cases (6.1%). According the age, hospitalized infants are divided into: 1month-1 year with 45 cases(17.4%) 2-4 years old with 70 cases (27%), 5-10 years old with 102 cases (39.4%), 11-14 years old with 42 cases (16.2%). According to the sex, predominate males with 149 cases (57.5%) and women with 110 cases (42.5%). According the location, city's hospitaliations (together with the suburbs) are 208 cases (80.3%)
Conclusion: Viral and bacterial meningitis is a desease that continues to remain in high numbers in Albania. The group most affected is the age of 5-10 years, by gender the most affected are males with 149 cases or 57.2% and urban areas are dominant over those rurales with 208 cases or 80.3%.

PP067

EPSTEIN-BARR VIRUS ASSOCIATED CHOLESTATIC HEPATITIS: A RARE ENTITY

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Introduction: Epstein-Barr virus is a herpesvirus that causes asymptomatic infections or mononucleosis. Although self-limited transaminase increase is frequent, cholestatic hepatitis is a rare complication (5%).
Purpose: to evaluate two cases of EBV associated cholestatic hepatitis.
Material: analysis of patients' charts regarding socio-demographic data, clinical presentation, evolution, workup and follow up. Methods: descriptive and retrospective study of two patients.
Results: Two cases referring to a 6-year old boy and a 5 year-old girl, both presenting with fever, jaundice, choluria and fatigue, the second case presenting as mononucleosis with tonsillitis and cervical adenopathies. Drug ingestion was denied. Physical exam showed a slightly enlarged liver in both cases. Laboratory studies showed increased transaminase values, AST varying between 90 and 170 U/L, ALT 180-210 U/L, GGT 110-210 U/L and ALP 600 U/L; both cases showed bilirrubin values above 2,5 mg/dL and direct fractions above 2,3 mg/dL. Coagulation profile was normal. Abdominal ultrasound showed absence of extra-hepatic bile duct obstruction. EBV VCA IgM was positive in both cases. Other acute co-infections where excluded (CMV, hepatitis A, B and C, HIV, B19 parvovirus, Brucella, Mycoplasma, Leptospira and L. pneumophila). Both patients evolved favourably, with normal transaminase values in 2 months and clinical remission in approximately 2 weeks.
Conclusion: While the first case presented as acute hepatitis, the second presented as mononucleosis evolving to cholestasis. Laboratory studies were suggestive of cholestasis in both cases. Serology confirmed acute EBV infection; although this presentation is rare, it generally has a favourable outcome and hepatic biopsy is usually not necessary.

PP068

THE IMPACT OF 7-VALENT PNEUMOCOCCAL CONJUGATE VACCINE (PCV7) ON PNEUMOCOCCAL MENINGITIS: A LITERATURE REVIEW

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Introduction: Prevenar (PCV7) was first licensed for the prevention of pneumococcal diseases in the US in 2000, followed by Canada, Europe and Australia. PCV7 was introduced in the national immunisation programmes (NIPs) in the US and Canada with a 3+1 schedule. In Europe the introduction dates and schedules varied, with a 2+1 schedule in most countries.
Purpose: To evaluate the impact of PCV7 on all-type and vaccine-type (VT) pneumococcal meningitis in industrialised countries. Material: Published studies on the impact of PCV7 on pneumococcal meningitis. Methods: A literature review to assess the impact of PCV7 on on VT and all-type pneumococcal meningitis.
Results: We identified 14 studies reporting the impact of PCV7 on pneumococcal meningitis. There was a substantial decrease in VT-meningitis, ranging from 59.2% (US) to 100% (Belgium) in children <5 years (median: 92.8%) and from 10% (US) to 87.5% (US) for non-vaccine-eligible age groups (median: 68.6%). One study in Spain reported an increase (43.2%) in the latter age group. The decrease in all-type pneumococcal meningitis ranged from 4.5% (Spain, Barcelona) to 66.4% (Spain, Basque county & Navarre) in children < 2 years old, and from 8.4% (US) to 100% (Spain, Basque county & Navarre) in children <5 years old (median: 54.7%); one study in Spain reported an increase (6.7%).
Conclusions: Substantial reductions in VT and all-type pneumococcal meningitis were observed in vaccine-eligible and non-vaccine-eligible populations after PCV7 introduction. The impact was influenced by pre-vaccination disease epidemiology, time since introduction, evolution of vaccine uptake and variability in surveillance systems over time.

PP069

COMPARISON OF THE LUMINEX® xTAG RESPIRATORY VIRAL PANEL FAST WITH REAL TIME POLYMERASE CHAIN REACTION FOR DIAGNOSIS OF RESPIRATORY SYNCITIAL VIRUS AND RHINOVIRUS INFECTIONS IN CHILDREN

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Introduction: RSV and RV are relevant in acute respiratory infection (ARI) in children. Methods with different sensitivity and specificity are available for diagnosis. The new xTAG respiratory viral panel (RVP) assay (Luminex® Molecular Diagnostics) is fast and allows simultaneous detection of multiplex viruses.
Purpose: to compare the detection of RSV and RV by Luminex with specific real time RCP in children with ARI. Material: nasopharyngeal aspirates from 140 infants with ARI from Roberto del Rio Hospital in Santiago, Chile, during 2010 – 2011.
Methods: all samples were tested for RSV by immunofluorescence antigen detection (IFI) and real time PCR and for RV by real time PCR. Luminex® was done in 88 cases. Statistical analyses were done by x2 test with SigmaStat®.
Results: Median age of 140 children was 2 months (range: 10 days – 9 months); 70 (50%) was female. RSV was detected in 44 (31%) by IFI and in 80 (57%) by real time PCR and RV was detected in 51 (37%) by real time PCR. Among 88 infants, Luminex® detected RSV in 40 (46%) (p=0.1) and RV in 42 (48%)(p=0.1). Sensitivity, specificity, (+) and (-) predictive values of Luminex compared to real time PCR was 69%, 87%, 52% and 67% for RSV, respectively, and 94%, 83%, 43% and 96% for RV, respectively. In addition, Luminex detected human metapneumovirus (3%); coronavirus (2%), parainfluenza (67%); adenovirus (0.7%) and Bocavirus (2%). Coinfection was detected in 32 (23%) cases and 24 of them were RSV and RV.
Conclusions: Luminex® is a good diagnostic method for detecting RSV and RV in infants with ARI, especially for RV and allows simultaneous detection of multiplex viruses. Lower sensitivity for RSV emphasizes the need to determine the usefulness of Luminex for each respiratory virus. Grant Fondecyt N°1100477

PP070

THE USE OF VITAL SIGNS AS PREDICTORS FOR SERIOUS BACTERIAL INFECTIONS IN CHILDREN WITH ACUTE FEBRILE ILLNESS IN BAHRY PEDIATRIC EMERGENCY CARE FROM MAY TO AUGHST 2012.

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Background: Distinguishing children with serious infections from those with milder, self-limiting febrile illnesses remains a daily challenge in primary care and hospital EDs. Measurement of vital signs is recommended as part of this assessment, but evidence for the predictive value of individual or combinations of vital signs in these settings is limited. **Purpose:** To determine whether vital signs can predict children with serious bacterial infections.
Material: Children age 1month to <16years presenting with acute febrile illness to Paediatric emergency unit in Sudan were enrolled.Sample size was 150. Severity of infection classified as serious, or not serious bacterial infection. Vital signs and oxygen saturation were recorded and compared to the final outcome of these children.
Methods: Measurements of temperature by axillary thermometer, blood pressure by sphygmomanometer with appropriate cuff and we used finger pulse oximetry for pulse rate and oxygen saturation measurements. Data analyzed bivariably and Multivariable using regression analysis.
Results: Ten percent of patients were classified as having serious bacterial infection. Tachycardia and tachypnea are the most sensitive and specific in predicting serious bacterial infections with sensitivity (80%,86.6 %) and specific(97.4% , 83.7%) respectively. High temperature, severe hypoxemia and hypotension were the least sensitive but highly specific for serious bacterial infections.
Conclusion: Vital signs can be used to differentiate children with serious bacterial infections from those with no serious bacterial infections in a paediatric emergency departments and has comparable sensitivity to more complicated triage systems.

PP071

COMPLICATIONS OF ACUTE SINUSITIS IN PEDIATRICS

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Introduction: Acute sinusitis is often a mild, self-limited disease. However, its complications may be severe and even life-threatening.
Methods: We retrospectively evaluated all patients hospitalized due to complications of sinusitis from January 2001 to March 2012.
Results: Out of 43 patients (22 males) 36 had orbital complications (8 periorbital cellulitis, 28 orbital cellulitis, 18 of those with subperiosteal abscess), 7 had intracranial complications (3 subdural empyema, 1 epidural abscess with frontal osteomyelitis, 2 meningitis, 1 cavernous sinus thrombosis). There was a seasonal trend of admissions (65% from January-May). Patients with orbital complications were younger than those with intracranial complications (mean: 5.7 vs 11.1 years, $p = 0.003$) and had a shorter hospital stay (mean: 4.6 vs. 31.3 days, $p < 0.001$). Presenting signs in orbital complications were periorbital edema (36), fever (25), proptosis (13), diplopia (10) and chemosis (4), while in intracranial complications were fever (7), vomiting (5), meningeal signs (5), altered level of consciousness (5), hemiparesis (2), seizures (2), papilledema (2) and ophthalmoplegia with torticollis (1). Cultures were positive in 9/34 patients (26%). Streptococcus milleri was isolated in 4 suppurative intracranial and 1 orbital complications. Other pathogens isolated were: Streptococcus pneumoniae in 1 meningitis and Staphylococcus aureus (2), Haemophilus aphrophilus (1), Eikenella corrodens (1) in orbital complications. Beta-lactams were the most used antibiotics, firstly intravenously and then orally two days after clinical improvement. Five (from 18) orbital subperiosteal abscesses, as well as all suppurative intracranial complications, underwent surgery. Mortality rate was null. Permanent morbidity occurred in 2 cases of subdural empyema: hemiparesis and epilepsy.
Discussion: Orbital complications are more common and in the majority of cases antibiotic treatment is enough. In our experience, treatment can be completed with oral antibiotics. Intracranial complications are potentially more serious and early diagnosis for adequate treatment is the mainstay of successful outcome.

PP072

OSTEOARTICULAR INFECTIONS IN PORTUGUESE CHILDREN: A 7-YEAR RETROSPECTIVE REVIEW

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Introduction: Osteoarticular infections in children are medical emergencies. Early diagnosis and prompt treatment are important to avoid severe complications.
Purpose: Determine the clinical characteristics, most common pathogenic organisms and clinical outcomes of osteoarticular infections in children admitted to our hospital. Material and **Methods:** Medical records of 39 patients with the diagnosis of osteoarticular infection were retrospectively reviewed from 2004 to 2011. Demographic data, clinical characteristics, diagnostic tests, medication and outcomes were reviewed.
Results: There were 22 cases of septic arthritis (SA), 10 of osteomyelitis (OM), five of spondylodiscitis and two of both, SA and OM. The age of diagnosis ranged from 14 days to 14 years, with the majority (64%) occurring under the age of five, and 59% were males. Most affected joints: knee (28,2%), hip (25,6%) and vertebral column (12,8%). Fever was present in 76,9% of patients and impaired mobility in 93,3%. Most cases (89,7%) had C-reactive protein levels elevated but only 48,7% had leukocytosis and neutrophilia.
Diagnostic tests performed: X-ray (n=36), ultrasound (n=14), bone scintigraphy (n=10) and CT scan/MRI (n=14). Joint effusion was found in 16 cases. Arthrocentesis and surgical intervention were performed in four and 12 cases, respectively. The major pathogens found were Staphylococcus aureus (n=5) and Salmonella typhimurium (n=1). All patients began empirical antibiotic therapy; the duration ranged from 17 to 120 days (mean 40 days). Osteoarticular complications were found in four cases.
Conclusions: The results are consistent with other reviews: infections were more frequently observed in male children under five years of age and Staphylococcus aureus was the most common agent isolated.

PP073

SINGLE NUCLEOTIDE POLYMORPHISMS IN IMMUNE INNATE GENES AND SEVERITY OF RESPIRATORY SYNCYTIAL VIRUS INFECTION IN CHILEAN INFANTS

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Introduction: Respiratory syncytial virus (RSV) is the most common cause of severe lower respiratory tract infection (LRTI) in infants worldwide. In Chile, 2% of children infected with RSV are hospitalized. Nowadays, genetic factors as Single Nucleotide Polymorphisms (SNPs) in innate immune genes have been implicated in RSV infection.
Purpose: To study association between SNPs of TLR3 (-7C/A, p.Leu412Phe), TLR9 (-2871A/G, -2622A/G) and SPD (p.Met11Thr, p.Ala160Thr) genes and severity of RSV infection in infants. Material: 97 previously healthy term infants, younger than 6-months of age with RVS-LRTI were enrolled. Nasopharyngeal aspirate (NPA) and whole blood samples were collected.
Methods: RSV and other respiratory virus were confirmed by immunofluorescence assays or reverse transcription-real time PCR in NPA samples. SNPs were analyzed by PCR and RFLP in blood sample. Allele and genotype frequencies were analized using Unphased program.
Results: Infants were grouped according to severity of illness in mild (n:31), moderate (n:28) and severe (n:38). No differences for SNPs in TLR3 and TLR9 genes were detected. In SPD gene, we detected differences only in SNP p.Met11Thr. There were no differences in allelic frequencies but the genotype Met/Thr was more frequent in severe infants (68.4%) than in mild (35.5%) (p: 0.012). Genotypes Met/Met (p:0.039, OR:3.07) or Thr/Thr (p: 0.008, OR: 8.27) were associated to mild illness compared with genotype Met/Thr. When this analysis was realized in 63 infants with RSV infection only, without other respiratory virus, we obtained the same result.
Conclusions: The genotype Met/Thr in SNP p.Met11Thr was associated with severity of illness in RSV infection but not other SNPs in TLR3 or TLR9. Supported by Fondecyt 1100477

PP074

BENIGN ACUTE CHILDHOOD MYOSITIS – A LEVEL II HOSPITAL EXPERIENCE

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Introduction: Benign acute childhood myositis (BACM) disorder causes difficulty to walk due to severe bilateral calf pain, mainly affecting school-aged boys after viral upper respiratory infection (URI). In more severe cases, disorders such as rhabdomyolysis and Guillain-Barré syndrome must be excluded.
Purpose: To characterize admitted BACM's population. Material: BACM admissions, from January 2001 to April 2012, in a Level II Hospital's Pediatric Unit.
Methods: Retrospective descriptive study of clinical records' data. Statistical analysis performed by Microsoft Office Excel 2007.
Results: Twenty-eight BACM admissions (0.26% of total) were identified. Twenty-three were boys (82.1%), with a median age of seven years (min=4; max=10). The majority of cases (n=19, 67.9%) were seen from 2008 to 2010 during winter and spring. BACM occurred usually 24 to 48 hours after resolution of preceding URI. Admission major causes were: serious functional impairment due to severe bilateral calf pain (n=24, 85.7%) and relapse (n=4, 14.3%). The median creatine kinase (CK) admission value was 4181 UI/L (min=785; max=26863). Red to brown urine and renal or hydroelectrolytic abnormalities were not seen. Viral tests were performed in 20 children (71.4%), with six positive results: influenza (n=3), cytomegalovirus (n=2) and adenovirus (n=1). All children showed rapid clinical and laboratorial improvement with supportive therapy; median hospitalization time was three days (min=1; max=7).
Conclusions: BACM is a rare, acute, self-limiting muscle disorder, with an excellent prognosis. Likewise, in this study all children recovered without residual impairment or complications. However, hospital admission is occasionally required to follow clinical course and exclude more serious disorders.

PP075

FATAL HEPATIC ABSCESS AS THE PRESENTING MANIFESTATION OF CHRONIC GRANULOMATOUS DISEASE IN A TEN YEAR-OLD GIRL

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Introduction: Chronic Granulomatous Disease (CGD) is a rare, genetically heterogeneous disorder, characterized by life-threatening bacterial and fungal infections and granuloma formation. Different mutations cause different impairment of NADPH oxidase subunits in phagocytic cells. Liver abscess can be the presenting manifestation of the disease (3%).
Case Report: A 10 year-old african girl from S. TomÃ© and PrÃncipe, previously healthy and living in Portugal for the last 3 years, was admitted to our hospital with an acute abdomen. Imaging studies revealed a large abscess involving the right hepatic lobe. She was started on ampicilin, gentamicin and metronidazole, and due to hemodynamic instability, was transferred to the Pediatric Intensive Care Unit. Blood culture grew a Staphylococcus aureus and antibiotherapy was adjusted accordingly. She was submitted to 3 surgical interventions: an exploratory laparoscopy; a laparotomy with abscess drainage of purulent content (isolation of Pseudomonas aeruginosa, Staphylococcus aureus) and a laparotomy with right-side hepatectomy (isolation of Candida parapsilosis). The oxidative burst revealed an impairment of the production of superoxide, thus establishing the diagnosis of autosomal recessive CGD (genetic characterization is ongoing). Despite aggressive measures clinical deterioration occurred, with a rapid progression to multiple organ failure and death.
Discussion: Unusual visceral abscesses should raise the suspicion of neutrophil dysfunction, irrespective of the patientâ€™s age. In CGD, residual NAPDH oxidase function relates to milder phenotypes and older age presentation. It is important to establish prompt diagnosis of CGD in order to apply specific therapeutic measures, which may prevent other complications and improve the outcome.

PP076

PARENTAL KNOWLEDGE ABOUT MANAGEMENT OF FEVER IN PORTUGUESE CHILDREN

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Introduction: Fever is one of the most common clinical symptoms in children and toxicity of antipyretics is an increasing concern.
Purpose: To access parental knowledge in our population which may sustain educational interventions.
Material and Methods: Cross sectional survey study conducted from April 1st - June 30th, 2011. A questionnaire was administered to a convenient sample of Portuguese caregivers of children aged 6 months – 9 years attending the Paediatrics clinic at Hospital do Espírito Santo de Évora. The questionnaire elicited information about definition of fever, concerns about fever, temperature measurement, and treatment modalities. Higher than-recommended-dose was defined as >16,5mg/kg for paracetamol and >10mg/kg for ibuprofen.
Results: The primary caregivers of a total of 186 children (mean age 4,1 years; 44,6% female) completed the questionnaire. The mean age of caregivers was 33,8 years. 94,1% (n=175) of caregivers reported measuring fever with a digital thermometer (axilla 77,3%, rectum 17,8%).
Most (66,7%; n=118) reported using predominantly antipyretics to lower the body temperature, 47% (n=86) for body temperatures ≤ 37,5ºC. 52% (n=93) declared alternating ibuprofen and paracetamol. 5,5% (n=10) of caregivers declared using table- or tea-spoons for determining the dose of drug. 16,3% (n=30) reported using antipyretics without measuring the temperature with a thermometer and 63,9% (n=117) declared administering antipyretics to children while they were asleep.
Purpose stated to use antipyretics: 36,1% (n=65) “to prevent temperature from rising again”, 26,1% (n=47) “to prevent seizures”, 22,8% (n=41) “to cure primary illness” and 12,8% (n=23) to “improve the child’s comfort level”. 7,1% (n=13) and 4,7% (n=8) of caregivers reported using a higher-than-recommended dose of paracetamol and ibuprofen respectively.
Conclusions: Some identified behaviours expose children to the risk of overdose and reveal lack of knowledge concerning management of fever. Paediatricians may help to prevent these behaviours by educating caregivers systematically in every visit.

PP077

CLINICAL OUTCOME OF RESPIRATORY SYNCITIAL VIRUS (RSV) AND RHINOVIRUS (RV) BRONCHIOLITIS IN CHILEAN INFANTS

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Introduction: In Chile, RSV is a leading cause of lower tract respiratory infection (LTRI) in infants causing outbreaks with a fatality rate of 0.1%. Bronchiolitis is the principal diagnoses at admission. Rhinovirus (RV) is the mayor cause of common cold and recently have been demonstrated that causes bronchiolitis.
Purpose: To compare the clinical outcome of RSV and RV LTRIs in infants < 6 months of age, according to a published clinical score system (Larrañaga C. et al. Pediatr. Infect. Dis. J. 2009; 28: 867-873).
Material: Healthy term infants, < 6 months of age, having its first acquired- community LTRI by RSV, RV and, or both viruses, were enrolled 140 infants during the winter seasons of 2010 and 2011 from the Roberto del Río Hospital. Methods: Nasopharyngeal samples (NPS) were collected by CopanR swab during the first three days of symptoms. NPS were tested for by immunofluorescence assay and real time PCR.
Results: A total of 74 infants were RSV positive, 23 were infected by RV and 28 were co-infected with RSV-RV. Six patients were infected by other viruses and 9 infants become negative for viruses. The median age was 2.6 month; 71 cases were male. There was no difference in sex ($p=0.187$) and age ($p=0.063$). Severe LTRIs was observed in 42 (30%) infants, of which 33 were RSV (78.6%); 6 (14.28%) were RSV-RV co-infection ($p<0.008$) and 3 (7.14%) were RV infection ($p<0.047$). So, 33/74 (44.6%) RSV patients had a severe illness, while 3/23 (13.0%) RV infants ($p<0.0047$) and 6/28 (21.4%) RSV-RV co-infected patients had a severe respiratory disease ($p<0.025$).
Conclusions: In our experience RSV is still more common in LTRIs and severe bronchiolitis comparing with RV Supported by Grant: FONDECYT 1100477

PP078

NEONATAL PERTUSSIS

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Introduction: Pertussis is a highly contagious infectious disease and outbreaks continue to appear, especially in young unimmunized children who are at higher risk of severe disease. **Purpose:** To evaluate the impact of pertussis infection in newborns.
Material/Methods: Retrospective chart-review of confirmed pertussis cases in newborns hospitalized in a level III hospital, between 2004 and August 2012.
Results: Eleven cases were diagnosed, 7 (55%) males, age at diagnosis 6-28 days (median 21 days). The most common presentations were: cought and cianosis (55%), refusal to eat (34%) and ALTE (18%). None had fever. Cases were detected in all seasons, except in Autumn. A history of household contact was identified in four, three adults and a twin sister who died with identified pertussis. Leucocytosis above 15000/uL was present in 55%, the maximum leucocytosis was 90000/uL. Three (27%) neonates were admitted to the intensive care unit: all developed pulmonary hypertension, treated with nitric oxide and sildenalfil (n=1) and extracorporal membrane oxygenation (ECMO) (n=1).All were treated with macrolides (64% erithromicin).Co-infection was present in 36%.Encephalopathy resulting from pertussis infection and hypoxia was present in one newborn.The overall median length of hospital stay was 14 days.There were no deads.
Conclusions: Pertussis continues to be a relevant public health concern. In newborns complications are common. Pulmonary hypertension may be life-threatening and ECMO may be needed. Uncertainties still persist about key variables needed to model and design vaccination programmes, such as risk of transmission from adults and adolescents to infants. New vaccination strategies under investigation include vaccination of neonates, family members, and pregnant women.

PP079

EVALUATION OF LIPOPOLYSACCHARIDE-BINDING PROTEIN (LBP) AND C-REACTIVE PROTEIN (CRP) FOR THE EARLY DETECTION OF BACTERIAL INFECTION IN PEDIATRIC ONCOLOGY PATIENTS

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Introduction: The potential value of utilizing lipopolysaccharide-binding protein (LBP) for detecting bacterial infections among febrile pediatric oncology patients has not been elucidated.
Purpose: To evaluate and compare the predictive values of LBP and CRP for the early detection of bacterial infections in febrile pediatric cancer patients.
Material: An analysis of 51 confirmed infections in 37 pediatric oncology patients (mean±SD age: 6.7±5.1 years) was conducted at a tertiary care pediatric hospital.
Methods: LBP, CRP and WBC were evaluated upon fever onset and 48 hours later. Cultures from biological materials, antibodies and PCR were obtained to classify febrile episodes as bacterial or viral infections. The following cut-off points were applied : (a) positive CRP:≥20mg/L, and, (b) positive LBP:≥35mg/L.
Results: Out of 51 infections, 38(74.5%) were bacterial and 13(25.5%) viral. Patients with a bacterial infection presented with higher CRP (33.1vs 10.0mg/L, p=0.005) and LBP (47.5 vs.29.6ng/ml, p=0.0004) levels on admission. Similar findings were observed at 48 hours. Both LBP and CRP on admission had similarly high positive (PPV: 91.2% and 93.8%) and low negative (NPV: 58.8% and 37.5%) predictive values, respectively, in determining bacterial infection. On admission, the sensitivity of LBP for detecting bacterial infections was markedly higher than that of CRP (81.6% vs.42.9%) while the specificity of CRP was greater (92.3% vs.76.9%). The ROC analyses indicates that LBP (AUC:0.88; 95% CI:0.78-0.98), as compared to CRP (AUC:0.84; 95% CI:0.72-0.96), adequately predicts bacterial infections among these patients.
Conclusion: LBP is a reliable marker for detecting bacterial infections upon fever onset in febrile pediatric oncology patients.

NEONATOLOGY

PP080

THERAPEUTIC HYPOTHERMIA FOR NEONATES WITH HYPOXIC-ISCHAEMIC ENCEPHALOPATHY: A NEW META-ANALYSIS

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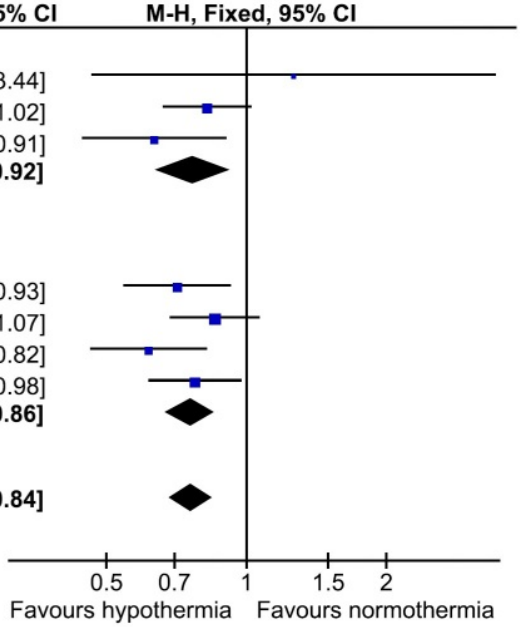
Introduction: Randomised controlled trials (RCTs) have shown that hypothermia reduces mortality and neurodevelopmental disability in neonates with hypoxic-ischaemic encephalopathy (HIE). However, no published meta-analyses incorporate data from all recent studies.
Purpose: To quantify the effects of hypothermia on mortality and neurodevelopmental disability in neonates with HIE. Methods: RCTs evaluating hypothermia in neonates (>=35/40) with HIE were identified from PubMed, EMBASE, and reviews. Studies that compared hypothermia with standard care and that included data on death or neurodevelopmental disability at 18-24 months were selected. A meta-analysis was performed using a Mantel-Haenszel fixed-effect model.
Results: 12 RCTs (1545 infants) were included; 7 (1342) provided information on both mortality and neurodevelopmental disability. Hypothermia significantly reduced the combined outcome of mortality or major neurodevelopmental disability [RR 0.76 (95% CI 0.69-0.84), NNT 7 (95% CI 5-11)] (figure).

	Hypothermia		Normothermia			Risk Ratio	Risk Ratio
Study or Subgroup	**Events**	**Total**	**Events**	**Total**	**Weight**	**M-H, Fixed, 95% CI**	**M-H, Fixed, 95% CI**
Selective head cooling							
Battin	7	18	4	13	1.2%	1.26 [0.46, 3.44]	
CoolCap	59	108	73	110	18.6%	0.82 [0.66, 1.02]	
China Study Group	31	100	46	94	12.2%	0.63 [0.44, 0.91]	
Subtotal (95% CI)		**226**		**217**	**32.0%**	**0.77 [0.64, 0.92]**	
Total events	97		123				
Systemic hypothermia							
NICHD	45	102	64	103	16.4%	0.71 [0.54, 0.93]	
TOBY	74	163	86	162	22.2%	0.86 [0.68, 1.07]	
neo.nEURO.network	27	53	48	58	11.8%	0.62 [0.46, 0.82]	
ICE	55	107	67	101	17.7%	0.77 [0.62, 0.98]	
Subtotal (95% CI)		**425**		**424**	**68.0%**	**0.76 [0.67, 0.86]**	
Total events	201		265				
Total (95% CI)		**651**		**641**	**100.0%**	**0.76 [0.69, 0.84]**	
Total events	298		388				



There was no significant interaction with method of cooling or severity of encephalopathy. Hypothermia was also associated with reduced mortality [RR 0.77 (95% CI 0.66-0.90), NNT 13 (95% CI 8-30)] and increased survival with normal neurological function [RR 1.58 (95% CI 1.29-1.93), NNT 8 (95% CI 5-13)]. In survivors, hypothermia significantly reduced incidence of major neurodevelopmental disability, cerebral palsy, severe neuromotor and neurodevelopmental delay, and blindness, but not deafness.
Conclusions: In neonates with HIE, hypothermia reduces both mortality and major neurodevelopmental disability in survivors. There is no evidence to support a different effect for selective head cooling vs. systemic hypothermia, or moderate vs. severe encephalopathy.

PP081

L-ARGININE FOR CHRONIC LUNG DISEASE (CLD) IN PRETERM NEONATES

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Introduction: Chronic lung disease (CLD) affects about 20-30% of very low birth weight (VLBW, <1500g) infants and is the major cause of morbidity and mortality in this population. CLD is characterized by arrested lung development and abnormalities in the pulmonary vascular bed. An important regulator of vascular perfusion is endothelial nitric oxide (NO). NO is synthesized from the amino acid L-arginine. A relative arginine deficiency or immaturity of NOS activity in premature infants may lead to deficient tissue NO levels, vasoconstriction and ischemia reperfusion injury and may predispose to CLD.
Purpose: To investigate the effect of arginine supplementation on the incidence of CLD and on the survival without CLD in VLBW infants.
Material: 74 VLBW neonates with birth weight <1,500gr and gestational age <32 weeks.
Methods: 32 neonates were randomly assigned to receive a daily oral L-arginine supplement of 1.5 mmol/kg/day with oral feeds, between 3rd and 28th day of life, while 42 neonates received placebo. Infants who continued to require oxygen support or died by 28th day of life were considered to have CLD.
Results: No adverse effects of oral arginine supplementation were noted. No significant differences in birth weight, gestational age, Apgar scores and antenatal steroid administration were noted between the two groups. 11 out of 32 (34.4%) neonates had CLD in the arginine group whereas 21 out of 42 (50.0%) neonates had CLD in the control group, but this was not statistically significant (p=0.139). The survival without CLD was significantly higher in the arginine as compared to the control group (66% vs 43%, p=0.052).
Conclusion: Oral L-arginine supplementation is safe and easy to administer and is likely to improve the survival without CLD in VLBW infants.

PP082

NOSOCOMIAL SEPSIS IN NEONATES: ETIOLOGIC AGENTS AND ANTIMICROBIAL SUSCEPTIBILITIES

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Introduction: Nosocomial sepsis is defined as an infection acquired after 72 hours of hospitalization.
Purpose: Characterize nosocomial sepsis in newborns of Hospital Pedro Hispano neonatal intensive care unit (NICU),Portugal.
Material and Methods: Clinical records of newborns with nosocomial sepsis (January 2010 to July 2012) were retrospectively evaluated for clinical characteristics, isolated agents in cultures and antimicrobial susceptibilities.
Results: It was recorded 228 sepsis episodes (334 admissions). The incidence of nosocomial sepsis was 14.7%(53 episodes;49 patients). About 90% of patients with nosocomial sepsis were premature, mean gestational age was 30 weeks and mean birth weight was 1370g. On average clinical and/or laboratory evidence of sepsis began in the fourteenth day (mean days of hospitalization 46). The 215 central catheters inserted had an average indwelling time of 24 days. It was collected 74 bloodstream cultures and 61 bacteriological cultures of central catheter tip, isolating agents in 15(20%) and 23(38%), respectively. Staphylococcus epidermidis was the most common isolated (64%,n=27), followed by Staphylococcus haemolyticcus (14%,n=6). The antimicrobial susceptibility of coagulase-negative Staphylococci showed resistance to penicillin, erythromycin and oxacillin and sensitivity to vancomycin.
Conclusions: Prolonged hospitalization and invasive procedures, including central catheter insertion, are some of the factors that may have contributed to nosocomial sepsis. The incidence found in our NICU was similar to other published studies. Most of the isolated agents belong to skin commensal flora, prompting the need for revision procedures, including catheter insertion. We emphasize the sensitivity to vancomycin of coagulase-negative Staphylococci.

PP083

NITRIC OXIDE AND PRETERM BRAIN: FOE OR FRIEND?

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Introduction: Altered production of nitric oxide (NO) by the vascular endothelium plays an important role in the pathogenesis of hypoxic ischemic encephalopathy (HIE).
Purpose: The aims of this study were to investigate the correlation between endothelial function and neuronal injury, and to determine the parameters which may contribute to the pathophysiology of brain damage in preterm infants.
Material: In this study, 60 preterm neonates (mean GA 33.6±1.8 wk and body weight 1843±230 g) with HIE were recruited and classified as appropriate gestational age (AGA) and small for gestational age (SGA) groups (n=40; n=20 respectively). Control group consisted of 22 term healthy neonates.
Methods: The peripheral blood NO concentrations was quantified by the Griess reaction on the 1st day of life. To evaluate neuronal injury we determined the concentrations of serum neuron specific enolasae (NSE) and NR2 antibodies on the 3rd day of life by ELISA method.
Results: The SGA infants were characterized by high NO levels compared with the AGA newborns. NO correlated with NSE negatively in AGA group (R: -0.51, $p < 0.05$), and positively in SGA newborns (R: 0.61, $p < 0.05$). Similarly, significant correlation (R: -0.49, $p < 0.05$) between NR2 antibodies and NO concentrations was found in AGA infants.
Conclusions: Negative connections between NO and neuronal injury markers might be estimated as positive response against neuronal injury. In contrast, high NO concentrations in the context of increased NSE activity in SGA infants testify the possible role of NO in the pathogenesis of HIE and growth restriction of newborns. Further investigations regarding the role of different levels of endothelial activity in the severity of HIE in preterm infants with growth restriction will be important.

PP084

ANTIBIOTIC RESISTANCE PROFILE OF SEPTICEMIC PREMATURE NEONATES IN INTENSIVE CARE UNIT

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Introduction: Premature neonates are high risk group of patients for nosocomial blood infections. In this special group of patients is important to identify not only the pathogen microorganism but also the antibiotic resistance profile.
Purpose: To retrospectically evaluate the antibiotic resistance profile in septicemic premature neonates in NICU in the last 5 years.
Material: This study was conducted in the 2nd NICU Aristotle University of Thessaloniki, Papageorgiou Hospital. We retrospectively evaluated 100 blood culture-proven cases of septicemic prematue neonates from 2006-2011.
Methods: Sepsis was identified according to the criteria of neonatal sepsis. We included demographic and microbiological data and antibiotic susceptibility test. Venous blood samples were collected in sterile pediatric tubes and analyzed according to the guidelines of National Committee for Clinical Laboratory Standards.
Results: 55% of the premature neonates were males with mean GA 25.19 weeks and BW 1025 g respectively. Gram-negative were the most commonly isolated microorganisms. Antibiotic susceptibility test was revealed 75% of resistance to ampicillin and 82% to penicillin while was 55% to the combination of amoxicillin with clavulonic acid. Linezolidic acid and piperacillin/tazobactam had small resistance (27%). In Gram negative bacteria, significant resistances were found in cephalosporins and gemtamicin. As far for the other antibiotics they exhibited minor or no resistances.
Conclusions: Better antibiotic usage policies are needed in NICUs. Preterm septicemic neonates had high percentages of ampicillin, penicillin, linezolidic acid and piperacillin/tazobactam resistance. Further retrospective studies are needed to identify antibiotic resistance profiles in NICUs.

PP085

EVALUATION OF BRAIN OXYGENATION IN SEPTIC NEONATES USING NEAR INFRARED SPECTROSCOPY

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Introduction: Neonatal sepsis is a common disease of infancy with increased risk of neurodevelopmental delay. The mechanisms of the brain injury consist of the inflammatory process, leading to the disturbance of the autoregulation and the oxygenation of the brain. **Purpose:** Near infrared spectroscopy (NIRS) represents a diagnostic tool, used for the measurement of tissue oxygenation. Our aim was to investigate a potential impairment in the brain oxygenation in septic neonates.
Materials: The study group consisted of 17 neonates with confirmed sepsis and 17 controls that have been hospitalized in the 2nd NICU of Aristotle University of Thessaloniki. Infants with IVH III – IV, CNS malformations or cyanotic cardiac disease were excluded from the study. Methods: Three ½ hourly measurements of the brain oxygenation of the fronto – parietal lobes bilaterally were performed for each individual in the 1st, 3rd and 7th – 10th day of the septic episode. **Results:** The demographic data of the two groups were similar. Regarding the NIRS measurement, the Total Index Oxygenation (TOI) and the Fractional Tissue Oxygenation Extraction (FTOE), representing the regional oxygenation and the oxygen consumption respectively, were significantly lower in the 7th – 10th day (60 vs 75 and 0.63 vs 0.77, $p < 0.01$, 95% CI 7.58 – 20.63 (right side) and 64 vs 72 and 0.66 vs 0.74, $p < 0.01$, 95% CI 3.14 – 13.85 (left side) respectively).
Conclusions: The brain oxygenation and the brain oxygen consumption measured with NIRS were decreased in neonates underwent septic episode, possibly reflecting the ongoing inflammatory processes. Further larger studies are needed in order to evaluate the significance of the brain hypoxia during sepsis in the neurodevelopment.

NEPHROLOGY

PP086

HOW USING SOCIAL MEDIA CAN HELP RAISE CKD AWARENESS; THE RENAL PATIENT SUPPORT GROUP (RPSG) AT 3 YEARS

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Introduction: The Renal Patient Support Group (RPSG) is a voluntary Facebook group. The RPSG now has 10 members to the admin team supporting over 900 members at various stages of CKD.
Purpose: The objective of this work is to highlight how using social media has helped provide insight and Chronic Kidney Disease (CKD) awareness.
Material: Using social media has permitted the RPSG to effectively provide kidney patients from all backgrounds a platform to interrelate
Methods: In support of World Kidney Day (2012), the RPSG hosted a series of e-seminar sessions in collaboration with NHS Kidney Care to raise CKD awareness which attracted over 120 members of the general public to learn and understand kidney health.
Conclusions: Providing more than peer support, at three years post development, the RPSG has raised CKD awareness and collaborated in research projects using social media.

PP087

IS MUTATION IN FACTOR H A MAJOR PROGNOSTIC FACTOR IN DENSE DEPOSIT DISEASE?

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Dense Deposit Disease (DDD) is a rare renal disease related to the dysregulation of the alternative pathway of the complement cascade, caused by several factors including the presence of an autoantibody to C3 Nephritic Factor, mutations in factor H and autoantibodies to this protein.
Herein we report the case of 8 years old child with benign course of DDD, who achieved clinical remission without immunosuppressive treatment.Laboratory testing revealed moderate proteinuria and significantly decreased serum C3 level.
The results of renal biopsy were consistent with DDD.Genetic analysis revealed that patient carried one copy of the H402 risk allele of factor H.The level of proteinuria did not change during the follow-up period and no nephrotic syndrome signs occurred.Renal function was stable. Further studies are necessary to establish if mutation in factor H correlates with good prognosis.

PP088

SERUM CORTISOL LEVEL IN NEWBORNS WITH ISCHEMIC NEPHROPATHY

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Introduction: Kidney hypoperfusion, stress blood circulation centralization in the newborns with asphyxia may cause formation of ischemic nephropathy (IN). One of the hormones that provide a response to stressful influences is cortisol. It regulates the processes of filtration and reabsorption in the kidney, has diuretic action etc.
Purpose: To examine the cortisol dynamics during the neonatal period in term infants with IN caused by asphyxia.
Material: The study involved 100 full-term infants with signs of IN (50 children who had severe asphyxia, and 50 children with moderate asphyxia). Comparison group included 20 children without asphyxia at birth. IN diagnosed if blood creatinine level over 89 umol/l, blood urea more than 8 mmol/l, urine output less than 1 ml/kg/hour.
Methods: Serum cortisol levels were determined at 1-2, 7-8 and 25-30 days of life by ELISA.
Results: Newborns with moderate asphyxia demonstrated the considerable increase serum cortisol levels at 1-2 days of life ($p<0.001$). Content of this hormone exceeded almost 2 times the level in comparison group at the end of 1 week of life, and reduced to physiological levels only in the late neonatal period. Children with IN caused by severe asphyxia noted the high value of serum cortisol levels in the first two days of life - 505,28 ± 56,96 nmol/l. Further content significantly decreased to 7-8 days ($p<0.05$), but was higher than the rate in other groups. Late neonatal period observed inhibition of cortisol production at this group.
Conclusions: Cortisol level in children with IN during the neonatal period depends on the severity of asphyxia. Depletion of hypothalamic-pituitary-adrenal system in case of severe asphyxia disrupts stress-induced response and adaptation newborn to extrauterine life.

PP089

FLANK PAIN- WHAT ELSE? – A CASE REPORT

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Introduction: Congenital ureteropelvic junction obstruction (UPJO) is the most common cause of antenatal hydronephrosis, which may be present in the fetus or at any stage during childhood. It is usually caused by intrinsic stenosis of the proximal ureter and less commonly by extrinsic compression.
Case report: We present the case of an 8-year-old boy, born at term, with no personal or family history of nephro-urological disease. The child was admitted to the hospital for a second episode of left sided colic pain. He presented pain on palpation of the left flank and positive renal murphy's sign. Laboratory tests showed microhaematuria in the urinary analysis. Renal function was normal. The microbiological urinalysis was negative for urinary tract infection. The abdominal x-ray did not show renal calculi. Ultrasound of the abdomen revealed a severe dilatation of the left renal pelvis, proximal and medium ureter. These findings were further confirmed by abdominal computed tomography, without definition of obstructive intrinsic or extrinsic cause. MAG3 renogram showed a hydronephrosis of the left kidney with normal scintigraphic uptake and radioactive urine formation but the urinary upload was very low and elimination after diuretic was quite delayed, indicated UPJO. Total resolution of the symptoms and kidney´s distortion was achieved following pyeloplasty.
Conclusion: It is unlikely that patients with primary UPJO remain asymptomatic until childhood, especially in patients with normal prenatal ultrasound screening and postnatal life, as was the case of our patient in whom the only clinical sign was pain at flank. In these cases, an incidental finding of hydronephrosis on ultrasound may be the first clue for the diagnosis.

PP090

ULTRASOUND FOLLOW-UP OF PATIENTS WITH CONGENITAL HYDRONEPHROSIS

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Introduction: Hydronephrosis (H) is the most frequent urinary tract abnormality.
Purpose: To evaluate the evolution of congenital H with ultrasonography (US)
Material and methods: Retrospective study of 131 children (97 boys, 34 girls) with congenital H followed-up with US for a mean period of 28 months. In 60.30% H were diagnosed prenatally. The patients were divided in three groups according to the degree of H- mild (splitting of the renal sinus); moderate (wide splitting of the renal sinus along with pelvis dilated outside the renal border) and severe (if additional thinning of the renal parenchyma) (Society for Fetal Urology guidelines). The outcome was partial or total resolution of H, stability or progression. Additional imaging studies – VCUG, MRI, diuretic renography or IVP were performed depending on clinical indications.
Results: In 86/131 (65.6%) patients mild H was found, moderate - in 18/131(13.7 %) and severe in 27/131(20.6 %). The study enrolled 110 children, 21 patients were lost from the follow- up. Spontaneous resolution of H was shown in 40% of patients, 55.45% were stable and in 4.54% a progression was registered. In a group of mild H 42.16% resolved, 51.80% were unchanged and 6.02% progressed. Patients with moderate H showed resolution in 35.71% and the remaining were unchanged. Children with severe H in 30.76% improved and in 69.23% H was persisting.
Conclusions: US is reliable, safe and available method for screening and follow-up of children with congenital H. Mild H has good prognosis and resolves spontaneously. US is reliable, safe and available method for screening and follow-up of children with congenital H. Mild H has good prognosis and resolves spontaneously. Close US monitoring is recommended especially in patients with moderate and severe H in order to assess additional investigations and therapeutic approach.

PP091

HIV NEPHROPATHY AND HAART NEPHROTOXICITY – APPLICATION OF A SURVEY PROTOCOL

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Introduction: Nephropathy in HIV infected patients may result from viral infection, immune mechanisms or toxicity of highly effective antiretroviral therapy (HAART), mainly tenofovir. Before the era of HAART, about 40% of HIV-infected children developed renal complications. The actual incidence of these pathologies in pediatric patients is unknown and clinical guidelines were only established for adults.
Purpose: Elaboration and application of a protocol of nephrological survey to a population of HIV-infected children and adolescents followed in a immunodeficiency appointment and determination of incidence of nephropathy.
Material and Methods: Determination of demographical, clinical and laboratorial parameters.
Results: Ninety seven patients were included, 51.5% were male and 49.5% of African origin. The median age was 14 years (3-19 years). Most patients were infected with HIV type 1 virus (94.9%) and vertical transmission was the most frequent pathway of infection (91.8%). In 86.6% of cases patients were receiving HAART, and in 23.8% of these, treatment included tenofovir. None of the children had CD4+<200 and 73.6% had CD4+>500. Viral load was indetectable or <1000 in 78.4%. Two patients had chronic kidney disease (1 in peritoneal dialysis) and 1 had proteinuria and high blood pressure. In the remaining patients, microalbuminuria was found in 1.7%. Urinary excretion of calcium was elevated in 8.5% and of phosphate in 3.4% (71.4% receiving tenofovir); none of the patients had alteration of the urinary excretion of uric acid.
Conclusions: In this population, some renal alterations were found. A longer follow-up is needed to confirm these findings and establish timing for onset and periodicity of screening.

PP092

THE VALUE OF DIFFERENT CLINICAL AND LABORATORY PARAMETERS ON THE PREDICTION OF ACUTE RENAL INVOLVEMENT IN CHILDREN WITH FEBRILE URINARY TRACT INFECTION

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Introduction: Urinary tract infection (UTI) is a common cause of fever without source in children younger than 2 years. However, little is known on the prediction of a possible renal involvement using clinical and laboratory findings in these patients.
Purpose: To evaluate the predictive value of various clinical and laboratory parameters on the identification of acute renal involvement in children with febrile UTI.
Material: The study included 148 children aged 0–2 years, admitted to a tertiary Children¢s Hospital during a three year-period, with a history of febrile UTI.
Methods: Detailed clinical history, physical examination and laboratory data were obtained from all children. Laboratory data included inflammatory markers, urine and blood cultures and acute phase DMSA.
Results: The mean±SD age of the patients was 12±8(2-24) months and the mean±SD duration of fever was 2.87±0.86days. 51.35 % of children had positive acute DMSA. Of them, in 37.84 % children DMSA score was >/3, whereas in 62.16 % it was \<2. Comparison of the latter two groups showed that DMSA score > 3 was associated with prolonged fever (12.5% vs 6.52%), shivering (16.3% vs 5.4%, p=0.05), elevated WBC (18,844±7,205 vs 15,083±5,327/ìL, p=0.001), ANC (10,196±5,108 vs 7,118±3,728 ìL, p<0.001), PCT (6.17±5.45 vs 0.51±0.23 ìg/L, p<0.001) and CRP (90±75 vs 46±42 mg/L, p<0.001). Logistic regression analysis (OR, 95%CI) revealed that the presence of shivering (3.4, 0.93-12.39), as well as WBC>18,000/ìL (2.44, 1.23-4.82), ANC>9,300/ìL (4.42, 2.15-9.08), CRP>50mg/L (2.67, 1.34-5.32) and PCT value ≥1.64 ìg/L were statistically significant risk factors for the development of abnormal DMSA>/3 in the acute phase of the infection
Conclusions: Our data indicate that children who present with febrile UTI along with shivering and elevated inflammatory markers are at higher risk for renal involvement.

PP093

RENAL TUBULAR DISORDERS: A RARE COMBINATION

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Introduction: Inherited renal tubular disorders are caused by several defects in the tubular transport systems and frequently have a mendelian trait. These defects can lead to an isolated or a more generalized disorder with a wide clinical spectrum.
Case description: We describe the case of a five year old male child with an irrelevant past and family history and adequate growth and neurodevelopment. He was referred to the General Pediatrics Consult in our hospital for etiologic investigation of glycosuria with normal plasma glucose detected in an episode of acute gastroenteritis. The physical exam was unrevealing.
The initial investigation showed: plasma glucose, HbA1c, creatinine, BUN, calcium, phosphorus, ionogram, osmolarity, pH and blood gases in the normal range; urine glucose of 1000 mg/dL. The initial diagnosis was Familiar Renal Glycosuria (FRG). The investigation of other tubular defects showed an increased excretion of glycine with a normal plasma range. The renal ultrasound was normal. Glycosuria was also slightly positive in the father and negative in the mother and the brother. During two years of follow-up there was a favorable evolution despite maintaining glycosuria.
Discussion: Renal glycosuria is the renal excretion of glucose with a normal glycemia. In FRG the insufficient reabsorption of glucose in the renal tubule is caused by mutations in the glucose and sodium cotransporter. Clinically it has a favorable prognosis. Hiperglycinuria is an aminoaciduria that can lead to renal stone formation. It is associated with mutations in the proton and aminoacid transporter. The investigation of glycosuria in this child revealed a rare association with glycinuria. It changed our clinical management as it can be associated with renal calculosis.

NEUROLOGY / NEURODEVELOPMENTAL PAEDIATRICS

PP094

EIGHT PATIENTS WITH KAWASAKI DISEASE (KD) COMPLICATED BY MILD ENCEPHALOPATHY WITH A REVERSIBLE SPLENIAL LESION (MERS)

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Introduction: Encephalitis or encephalopathy is rare complications of KD.
Purpose: To evaluate clinical and radiological features of KD patients complicated by MERS.
Material and Methods: Information on patients was collected retrospectively.
Results: Eight previously healthy patients aged from 2 to 14 years were enrolled. All were treated with ƒÁ-globulin, the fever being alleviated between day 5 and 25. Two patients (8 and 14 years) had a cardiac aneurysm as a sequela. All 8 patients presented with delirium between day 1 and 10. MRI (day 3 to 10) revealed reduced diffusion in the splenium of the corpus callosum, which had disappeared by day 7 to 15. No specific treatment for MERS was performed for any patient.
Conclusions: It is important to acknowledge that MERS can be observed in patients with KD, especially in older children, and that they might be at high risk for cardiac abnormalities.

PP095

CLINICAL PRESENTATION OF TUBEROUS SCLEROSIS COMPLEX IN INFANTS

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Clinical presentation of tuberous sclerosis complex (TSC) depends on the age of the patients. The most of the cases were diagnosed later at childhood despite very early signs of disease. Only a few published studies included only infants with TSC particularly.
Purpose of our investigation was to evaluate clinical, neuroradiological, ultrasound and neurophysiological characteristics of TSC in infants.
Methods: Investigation was designed as a single-center retrospective study. Inclusion criteria were: children with TSC clinical presentation at the age less than two years treated in period from May1992 to May 2012. Data were collected from medical records, computerized EEG databases and available sources related to neuroradiological, cardiological, ultrasound and supplementary relevant analyses.
Results: The study included 27 infants with initial TSC clinical presentation at median age of 6.7 months. Median follow up period was 4.8 years. Initial signs of TSC were: epileptic seizures in 25 (93%); hypomelanotic macules in 25(93%); CT brain calcifications or nodules 12/18 (67%) and cardiac rhabdomyoma (CR) 7/13 (54%). In two newborns, the only TSC manifestation during the first months was CR. During the follow-up, the percentage of patients with CR (up to 85%) and CT abnormalities (up to 78%) was increased, while renal cysts were found in 56%. The most common initial type of epilepsy included infantile spasms (68%) and focal epilepsy (32%).
Conclusion: Clinical presentation of TSC in infants is atypical and current TSC criteria are not absolutely acceptable for diagnosis at very early age. The results of our study contributed to suggestion of some previous studies that it is necessary to reconsider criteria for TSC diagnosis in newborns and infants.

PP096

NEUROFIBROMATOSIS TYPE 1 – CLINICAL EXPRESSION AND COMPLICATIONS

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Introduction: Neurofibromatosis type 1 (NF1) is one of the most common genetic disorders. It has an autosomal dominant transmission but half of the cases come from new mutations. Clinical expression and incidence of complications are variable between patients.
Purpose: To evaluate the epidemiological and clinical features of children with NF1 followed in the paediatric department of a Portuguese second-level hospital.
Material and Methods: Retrospective descriptive longitudinal study based on the clinical records of children with NF1.
Results: Twenty-five children (11 males; 14 females) fulfill the diagnostic criteria of NF1. Age of referral varied from 4 months to 13 years old; median age of diagnosis was 5 years old. Twenty-four have café-au-lait spots; 52% have positive family history. Six children developed optic glioma (5 between 1 and 3 years old): 1 receded spontaneously, 2 submitted to chemotherapy and 3 under surveillance without complications. Four children have Lisch nodes (mean age of diagnosis - 11 years old). One girl has a plexiform neurofibroma diagnosed at the age of 13. Six children developed scoliosis (mean age – 7,3 years old). Two boys have Moya-moya syndrome, diagnosed at 1 and 4 years old, for now stable and under surveillance. One girl had a cerebellar astrocytoma at 11 submitted to resection. Four children have seizures, 3 associated to developmental disorders.
Conclusions: This group of cases shows the variability of expression of NF1. Café-au-lait spots and family history are frequent. Optic glioma seems to appear early in life while neurofibromas, Lisch nodes and scoliosis manifest later. Developmental disorders seem to relate to seizures. These data help to recognize the need for follow up protocols to diagnose complications precociously.

PP097

LITTLE PEOPLE HEADACHE - A CASUISTIC REVIEW

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Introduction: Headache represents a common symptom and reason for seeking medical care among paediatric age group, especially in small children in whom it is more difficult to characterize.There is no consensus regarding its approach and appropriate workup.
Aim: The aim of this study was to characterize the paediatric population presenting with headache under the age of 5 years old, attending an outpatient clinic of a Portuguese neuropaediatric department centre.
Methods: A retrospective study was performed including all children with a follow-up due to headache that was first recognized before the age of 5.Data (demographic, headache characteristics, workup, prophylactic treatment, outcomes) were collected from local clinical database with all incomplete files being excluded.
Results: From a total of 225 patients, 63 were included in the present study among which 54% were male. The average age of headache onset was 4 years old and 90,5% had associated symptoms, with the most frequent being phonophobia, followed by photophobia. Eighteen patients identified the predisposing factor (most frequently stress/anxiety) and 37 mentioned relieve with rest.Regarding workup, 40 patients had complementary exams (neuroimaging in 31).When considering international classification, the most common was migraine followed by tension headache.Prophylactic treatment was initiated in 31 patients.
Conclusion: To the authors' knowledge, there is a small number of published data regarding headache among this age group.Although the small sample of this study, the authors would like to emphasize the difficulty of headache characterization, which can explain the current broad use of neuroimaging.Future research is therefore needed to a better definition of pediatric headache under the age of 5 years.

PP098

HEADACHE IN THE PEDIATRIC EMERGENCY DEPARTMENT

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Introduction: Headache is a common complaint in children and adolescents and the etiology varies widely. Generally, the anamnesis and physical examination can establish a differential diagnosis. However there are situations where neuroimaging studies are needed.
Purpose: To describe the spectrum of headaches in a pediatric ED. Material and Methods: A retrospective analysis was performed on the ED records of patients observed in a pediatric ED in 2011, with headache as the main complaint.
Results: Headaches accounted for 1.7% of admissions (668 of 40470), representing 630 patients. According to the criteria of the International Headache Society, we obtained the following etiological distribution: 7.2% primary headaches, 65.3% secondary headaches and 27.5% unclassifiable. Migraines accounted for 87.5% of primary headaches. The majority of secondary headaches (86.2%) were attributed to extra-cranial infections. We observed 18 cases of post-trauma headaches, 6 of meningitis, 2 of post-ictal headache, 1 encephalitis and 1 headache associated with drugs. Neuroimaging was performed in 9.5% of cases; 25% had abnormal findings. Paracetamol was the most used drug for treatment (44.2%). The majority of patients (91.6%) were discharged, however 3 children were transferred to a central hospital. Among the children with primary headaches, 20.0% were already being treated as outpatients and 22.2% were referred; 3 cases were readmitted to the ED.
Conclusions: The etiology of headaches in an emergency context is varied, with life-threatening intracranial disorders occurring in no more than 6%. The investigation of the pattern of headache, family history and a detailed neurological examination is essential in the diagnostic approach in order to avoid the inappropriate use of neuroimaging

PP099

CLINICAL AND LABORATORY ASSESSMENT OF THE GENERAL HEALTH STATUS OF MENTALLY RETARDED CHILDREN:A CONTROLLED STUDY

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Background: Mental retardation is a major health and social problem. However, the medical aspect and probable consequent general health affection and their correlates need further clinical and research attention.
Objective: To investigate the general health status of a group of mentally retarded children by clinical and laboratory assessment.
Subjects and Methods: Eighty sex mentally retarded children were studied (49 males and 37 females) and a comparative group (age and sex matched) with an average IQ was taken as a control group (70 in number, 40 males and 30 females. Complete history taking, clinical assessment including anthropometric measurements and laboratory investigations were done. **Results:** The group of mentally retarded children had significant lower body weight and head circumference than the control group. In addition, clinical history and examination showed a higher frequency of epilepsy, pallor, scalp and skin diseases (including alopecia and infection), acute and chronic respiratory tract infection, signs of both recent and old injuries among the mentally retarded children group than the control group and the difference was statistically significant.Concerning laboratory findings, mentally retarded children had significant anemia, parasitic infestation in stool and pus in both urine and stool in comparison to the control children.
Conclusion: Mentally retarded children have more vulnerability to various medical problems including skin, respiratory and urinary tract infections, trauma, epilepsy, anemia and parasitic infestations. This calls for more clinical attention, in addition to family and young doctor education.

PP100

CHILDREN'S SLEEP HABITS, PROBLEMS AND PARENT AWARENESS: RESULTS OF A PRIMARY CARE SURVEY

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Introduction: Sleep problems are very prevalent during infancy and may persist if not adequately managed. However, research indicates that they may go undetected during routine clinical care due to superficial inquiry and parent misinterpretation of sleep problems. The sleep habits, prevalence of sleep disturbances and parent awareness have been poorly evaluated in Portugal.
Purpose: The aims of this study was to detect sleep disturbances in healthy children, describe their sleep habits and problems, collect data for future reference, and orient parents and children for healthier practices.
Material: Convenience sample of caregivers of children between 6 months and 12 years attending a primary care heath center. Methods: The caregivers completed a brief survey about child's sleep.
Results: Were obtained 41 reports. Mean age was 37 months, 63% girls. Average total sleep duration was 11 hours. 41% stated that the child was not getting enough sleep time. Co-sleeping was common; 46% of children shared room with parents (15% in the same bed) and 51% not fall asleep in their own bed. There was common sleep resistance (31%), 51% went to bed later than 10 pm and 73% watch television before bedtime. Sleep problem were reported in 29% of cases, almost all related with short time of sleep. Vocalization (29%), nightmares/night terrors (28%), bruxism (20%) and respiratory problems during sleep (12%) were reported but not identified as a problem.
Conclusions: The duration of sleep in these children was low, there were problems undetected by the parents and poor sleep habits were prevalent. Active asking about children's sleep should be part of every routine physical examination and seems necessary to increase the educational measures and explain the importance of sleep.

OTHER

PP101

A SURVEY OF STRESS RESOURCES AMONG PARENTS OF CRITICALLY ILL CHILDREN IN PICU

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Introduction: Pediatric intensive care unit has long been recognized as an highly stressful place. Therefore this study was done to determine stress resources of parents in PICU.
Method: A descriptive cross sectional study was carried out by using data obtained through "parental stressor scale Pediatric intensive care unit". A convenience sample of 25 parents whose child had recently admitted to PICU ward were subjects for study. Demographic data were collected using an investigator designed questionnaire
Findings: In a comparison of mean score on the 7 dimensions of the PSS: PICU parents found the "Alteration in parental role "to be the greatest source of their stres (3.74±0.61)
Conclusion: Result suggests the need to prepare parents for role alteration when a child is admitted to PICU. They should also be encouraged to participate in the child's care and provides comfort measures.

PP102

PLEURAL EFFUSION SECONDARY TO RETAINED APPENDICOLITH ABSCESS

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Backgrounds: Acute appendicitis is a commom surgical emergency in pediatric population. Laparoscopic appendectomy has become increasingly popular however despite its advantages it also presents complications.
Case presentation: A 14-year-old male presented to the emergency department with high fever and right chest pain, for 4 days, associated with anorexia and weight loss. He had been appendectomized by laparoscopy 15 days before for perforated appendicitis. On examination he was unwell, presented tachypnea and pulmonary auscultation revelead decreased breath sounds on the lower third of the right hemithorax. Chest X-ray demonstrated a homogeneous opacity of the right lower third, with obliteration of the costophrenic angle. Laboratory studies showed leukocytosis, neutrophilia, elevated CRP and sterile blood culture. He was admitted, treated with ampicillin and analgesia. Investigation realized was negative (Mantoux test, Streptococcus pneumonia urinary antigen, serologies).For persistent symptoms ampicillin was substituted by ceftriaxone and added clindamycin.CT showed an opacity in the right lower lobe which seemed to be in contiguity with the diaphragm and liver parenchyma, suggesting an abscess; inside this image was observed an image difficult to characterize (granuloma?, iatrogenic?). He underwent diagnostic laparoscopy that revealed a supra-hepatic abscess which was drained and a faecolith was removed. He was discharged asymptomatic after 28 days of hospitalization, with subsequent reassessment.
Discussion: Perforated appendicitis shows an increased risk of intra-abdominal abscesses formation. Abscesses formed by retained appendicoliths are rare.
In this case, pleural effusion occured in contiguity with the abscess, which explains the failure of antibiotherapy.

PP103

ORAL MANIFESTATIONS OF ELLIS-VAN CREVELD SYNDROME: A CASE REPORT

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Aim: The aim of this paper is to report a case in which the diagnosis of Ellis-van Creveld (EvC) syndrome was possible with the oral findings of a dentist. EvC syndrome also known as chondroectodermal dysplasia, is an autosomal recessive disorder, mainly affecting the ectodermal components such as, enamel, nail, and hair. Patients with EvC syndrome characteristically presents with congenitally missing teeth, abnormal frenal attachment, microdontia, and hexadactyly.
Case Report: A 9-year-old girl referred to Pediatric Dentistry Department, with a chief complaint of missing lower and upper anterior teeth. Her history revealed that she was the first child of consanguineous parents. The patient was short statured, which was relatively short for her age, and had a waddling gait. The limbs were shortened and markedly deformed. Fingernails were hypoplastic, thin and spoon shaped. Head morphology, facial appearance and quality and quantity of hair were normal. Panoramic radiograph showed missing permanent maxillary left lateral incisor and permanent mandibular lateral incisors, delayed formation of tooth buds of permanent maxillary right and left canines, rihgt lateral incisor, first and second premolars and permanent mandibular left and right canines, first and second premolars. The permanent mandibular right central incisor was embedded to lower jaw bone. Taurodontisum were present with all the first and second primary molars. After evaluation of the oral manifestations, the dentist referred her to a geneticist, with the suggestion of EVC. The dental report, together with the systemic manifestations, allowed the geneticist to confirm the EVC diagnosis. The necessary dental procedures were performed.
Conclusion: The presentation of medically compromised and syndromic children

PP104

DENTAL MANAGEMENT OF CHILDREN WITH EPIDERMOLYSIS BULLOSA: A REPORT OF THREE CASES

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Objective: This study aimed to present the oral and extra oral symptoms and treatment of 3 cases of dystrophic and simplex forms of Epidermolysis Bullosa (EB).
Case Report: Case 1: A 14 years old, simplex EB patient reported with a complaint of tooth ache and halitosis. Treatment of simplex EB patient, implemented in clinical conditions because of the sensitivity of the skin is less than the dystrophic EB. Case 2: A 14 years old dystrophic EB patient reported with complaints of missed teeth, bleeding of the gums and halitosis. As a result of dystrophic EB disease, thickening of skin and sensitivitiy and high risk of infection, patient treated under general anesthesia and caring for sterilization. Case 3: A 13 years old dystrophic EB patient reported with complaints of tooth ache, tooth sensivity, bleeding of the gums and halitosis. This patient also treated under general anesthesia and caring for sterilization.
Conclusion: Epidermolysis Bullosa, is the deficiency in anchoring fibrils impairs the adherence between the epidermis and the underlying dermis. The bullosa occurs in any trauma. Bullosa may bleed and open to infections. There will be scars after healing. Because of this reason, palpation and trauma have to be decreased for this kind of patients. Oral hygen, regular dental checks and standardization of diet is very important for EB patients.

PP105

CONDYLOMATA ACUMINATA IN CHILDREN- DIAGNOSTIC AND LASER TREATMENT

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Objective: HPV (Human papillomavirus) is the most common sexually transmitted infection worldwide. We investigated in a retrospective study the effect of CO2 laser treatment in anogenital condylomata acuminata in children.
Methods: Between 2001 and 2011, 22 children with condylomata acuminata were treated with the CO2 laser. The patients age ranges between 1 to 13 years. We had 18 patients with anal condylomata acuminata, one girl had warts on the vulva and 3 girls in both regions. All of the children had biopsies prior to treatment with immunohistochemistry and HPV subtyping by PCR assay to detect and differentiate the HPV type.
Results: The majority (n=18) of the HPV-positive children were infected with type 6, whereas in 2 children HPV type 57 and another high risk HPV were detected. In 2 patients we saw a mild to moderate epithelial neoplasia (AIN 1-2) with HPV 6. In another 2 patients we saw condylomata acuminata without HPV verification. We performed 34 treatment sessions under general anesthesia. No severe side effects were present.
Conclusion: CO2 laser treatment is a safe and effective way to treat anogenital warts in children. The risk of a damage of the sphincter muscle and incontinence is also very low.

PP106

ATHLETIC INJURIES IN CHILDHOOD

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Introduction: Injuries during organized exercise/training are common in childhood.
Purpose: Recording the frequency of injuries in children who practice sports. Material: During 2010-2011 25 children aged between 11-14 years old, 18 male (72%) and 7 female (28%) – average age: 13years-, who were admitted and examined in the outpatient clinic because of musculoskeletal complaints, were studied.
Methods: Symptoms were recorded depending on the part of the musculoskeletal system being injured and the intensity of injury such as: pain, swelling of the affected area, hematoma, limping gait, difficulty in using the upper limb, inability of movement (if fracture) as well as the types of the injuries. The diagnosis was based on clinical and radiographic findings.
Results: Ankle sprain had 14 children (56%), muscle contusion (quadriceps-adducts) 6 (24%), shoulder exarthima 3 (12%), tendonitis of the patellar tendon 1 (4%), ankle fracture 1 (4%).
Conclusions: 1.The athletic injuries can affect bones or soft tissue (ligaments, muscles, tendons). 2. In sports in childhood, injuries can occur during training or during unsystematic activity (due to children¢s underdeveloped coordination system, immaturity and inability in recognizing and evaluating danger), with the ankle injuries to occupy the leading position

PP107

HEALTH CARE STANDARDS ADJUSTED TO NEEDS OF MOTHER AND NEWBORN- BABY FRIENDLY PLUS

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Introduction: Breast milk has the absolute priority in newborns' feeding. It is advised as the exclusive until the sixth month of life, and combined with solid food until one year and longer. Modern life-style impose the decision to stop breastfeeding or to add supplements without justified medical indications. It leads to decrease of breastfeeding rates, and increase of morbidity risk –in neonatal period and later. The barriers to successful breastfeeding could be overcome by the health care staff, close environment, and the whole community.
Purpose: Realization of National Millennium goal of at least 30% of children exclusively breastfed up to sixth month of life is not possible without revitalization of the basic BFHI standards and incorporation into mother and child health care standard procedures.
Material and Methods: In accordance with the National program of health care of women and children, accompanying Guideline, the National Breastfeeding Committee was established.Their tasks include making the action and education plan for Standards implementation, breastfeeding promotion, coordination of activities, control of substitutes advertising.
Results: Standards for breastfeeding promotion are the optimal level of health care of pregnant woman, during delivery, newborns and infants. The law regulation, international standards and WHO Code are established aiming to protect the breastfeeding.The Standards include 11 defined rights of pregnant women/mothers and children, the National Guidelines in deliveries, and the Code of breast milk substitutes advertising.
Conclusion: Standards promotes exclusive breastfeeding, witch will reduce the morbidity and mortality rates in newborns and prevents serious metabolic diseases in adult.

PP108

FIRST CASE OF A PATIENT WITH LATE-ONSET POMPE DISEASE RECEIVING ENZYME REPLACEMENT IN MEXICO WITH VERY GOOD PROGRESS IN THE CARDIOMYOPATHY

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Introduction: Pompe disease is a deficiency of acid alpha-glucosidase lysosomal enzyme due to an autosomical recessive disorder manifested by glycogen storage in liver and muscle. Cardiomyopathy in late-onset Pompe is a rare condition with low response to enzyme replacement therapy (ERT) while early-onset Pompe has cardiomyopathy with good response to ERT
Case: A 8 year old female with normal development until 3 years of age when starts with recurrent respiratory infections and pneumonia, reduced physical activity and frequent falls. In 2011 underwent right basal lobectomy because bronchiectasis and necrosis and appears progressive muscular weakness with severe impairment, generalized atrophy hypotonia and inability to swallow that requires gastrostomy. Diagnosis of Pompe disease is suspected and was confirmed when we found glycogen storage in muscle biopsy, alpha-glucosidase low activity (0.19 range 1.5-10), CPK (1620) and positive molecular study with two mutations. Echocardiogram shows myocardial and septal hypertrophy, LVEF 50%, pulmonary hypertension with RVOP 50mmHg, intraventricular septum 13mm. We decided to start treatment with ERT in february 2012 with acid alpha-glucosidase 20mg/k every 2 weeks, sildenafil, furosemide and spironolactone and continuous BPAP.
Results: After 14 infusions (7 months) the patient has normal swallowing, eat alone, recovered muscular tone and spontaneous movements, improved nutritional status and currently is eutrophic. Follow up echocardiogram shows reduced intraventricular septum (8mm), increased LVEF 70% and reduced RVOP 35mmhg. Use alternating BPAP and O2 every 3hrs, sildenafil and diuretics were suspended.
Conclusions: Our patient was the first treated in Mexico and had a spectacular response to ERT in both muscular and cardiopulmonary disorders even though the literature mentions no cardiomyopathy improvement in late-onset Pompe. Despite the cost, the use of ERT is already a reality in developing countries that improves patients' quality of life.

PP109

CONGENITAL HEART DISEASE - IMPACT ON THE FAMILY

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Introduction: The presence of a congenital cardiac disease (CHD) involves psychological, emotional and adaptation problems from the part of the child and the family.
Purpose: The aim of the study was to identify the problems with which the family of a child with CHD is confronted and to evidence the modalities by which the family copes with them. **Material:** The study included 24 subjects: 12 children with CHD aged between 2 months and 10 years, and their mothers. The pediatric subjects presented: 3 cases, cyanogenic CHD, 7 cases, non-cyanogenic CHD, and 2 cases, cardiomyopathy.
Method: We used the qualitative research method through a semi-structured interview, 15-40 minutes/subject, which was recorded, analyzed and coded.
Results: Cardiac diagnosis was made at birth (5 cases), during the first year of life (5 cases), and after the age of 1 year (cardiomyopathies). Some of the children had already undergone surgery (2 cases), others were under preoperative preparation (8 cases), and the 2 patients with cardiomyopathy had no operative indication. The identified problems were grouped into five categories: problems related to diagnosis (late diagnosis, insufficient information or inadequate communication), problems related to surgery from planning, absence of psychological support, social implications, and economic problems. Coping strategies were: denial, minimization, depression, anxiety, social isolation. Adaptive strategies included: searching information and social support, active implication, faith and hope.
Conclusions: Congenital heart disease have a psychological impact on the family and a social impact. The education level of the mother is correlated with the coping strategies that the family adopts and the way of managing the health problem of the child.

PP110

SUCCESSFUL TREATMENT OF DIFFUSE SCLEROSING OSTEOMYELITIS OF THE MANDIBLE WITH INTRAVENOUS PAMIDRONATE: RESOLUTION OF PAIN AND BONE INFLAMMATION WITH IMPROVED COSMETIC APPEARANCE. A CASE STUDY

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Introduction: Diffuse sclerosing osteomyelitis of the mandible (DSOM) is a form of chronic non-infectious osteomyelitis (CNO) and predominantly affects patients <18 years. It can result in cosmetic disfigurement. Intravenous pamidronate (IV-PAM) has been reported to be effective in multifocal CNO.
Purpose: To describe clinical and radiologic outcome of a DSOM patient following treatment with IV-PAM.
Methods: A 4-year old female was diagnosed with DSOM and prospectively followed from 2007 to 2012. She presented with 20-month history of facial asymmetry and painful bony expansion of the left hemimandible. CT-scan revealed bone expansion suggestive of fibrous dysplasia, but two consecutive bone biopsies revealed inflammatory cells only. Infectious osteomyelitis was suspected, but cultures were negative and antibiotics were of no benefit. MRI revealed bone marrow and soft tissue edema with periosteal reaction, consistent with DSOM. Naproxen was not effective and she was started on monthly 1-day IV-PAM infusions (1st dose: 0.5 mg/kg; each subsequent dose: 1 mg/kg). The response to treatment was assessed according to visual analogue score for pain (VAS, 0= no pain, 10= maximum pain possible), sequential MRIs and clinical photos.
Results: She received 8 monthly IV-PAM infusions. After 1st dose, VAS decreased from 10 to 0. MRI documented resolution of abnormal signal at 5 months with gradual mandibular remodelling. Clinical photos confirmed resolution of facial asymmetry over 5-years. She remains currently asymptomatic at 60 month follow-up.
Conclusion: DSMO is challenging due to its rareness and lack of uniformly effective treatment. IV-PAM was effective in this young refractory patient and resulted in resolution of pain and mandibular remodelling.

PP111

A CASE OF DYSKERATOSIS CONGENITA IN A CHILD

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Introduction: Bone marrow failure could be either acquired or congenital. Dyskeratosis congenita is a rare cause of inherited bone marrow failure in children. This genetic syndrome displays various forms of inheritance and is associated with a number of congenital abnormalities affecting mainly the bones, kidneys and heart and a severe risk for cancer in adulthood. The haematological manifestations usually begin within the first decade of life. We report on a boy with short stature and multiple stigmata, which eventually was diagnosed as a case of Dyskeratosis congenita.
Case report: A 10-year old boy was admitted in our clinic for rectal bleedings. From the age of 2 years old, he had dystrophic nails and mouth ulcers. When he was 6 years old, growth hormone deficiency was diagnosed and replacement treatment was started. At the age of 7, he had neck rash and thrombocytopenia, with no abnormal findings from his bone marrow aspiration. During his hospitalization he had mouth ulcers, glossitis, periorbital erythema. New bone marrow aspiration demonstrated pancytopenia. With the working diagnosis of dyskeratosis congenita a molecular testing was performed and our patient was found to be positive for DKC1 mutation, which is the X-linked form of the disease. He underwent successful bone marrow transplantation from his HLA compatible brother.
Discussion: Dyskeratosis congenita is a disorder with mucocutaneous and heamopoietic abnormalities. Characteristic clinical triad of the disease includes: skin pigmentation, leukoplakia of the mucous membranes and dystrophic nails. The bone marrow failure usually appears during the 2nd decade of life. X-linked (due to mutations in DKC1-Xq28), autosomal dominant (heterozygous mutations in TERC-3q26 and TERT-5p15 genes) and autosomal recessive subtypes are recognized. Eventhough our patient had the classical triad at a very young age, the diagnosis was delayed and emphasis was put on the short stature only and not on the multiple clinical stigmata.
Conclusion: A thorough clinical evaluation in children with short stature, haematological abnormalities and other stigmata could raise suspicion towards an inherited bone marrow failure syndrome. Genetic examination of bone marrow is necessary for establishing the diagnosis and offer the proper treatment.

PULMONOLOGY

PP112

VALVED HOLDING CHAMBERS (VHCs) ARE NON-INTERCHANGEABLE

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Introduction: The UK Regulatory Agency stipulates that patients using a VHC with their pressurized metered-dose inhaler (pMDI) should employ the device named in the Summary of Product Characteristics. This laboratory study was undertaken to assist with pMDI+VHC selection.
Purpose: (1) To compare different pMDIs with a common VHC; (2) To demonstrate that the mass of therapeutically beneficial medication is comparable with that which would have been received ex pMDI alone.
Material: AeroChamber Plus® Flow-Vu® VHCs (TMI, Canada) were evaluated with several commonly prescribed pMDIs (n=5 devices/group).
Methods: Measurements of FPM<4.7µm were made at 28.3 L/min by Andersen cascade impactor operated with a 2 s delay between pMDI actuation and the onset of sampling, simulating use by an uncoordinated patient. FPM<4.7µm was also determined for the pMDI alone, no delay. Assay for active ingredient(s) was undertaken by validated methods.
Results: FPM<4.7µm (µg/actuation) for pMDI alone, pMDI+ VHC (mean±S.D.) are summarized for the following pMDI products: Advair®50/25 - fluticasone propionate component: 17.4±2.1, 19.7±1.0; salmeterol xinafoate component: 8.9±1.3, 9.5±0.6; Alvesco®:99.9±2.5, 97.1±6.1; Atrovent®: 6.7±0.4, 7.1±0.7; Flovent®-125: 46.2±2.1, 44.7±2.8; Qvar™: 41.9±2.2, 42.6±5.7; Ventolin®: 34.8±1.4, 33.4±4.2; Zenhale® - mometasone furoate component: 43.8±1.7, 41.9±3.5; formoterol component: 2.4±0.3, 2.0±0.1.
Consclusions: The AeroChamber Plus® Flow-Vu® VHC demonstrated equivalent FPM<4.7µm performance to the pMDI alone, thus providing dosing assurance for the prescribing clinician.

PP113

ASTHMA AND PSICHOSOMATIC

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Introduction: Asthma is a leading cause of chronic morbidity and mortality worldwide, especially among children, and has been recognized as a major public health problem for many years. The significant increases in its prevalence and continuing concern, because asthma control requires continued care and long-term monitoring.
Objective: This bibliographical study aimed. (1) identify and quantify the presence of articles on asthma, published in the "Journal of Pediatrics", the official journal of the Brazilian Society of Pediatrics from 2005 to 2007, and (2) to analyze the content found in the articles in full on look asthmatic patients in their biopsychosocial context.
Method: Articles were obtained through the website (www.sbp.com.br) Brazilian Society of Pediatrics, Journal of Pediatrics at the link. The material relating to the period under study was selected using keywords like: asthma and asthmatic child, not just in title but also in the body of the following types of articles: Editorials, Special Editorials, Review Articles, Original Articles and Case Reports. In the defined period, 341 articles were published types, and 39 of them mentioned the keywords were found. The 39 selected articles were grouped into categories, to contextualize the content and to identify possible emphases given by the authors in the proposition of the objectives of the work, resulting in the following categories: diagnosis, treatment, prevalence, quality of life and environment.
Results: Quantitative analysis indicated that there is a real concern on the part of authors with childhood asthma, demonstrated by 11.14% of the total articles published. Qualitative analysis indicated that the psychosomatic aspects related to childhood asthma were poorly referenced and discussed. We analyze the articles based on the guidelines of the Consensus of the Brazilian Society of Pediatrics regarding the management of childhood illnesses, and we also analyzed using criteria Lipowski
Conclusion: The articles published ascribed not due importance to psychosomatic aspects in addressing the asthmatic child. A major challenge is that we must emphasize that the improvement of the quality of medical care is closely related to the adequacy of medical education to the modern view of health, and the inseparability of biological, psychological, social, environmental, and lifestyle habits in regard to population. It would be productive if the psychosocial aspects of each disease were introduced in order disciplinary symposia and roundtables on academic and curricular activities in continuing medical education. With the release of this information, I believe the interest of pediatricians in finding more information about a holistic view of childhood diseases would be fostered.

PP114

THE ROLE OF GENE IN THE DEVELOPMENT OF BRONCHIAL ASTHMA IN CHILDREN OF KAZAKH NATIONALITY

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Epidemiological studies of ISAAC 2000 to 2009 showed that, in the pediatric population in Almaty there had been an increase of asthma (A) from 9.2% to 13.8%. Isolation of DNA from peripheral blood of surveyed conducted by brine, followed by chloroform-phenol purification and testing of a 3% agarose gel. Genotyping by DNA amplification by polymerase chain reaction (PCR) using specific oligonucleotide primers identified polymorphic variants of genes glutathione-S-Transferase (GSTM1, GSTT1, GSTP). Genotype GSTM1 (0) was found among patients with mild disease are found in 33.3% of cases, moderate and severe disease in 39.5% and 46.3% respectively. Thus, polymorphic genotype is prevalent in moderate and severe forms of the disease (÷2 = 2.3). The frequency of genotype GSTT1 (0) among children with A showed a uniform distribution of homozygous deletions in groups of severity and 22.2% in mild, 26.2% with moderate and 27.0% in severe disease (÷2 = 0.03). In the study of GSTP gene polymorphism in children with A, we obtained genotypes: A / A, A / B, A / C, B / B, B / C. Of these, the most favorable allele of the gene GSTP is the allele A and allele B and C - slow alleles encode enzymes with impaired function. Thus, the combination of data from the most favorable variants of the gene variants are A / A, A / B. The prevalence of GSTM1 gene deletion variants in children is 1.9 times greater risk of developing A than children with normal genotype. The frequency of polymorphic genotypes of GSTM1 predominated in the groups of children with severe and moderate course of the disease. The presence of homozygous deletions in the gene GSTM1 (0) and carrier genotype B / B and B / C gene contributes GSTP1 as more severe disease.

PP115

DISCOVERING AN AZYGOS LOBE IN TWO WAYS

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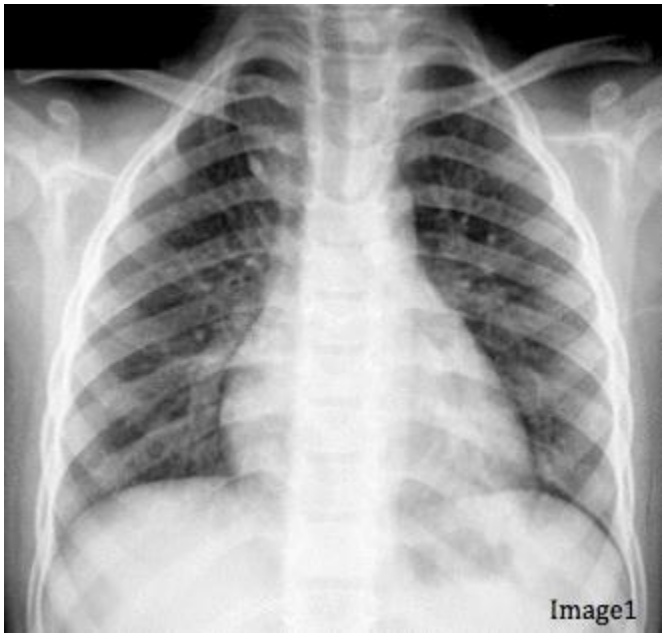
Introduction: The azygos lobe is assumed to have no clinical significance but, rarely, pulmonary diseases occur in this lobe.
Purpose: Describe the azygos lobe radiologic image and the clinical evolution and therapeutic approach of a child with azygos lobe and pneumothorax.
Clinical Cases: A 6-year-old boy presented to the emergency department with mild symptoms of respiratory infection; the thoracic X-ray showed a curvilinear line that crossed the apex of the right lobe, ending with a tear-shaped shadow (image 1). There have been no complications associated in the azygos lobe in this child. A healthy and asymptomatic 9-year-old boy, in the routine clinical examination for the sports practice, has done a thoracic X-ray which showed a right medium-volume pneumothorax. He was treated with 100% oxygen via a non-rebreathing mask for 36 hours without right lobe expansion. The right medium/large-volume pneumothorax was confirmed by thoracic CT scan, which also showed an accessory fissure of the azygos lobe and right pleural adhesions, without pulmonary bullae (image 2). A thoracoscopic azygos lobe lobectomy with parcial right lung lobectomy and parietal pleurodesis in the right apex was performed; azygos vein was preserved. He was discharged home 7 days after and remains without recurrence.
Conclusions: The azygos lobe isn't associated with increased risk of complications but its recognition is important because it can alter the clinical evolution and therapeutical approach of other thoracic pathologies. There are nine published cases of pneumothorax in people with azygos lobe. In this paediatric case, the child was asymptomatic but with pulmonary fibrotic changes, there was no response to medical therapy but the thoracoscopic approach was successful.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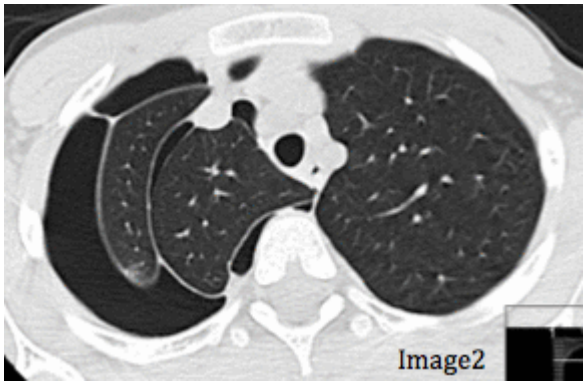
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PP116

CHANGES IN BODY COMPOSITION AND IN AEROBIC FITNESS IN TEENAGERS WITH CYSTIC FIBROSIS AFTER INDIVIDUALIZED PHYSIOTHERAPY REGIMEN

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Introduction: Lung function is the central part of the patients with cystic fibrosis treatment, but quality of life depends on several factors including: level of fitness, nutritional status and social functioning. Purpose of the study is to design an individualized physiotherapy regimen for teenagers with cystic fibrosis in order to enhance the fitness level and nutritional status. **Material**: We have daily used different airway clearance techniques-depending on age or stage of disease (ACTB, AD, oscillating PEP, high-frequency chest compression) and individualized aerobic training 3 times/week 30-45 minutes.
Methods: We conducted a 12 months study, on 20 patients from Romanian CF Center, age between 12-18 years. Inclusion criteria were: FEV1 or FVC lower than 60 % of predicted, SaO2 lower than 94% at rest. Before and after the treatment we have evaluated the body composition through bioimpedancy (In-Body 720) and the individual's response to aerobic exercise (6 MWT).
Results: We noticed important changes in Weight (from 44.84±16.06 to 46.23±16.38, p=0.0023), proteins (from 7.52±2.422 to 8.425±2.494, p=0.0002) and skeletal muscle mass (20.23±7.226 to 22.03±7.277, p=0.0002), and also small changes regarding intra and extra body water. We observed significant improvements of 6MWT from 518.2±108.9 to 604.9±68.00.
Conclusions: Correlated data and analyses after supervised programs including ACT and physical exercise determine an improvement of exercise tolerance in CF patients and a positive evolution of the body composition for the majority of patients. This physiotherapy regimen needs correct assessment, good collaboration with patient and their family and should be tailored to meet the patient's needs.
Acknowledgements: CNCSIS Romania TE 36

PP117

TH1/TH2 CYTOKINE RESPONSE IN INFANTS WITH ACUTE RESPIRATORY INFECTION: CAN WE PREDICT WHEEZING?

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Introduction: The origins of asthma begin in early life. Unbalanced Th1/Th2 immune response in infants might be one of the risk factors for developing asthma.
Purpose: The aim of the study was to assess the relationship among cytokine response in lower respiratory tract illness (LRTI) with wheezing in infancy and frequency of wheezing episodes in preschool children.
Methods: 45 Infants younger than 3 years of age admitted to Iashvili central children hospital of Tbilisi, between January 2010 and December 2011, with an acute episode of wheezing associated with LRTI were selected. Levels of tumor necrosis factor alpha (TNF-alpha), interferon-gamma (IFN-gamma), interleukin-6 (IL-6) in blood were evaluated by ELISA at admission to the clinic. IgE concentration also was assessed. The association between wheezing and familial, pre- and postnatal risk factors also was investigated. The follow-up study consisted of physical examination and/or written questionnaire.
Results: At follow-up, 12 children (27%) had recurrent wheezing. Cytokine responses were analyzed in relation to the development of recurrent episodes of wheezing during a 1-year follow-up period. IL-6 and TNF-alpha levels during LRTI turned out to be higher in infants that later developed wheezing. No association was found between IFN-gamma responses and recurrent wheezing. Atopy in infancy was associated with the increased risk for wheezing (OR:7.4; 95% confidence interval [CI]: 1.799 to 30.994).
Conclusions: Our results suggest that characteristics of the immune system present during the infancy might anticipate the likelihood of development of airway obstruction in preschool age. Longer follow-up is required to better understand the role of these cytokines, as well as risk factors, in the development of asthma.

PP118

SEVERE HEMOLYTIC ANEMIA ASSOCIATED WITH MILD PNEUMONIA CAUSED BY MYCOPLASMA PNEUMONIA

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We report a case of M. Pneumoniae infection presenting with severe hemolytic anemia in a 4-year-old girl, with a ten-day history of paleness, weakness and non-productive cough. She was very pale and tachycardic.
However, she was not tachypneic. Chest examination showed normal breath sounds.
No rhoncus or whistling was heard. As the erythrocyte sedimentation rate was excessively elevated, the differential diagnosis primarily comprised hematological malignancies. Direct Coombs' test was positive. Diagnosis of M. pneumoniae infection was confirmed by elevated levels of M. pneumoniae IgG and IgM antibodies and a chest X-ray suggestive of atypical pneumonia. The patient was treated with clarithromycin and packed red cell transfusion and showed a favorable recovery within ten days after admission. In conclusion, this case demonstrates that severe hemolytic anemia caused by M. pneumoniae is not always associated with severe pulmonary involvement, even the respiratory infection is very mild, M. pneumoniae may be the cause of severe anemia.

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