

# PORTO

**WORLD SUMMIT ON PEDIATRICS 2016** 

### **ABSTRACT BOOK**



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#### ORAL PRESENTATIONS

WSP-OP001

#### DIAGNOSING OF EARLY DISORDERS OF PHOSPHATE IN PRETERM INFANTS

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**Introduction**: Refeeding syndrome (RFS) is a set of symptoms, that malnourished patients develop after initiation of parenteral or enteral nutrition. Supplementation of electrolyte with the start of feeding can prevented RFS. Hypophosphatemia is a hallmark feature. Early aggressive parenteral nutrition (PN) in VLBW infants after the placental feeding disruption or IUGR newborns experience status like RFS after birth with the initiation of nutrition.

**The Purpose:** Timing of hypophosphathemia and determination of hipophosphatemia risk factors for premature infants receiving PN. Evaluation of safety of current approach for phosphate supplementation in premature infants in the first week of life.

**Materials and Methods:** A retrospective review includes 49 preterm infants below 33 GA, hospitalized in the NICU. Patients received phosphates in PN from 3 days of life according to the current recommendations. Phosphate plasma concentrations were within strict laboratory standard (4,4-6,7 mg/dl) only in 25% of newborns, in 4% slightly elevated. Patients were divided into two groups based on the phosphate concentration: with significant hypophosphatemia (less than 3.1 mg / dl) (HP group, n = 18) and infants with the higher level of phosphate in this period (NP group, n = 31).

**Results:** Hypophosphatemia were reported in 61% of patients, phosphate level was decreased in the subsequent measurement in 45% of them. In the remaining infants (39%) hypophosphatemia was diagnosed in 4-7 days of life. The risk of early hypophosphatemia was higher in SGA neonates (RR 5.2, 95% CI 2,2-12,4, p = 0.0001) and ELBW (p < 0.05).

**Conclusions:** Early hypophosphatemia is a common metabolic complication in newborns below 33 GA, receiving TPN. It should be closely monitored from the first days of life, in particular in VLBW and SGA infants. Further research is needed to establish optimal nutritional regimen in first days. In the risk groups is the higher requirement for supplementation of phosphate to preventing RFS.





#### TREATMENT OF COMPLEX VASCULAR ANOMALIES WITH SIROLIMUS.

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Introduction: The biological classification of vascular anomalies (VAs) clearly separates vascular tumors from vascular malformations. There is a group of patients with very large VAs who are not amenable to treatment by surgical resection and/or other tissue destruction techniques. Management of these patients is often associated with significant morbidity and mortality. Recently, reports of treatment of patients with complex VAs with sirolimus revealed encouraging results. Sirolimus inhibits the mammalian target of rapamycin (mTOR), which acts as a master switch of numerous cellular processes. We report a successful use of sirolimus for the treatment of patients with a complex capillary - lymphaticovenous malformation (CLVM) of the trunk and the right lower extremity, diffuse microcystyc lymphatic malformation (LM), and lymphaticovenous malformation (LVM).

**Purpose:** The purpose of this paper is to show efficiency of sirolimus in treatment of patients with complex vascular malformations.

**Materials and Methods:** We analyzed protocols of treatment and other medical documentation of three patients with CLVM, diffuse microcystyc LM, and LVM treated with sirolimus.

**Results:** Our first patient had 44 hospitalizations during the 10-year period, with various unsuccessful treatments and continuous deterioration of his clinical condition, ending up in a wheelchair. His condition reversed to normal everyday activities 9 months after initiation of sirolimus therapy. The other two patents, with LVM malformation and with diffuse LM, also showed very good response to treatment with sirolimus. The children are for the moment still on sirolimus, which we plan to taper gradually under strict monitoring of the size and the clinical behaviour of VAs.

**Conclusions:** We conclude that sirolimus is a very promising therapeutic option for children with complex VAs with predomination of lymphatic component.



# A FAMILIAL APPROACH TO DUCHENNE MUSCULAR DYSTROPHY WITH A FOCUS ON FAMILY MEDICINE - CASE REPORT

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**Introduction**: Duchenne Muscular Dystrophy (DMD) is a progressive, hereditary, recessive and X-linked disease. It is the most common type of muscular dystrophy, demonstrates the fastest progression and occurs in about 1 in every 3,500 male births. It is caused by the absence of dystrophin, a glycoprotein which provides stability to the sarcolemma in muscle cell membranes. The disease results in progressive muscle weakness and degeneration which usually starts with the muscles of the pelvic girdle and the flexors of the neck, subsequently affecting the shoulder girdle and the muscles of the trunk and distal limbs.

**Objectives**: To characterize the clinical, functional and social profiles of patients with DMD, to investigate family knowledge about the disease, to analyze the impact the disease has on families and to affirm the importance of the Family Medicine approach in these cases.

**Materials and Methods**: This is a study based on interviews using a standardized questionnaire consisting of multiple choice and essay questions pertaining to living conditions, socio-demographic characteristics, social support, family knowledge about DMD, the history of the disease and health support for the patient. Four women from the Belo Horizonte metropolitan region were interviewed, them being sisters and all mothers to children who carry the disease. Information was gathered on 5 disease carriers, two of them brothers and three first cousins.

**Results**: All the DMD carriers were males between 11 and 22 years of age (median age = 17 years; average age = 16,4 years). Out of 10 questions on family knowledge about DMD, one of the families answered one correctly, another family answered two correctly and two families answered 3 correctly. The first symptoms began between 4 to 9 years of age and the disease showed different progression patterns in each case. None of them were seeing health professionals, although community health workers made home visits, but not to specifically address the DMD.





**Conclusion**: Lack of information about the disease, difficult access to health services and delays in receiving proper treatment lead to worse prognosis and increased morbidity and mortality rates. The training of health teams to recognize and treat rare diseases in primary care is necessary. Furthermore, the implementation of public programs such as affordable public transport and schools with inclusive programs is needed in order to increase quality of life of the patient and of their family.



# PANDAS - PANS: ANALYSIS OF HANDWRITING AND DRAWING. A TRAGIC EPIDEMIC BUT SILENT, AN HIDDEN DRAMA AND UNSTOPPABLE

Author: A. Vigliotti

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**Introduction:** PANDAS is an acronym defined by the study group (coordinated by Swedo SE - 1996) which stands for pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections. PANS is another acronym (evolution and redefinition of the same group of Swedo of Pandas 2012) which stands for pediatric acute-onset neuropsychiatric syndrome (to describe the acute onset of obsessive-compulsive disorder related not only to prior streptococcal infection, but also to other viral or bacterial infections and generally apparent to environmental precipitating factors or immune dysfunction.

**Purpose:** The study of drawing and handwriting is required to better understand one of the symptoms of PANDAS /PANS which is the Behavioral (developmental) regression (examples: talking baby talk, throwing temper tantrums, etc) and Sensory or motor abnormalities for a diagnostic assessment most appropriate but also a prognostic evaluation to follow in tempo; for example: dysgraphia in the acute period of the disease and during therapy.

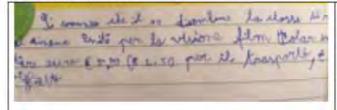
Materials and Methods: I analyzed in my study the handwritings and drawings of 11 children who were diagnosed with Pandas and Pans, most of the patients, for my graphological study, sent me by Italian PANDAS Association.

**Results:** handwritings and drawings by children with PANDAS and PANS before, after treatments or during the Pandas' crisis.

# Before therapy: handwriting decomposed, poor quality trait, skim, tangled, disorded and literal deformations | PASSFRO SOLITARIO | PASSFRO SOLITA



#### Second clinical case



ita vedi gadi mat problema sul quesdo e fotocopia

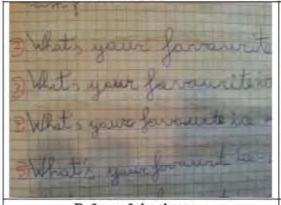
#### Before therapy

Una grafia stentata nel procedere, scattante, non mantiene il rigo, oscura, e in molte lettere è deformata. handwriting stunted in proceeding, snappy, it does not keep the staff, obscure, and many letters is deformed.

#### After therapy

La grafia è più chiara, più ordinata. Non scattante, non deformata anche poco fluida. The handwriting is clearer, more orderly. Not agile, not deformed even in stuttering

#### Third clinical case



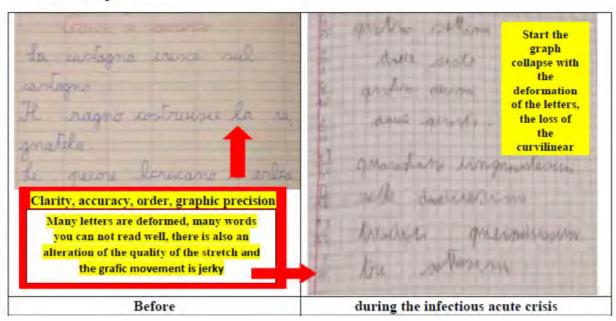


You already see
the
improvement,
in the shape of
letters, in the
space between
words, in
clarity, in size.

Before of the therapy

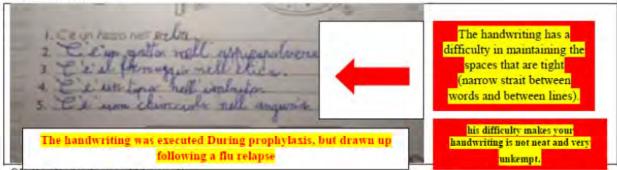
After the therapy

#### Fourth case report





#### Fifth clinical case



Sixth clinical case (16 anni)

3 resporte di oggi, poume orore dei problemi, ma con l'erereveu, con gli erempi porilivi, con la sforozo di ogni giorno, ponono al miglierore e perfezionore e diventore più forti.

The handwriting inclegant, a little ugly, inaccurate although quite clear

The handwriting is the boy's father

I regaliti sti pop possono svere dei problem, ma son l'ecercisio, son gli esempi positivi, son lo sforos di squi piono, possono suigliorare e perfessionere e directare qui forti The handwriting of the mother is more accurate, more upright, more linear in the direction of the line, more related to basic copybook

The handwriting is the boy's mother

Designation of ogg. persone were problem.

me for l'esercicio, son gli esempi positive;

man la sposso oli egoni gromo, passono migliora
pri forti.

The handwriting of the boy, with difficulty. Rhythm is not supported, but there is a good energy in the stretch and the boy tries to be clear in the form of the letters even though some letters are leaned.



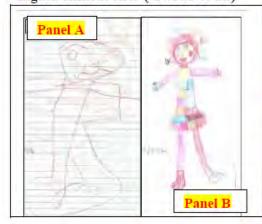


Seventh clinical case (six and a half)



Eighth clinical case (Swedo et al.)

Drawing done at 5 and a half years



Handwriting Samples Showing Behavioral Regression Symptomatic Episode

Drawing of the 4 elements made 6 years and 8 months

Panel A - Drawing produced durring an acute exacerbation of OCD and other symptoms of PANDAS which appears quite messy and immature

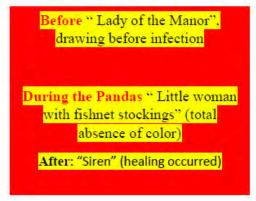
Panel B - age appropriate picture drawwn after treatment with IVIG and symptomatic improvement.

Fonte: Swedo et al., Pediatr Therapeut 2012, 2:2



Ninth clinical case ( www.pandasitalia.it) F - 5 years old (After 8 years old)





**Conclusion:** The study of the drawings and handwritings confirmed through the 'grapholgical analysis, some of the most important symptoms of PANDAS / PANS among which: Behavioral (developmental) regression (examples, talking baby talk, throwing temper tantrums, disgraphia, unbalanced drawings etc.; deterioration in school performance; Sensory or motor abnormalities.

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- Journal of Child and adolescent psychopharmacology- Vol.25.n.1-2015-Special number of PANS
- PANS/PANDAS Fact sheet 2015 Pandas Network.org
- Swedo Susan in "European Pandas conference Como (Italy) 26-27 Sept. 2015": It is a Good Day for children whit PANDAS and PANS Trends in Research and Awareness.
- www.pandasitalia.it





# A NEW AUTOINFLATION DEVICE FOR TREATMENT OF OTITIS MEDIA WITH EFFUSION.

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**Objectives**: Otitis media with effusion (OME) is caused by accumulation of fluid in the middle ear, without the signs or symptoms of an acute inflammation or infection. OME is the most common cause of hearing impairment in children and the most common cause of surgical intervention under general anaesthesia in children. Autoinflation is an alternative treatment based on the opening of the Eustachian tube, by forced introduction of air either by the Valsalva manoeuvre or the Politzer method.

**Methods**:A new autoinflation device (Moniri-Otovent ®, Abigo Medical, Askersund, Sweden) for home treatment of children with persistent OME was used in this study. Forty-four children, aged between two and eight years, with persistent bilateral OME for at least three months and history of subjective hearing loss, waiting for grommet surgery were treated with the autoinflation device during four weeks. Another forty-five children, aged between three and eight years, submitted to grommet surgery were compared to the autoinflation group. Both groups underwent otomicroscopy, tympanometry and audiometry at inclusion. The exams were repeated at one, six and twelve months in both groups with the exception of tympanometry in the grommet group.

**Results**: In the autoinflation group after four weeks of treatment, the mean hearing level improved from 22 to 16 dB and the number of ears with hearing thresholds of  $\geq$  20 dB was reduced from 60 (77%) to 16 (22%). During the follow-up period, 12 children were treated at least one more time with the device, of which seven were subjected to further follow-up at the end of the study and five were submitted to grommet surgery. No complications were reported. In the grommet groups the mean hearing threshold improved from 24 to 15 dB and the number of ears with hearing threshold of  $\geq$  20 dB was reduced from 82 (91%) to 15 (18%). During the follow-up period a total of 31 (34%) complications were reported related to the grommets. Fourteen ears (16%) presented otorrhea, six ears (7%) early extrusion, four tubes (4%) were obstructed, 12 ears (13%) had recurrence of effusion and one ear (1%) presented persistent perforation after tube extrusion.

**Conclusions**: This study reveals that autoinflation may reduce middle ear effusion and improve hearing in children with OME. Given the non-invasive character of autoinflation therapy, it may be reasonable to apply this method as a first-line treatment before considering surgery in children with OME.





# THE ASSOCIATION OF BASIC FEEDING RULES PRACTICE WITH WEIGHT VELOCITY IN CHILDREN AGED 6-24 MONTHS IN PALEMBANG

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**Introduction:** Basic feeding rules are rules developed to help the children to understand external and internal regulation in feeding process. It is essential to children beyond infancy to meet the basic goals of adequate nutrition, efficient mealtimes and supportive environment, which will assist the infant and young child to grow. Despite the importance of basic feeding rules, its practice is still poorly understood by the community and health workers in Palembang, Indonesia.

**Purpose**: This research was conducted to identify mothers knowledge in basic feeding rules practice, their children's weight velocity and to determine the association of basic feeding rules practice with weight velocity in children aged 6-24 months.

Materials and Methods: An observational analytic research with cross sectional approach was conducted in Posyandu in the working area of Kampus Community Health Center, Palembang, Indonesia in October-December 2014. Subjects of this research, 97 mothers and their child aged 6-24 months, were taken by consecutive sampling technique. The data were obtained by measuring children's weight, see the previous weight measurement in children's growth record, and interview respondents with questionnaires. The data were analyzed by using Chi-square and Fisher exact test.

**Results**: Of the 97 mothers and their child, 14 mothers (14,4%) were good, 54 mothers (55,7%) were moderate and 29 mothers (29,9%) were low in practicing basic feeding rules. 74 children (76.3%) had a good weight velocity and 23 children (23.7%) were at risk of failure to thrive. The analysis showed an association between basic feeding rules practice and children aged 6-24 months' weight velocity (P=0.000; r=0.474).

**Conclusions**: The majority of mothers were moderate and only 14,4% were good in practicing basic feeding rules. The majority of their children already had a good weight velocity. There was a really significant association between basic feeding rules practice and children aged 6-24 months' weight velocity in Posyandu in the working area of Kampus Community Health Center Palembang, Indonesia.





#### DIABETIC NEPHROPATHY IN KUWAITI CHILDREN WITH T1DM: A SINGLE-CENTER STUDY

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**Intoduction**: Kuwait has the third highest incidence of type 1 DM (T1DM) in children less than 15 years old in the world. One of the major complications of TIDM is diabetic nephropathy (DN). DN can start as microalbuminuria (MA) progressing to overt-proteinuria leading to End -Stage renal disease in early adulthood.

**Purpose**: To study the incidence, pattern and factors related to diabetic nephropathy among our pediatric patients with T1DM.

**Patients & Methods:** A hospital-based retrospective study of all children less than 15 years of age diagnosed with T1DM at Mubarak Al-Kabeer University Hospital was conducted. All children aged less than 18 years old who were diagnosed with T1DM over 8 years (January 2008 to December 2015) were included. Demographic, clinical and biochemical data of all patient were analyzed.

Results: A total of 302 patients were included. M: F ratio was 1:1. Mean age of patients was 7.3 years (range: 8 months-13.6 years). Patients who had TIDM for less than 5yrs constituted 64.5% and those with 5-10 years duration were 35%. Mean serum creatinine was 42 µmol/l (range:16-158) and mean estimated GFR (by Schwartz formula) was 184 ml/min/1.73M2 (range:48-440). Micro-albuminuria (MA) was reported in 6% of patients while overt proteinuria was reported in only 1 patients. Two thirds (66.7%) of patients with MA had TIDM for <5 years. No correlation was found between MA and HbA1c levels (r.r.:- 0.032) nor between MA and the number of DKA admissions (r.r.: 0.234).

**Conclusion**: Micro-albuminuria and hyperfiltraion are common and early renal complication of TIDM in Kuwaiti children. As poor glycemic control seems not to be a risk factor of early DN, other factors such as genetic factors, need to be explored.





# HEALTHY LIFESTYLE BEHAVIORS IN PATIENTS WITH THALASSEMIA MAJOR

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**Introduction**: Thalassemia is a genetic autosomal recessive blood disorder caused by abnormal formation of hemoglobin. It has recently been suggested that promoting healthy lifestyle behaviors is key to prevent diseases and to lead a healthy life. This approach relies on adopting healthy lifestyle behaviors to maintain one's physical and mental well-being

Purpose: This study aims to investigate the healthy lifestyle behaviors in patients with thalassemia major.

**Materials and Methods**: This descriptive study was conducted with 151 patients with thalassemia major (9 years old and above) in two hospitals in Antalya, Turkey. The study data were analyzed with a Personal Information Form and the Healthy Lifestyle Behaviors Scale-II.

Results: The participants were aged between 9-57 years old and 49.7% of them were between 13-20 years old. It was also noted that 59.6% of the participants were female. It was reported that 75% of the participants had moderate Body Mass Index levels. Moreover, 58.3% of the participants were either still attending or already graduated from a primary school. The study results also indicated that 89.4% of the participants were single and 43% of them were living in city centers. Additionally, 31.8% of the participants had two siblings and 75.5% of them were unemployed. It was further found that 24% of the patients were diagnosed with a chronic disease other than thalassaemia. Moreover, 28.5% of the participants had a sibling also diagnosed with thalassaemia and mothers, fathers, and siblings of 34.4% of the participants were carriers of thalassaemia. There was found that the Cronbach Alpha reliability coefficient was 0.93 and the subdimension coefficients ranged from 0.63 to 0.83. The overall scale score was noted to be 2.48±0.03. It was also stated that there was a statistically significant difference between the mean scores in relation to education, employment status, number of siblings, place of residence (p<0.05).

**Conclusions**: In light of the study results, it was suggested that the educational status is important in developing healthy lifestyle behaviors. Therefore, health professionals especially nurses who work with patients with thalassemia major are considered to undertake a great responsibility to assist them to maintain healthy lifestyle behaviors. It is consequently recommended to create education and therapy programs to raise awareness towards and improve the healthy lifestyle behaviors among patients with thalassemia major.

Key words: thalassemia major, healthy lifestyle behaviors, nurse





#### COMPLICATION AND PROGNOSIS IN CHILDREN WITH CRUSH-SYNDROME.

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**Introduction**: Crush syndrome is encountered in two different scenarios: individual major emergencies and disasters (earthquakes, land-slides, road traffic accidents, accidents at work). Crush Syndrome develops in children with prolonged compression of body parts. Complications are also the main causes of mortality in children with crush syndrome: acute traumatic rhabdomyolysis, acute renal failure and polyorganic failure, hyperkalemia, leading to fatal dysrhythmias and cardiac arrest, infection and disseminated intravascular coagulation syndrome.

**Purpose of the study:** the influence of demographic data, type of injury, treatment, transportation conditions on the occurrence and extent of complications and prognosis.

Materials and Methods: The study has been conducted over the last two years (2014 -2015) of statistical data of individual emergencies National Centre of Prehospital Emergency Medicine and Emergency Departament, Chisinau, Moldova.

**Results**: From the study we see that immediate, early and late complications in collective and individual emergencies is closely correlated with the duration of compression, children age, associated injuries, access venous and early replete volume replacement, early fasciotomy . Typical affected areas include the lower extremities (74%), upper extremities (10%) and 'runk (9%). Of the most common complications are hyperkalemia 15.9%, characteristic that occurs rapidly after extrication, can be fatal, develops until installation renal failure, crushing signs may be absent. Acute renal failure in patients with crush-syndrom grew to 41.6%, which hemodialysis was required in 22.1% of patients. According to data from patients with crush-syndrom mortality varies between 29.8% -60%.

**Conclusions**: Many factors may affect survival, appearance of complications and prognosis in patients with crush-syndrome. To prevent and improve the condition of patients are necessary following conditions: appropriate triage, victim extraction with many precautions, adequate analgesia and sedation, peripheral venous access and fluid replete with Ringer lactate and bicarbonate Na, prophylaxis, application of tourniquet until extraction, bandaging and splinting extremity, early fasciotomy. Diagnostic laboratory tests are necessary for continuous monitoring of patient status to prevent fatal complications.

**Key words:** crush-syndrom, complications, hiperkaliemia, acute renal failure.





# PREHOSPITAL EMERGENCY MEDICAL ASSISTANCE AS A FIRST APPROACH FOR TRAUMATIZED CHILDREN IN MOLDOVA

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**Introduction:** Paediatric trauma is a very significant cause of mortality and disability, being responsible for more deaths than all diseases combined. Paediatric trauma is a public health problem worldwide. Nationally politrauma causes extensive body of case law that requires material, financial and human resources to resolve outstanding at all levels of the health care system. Trauma in children is an integral part of the emergency service.

Materials and Methods: There have been analyzed all the cases of paediatric trauma records in the Republic of Moldova by the National Center of Prehospital Emergency Medicine during a period of 1 year (2015).

**Results**: In Republic of Moldova there were recorded 85 610 cases of emergency trauma, including 19 817 paediatric emergency trauma. Major trauma were recorded in 21 253 cases, including 10 325 paediatrics causes, which consist in 48,6%. The second degree trauma were recorded to a 62635 patients, of which 9372 were in children, which consist in 14.9%. The third degree injuries were recorded to a 1722 patients, including 120 paediatrics causes, which is 6.9%. Critical polytrauma occuired in 189 cases, including 30 cases (15,8%) in children. 238 cases of electrical injuries were recorded, in 19 cases (7,9%) were children, who suffered. There have been 3621 cases of burns, of which 1184 cases (32,6%) were in children. 3759 cases of road trauma have been reported, including 477 cases (12,6%) in children.

**Conclusions**: By knowing the epidemiology of paediatric trauma, we conclude that majority of pediatric injuries are preventable and pediatric epidemiological trends differ from those in adults. Therefore, preventive strategies should be made in pediatric patients on the basis of these epidemiological trends.



# PREVENTING MENTAL DISORDERS IN PRESCHOOL-AGE CHILDREN: USING EDUCATIONAL ANIMATED CARTOONS ON SOCIAL MEDIA TO REACH YOUNG CHILDREN

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Aggression starts as early as childhood, with only ~ 28% of the children indicating little or no physical aggression. The remaining children display modest aggression, ~58%, with ~14% showing high expressions of aggression. Most of the children will learn to use alternative behaviours and regulate the use of aggression during the preschool years. However, these resolution and negotiation skills are learned and hardly happen naturally, requiring prompt detection and intervention. These unattended behaviours create a higher risk for these children to show steady, serious violent behaviour during adolescence and adulthood.

Despite the importance of early interventions at the preschool age, most interventions target school-age children, after aggression has become a way of life and their preferred, and often only, way to communicate and or manage conflicts. In the past, a child's parents and the surrounding community modelled and reinforced positive behaviours; unfortunately, nowadays children are surrounded by both positive and negative influences presented in all forms of media. The effects on the child of these positive and negative learning experiences additionally depend on the child's unique environmental conditions. Researchers have found that the detrimental effects of children viewing negative behaviours (e.g., robbing, stabbing, and killing) do not affect all children equally. The children most affected are those who experience these events in their neighbourhoods on a regular basis. Understanding how learning occurs through media is complex and many of the research results are conflicting. However, media technology must be seriously considered as an element of radical change in education.

We are proposing theory-based fundaments that support the development of an educational program presented on a social media platform to model and modify the behaviours of preschool-aged paediatric inand outpatients.

Our presentation includes four segments, presented by a psychiatrist, a health educator, and paediatricians, including:

- The effect of inequalities and their impact on the mental health of children: preventive measures
- YouTube as a valuable healthcare education platform: using educational animated cartoons on social media to reach young children
- How to use this popular social media with pediatric outpatients
- Challenges for follow-up and opportunities for a teachable moment with pediatric inpatients





# STUDY OF BIRTHS DEFECTS IN LIVE BIRTHS OCCURRED IN THE YEARS 2010-2014 IN A MATERNITY HOSPITAL IN THE CITY OF MANAUS – AMAZONAS.

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**Purpose**: Congenital malformations occur due to genetic factors, environmental, mixed or unknown causes. This descriptive cross-sectional study aimed to present a panorama of the occurrence of congenital malformations in the municipality Manaus-AM, in the period from 2010 to 2014.

**Materials and Methods:** The data were collected from the query to the medical records of live births of motherhood Balbina Mestrinho.

**Results**: 15621 were reported live births, being 248 (2.5%) presented congenital malformations. Higher prevalence of observed malformations among live births male 49.7%, with Apgar score  $\geq$  7 in first and fifth minute, gestational age ranging from 37-41 weeks, where 46 were born weighing between 3000-4000 g. The Association of two or more defects was observed in 38.7% of the total cases, and isolated anomalies in 67.3%, with predominance of digestive system changes (26.3%), followed by malformations of the musculoskeletal system (21.2%), nervous system (20.2%) and cleft palate (9.1%) cleft lip.

**Conclusions**: New results can guide strategic actions for planning a higher quality of care to the family of malformation patients, considering the confirmation of diagnosis and guidelines that can even prevent and track the occurrence of new cases.



# EARLY DETECTION OF LIVER FIBROSIS IN ASYMPTOMATIC CHRONIC HEPATITIS C INFECTION; ROLE OF MAGNETIC REASONANCE SPECTROSCOPY

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**Introduction**: Egypt is the highest affected country with Chronic hepatitis C with a prevalence of 22%. . Seroprevalence of HCV is 0.2% in children < 11 years and 0.4% in children ≥11 years of age.

**Purpose**: To evaluate the use of 1H MRS and DW-MRI in early detection of liver fibrosis by measuring some metabolic components (Glx/lipid, PME/lipid and Glyu/lipid ratios) and ADC in liver tissues in relation to histopathological changes.

**Material & Methods**: A cross-sectional study was conducted from 2012-2014, included thirty children (25  $\stackrel{?}{\circ}$  & 5 $\stackrel{?}{\circ}$ ) with asymptomatic chronic hepatitis C infection matched to twenty healthy children as controls. Anti HCV antibodies, HCV RNA PCR, liver function tests, abdominal ultrasonography, percutaneous liver biopsy and IH MRS (Glx/lipid, PME/lipid, Glyu/lipid ratios) and DW-MRI were done.

Results: METAVIR grades showed 29 cases (96.6%) had activity while 17 cases (56.7%) had fibrosis and +ve TGF- $\beta$ 1 in liver tissues in 19 cases (63.3%). Significant positive correlations between the results of 1H MRS and liver biopsy (METAVIR Grades, Stages and TGF- $\beta$ 1). Multivariant regression analysis showed that DW-MRI (reflected by ADC) was the good predictor for activity and Glyu/lipid ratio of MRS was the good predictor of fibrosis.

**Conclusion**: Early diagnosis of asymptomatic chronic hepatitis C is essential to prevent or delay liver fibrosis. TGF- $\beta$ 1 in liver tissue may be considered a useful better tool in the assessment of hepatic fibrosis. 1H MRS may be a non-invasive helpful diagnostic tool in assessing asymptomatic chronic hepatitis C children

**Keywords**: hepatitis C;children; MRS; DW-MRI; liver biopsy.



DETECTION AND MOLECULAR CHARACTRIZATION OF ENTEROPATHOGENIC BACTERIA ISOLATED FROM CHILDREN WITH ACUTE DIARRHOEA, SLAUGTHERED ANIMALS AND RAW MEAT SAMPLES IN TEHRAN, IRAN.

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**Introduction**: Infectious diarrhoea is a leading cause of morbidity and mortality globally. Worldwide, enteropathogenic bacteria are responsible for one of the most important infectious diseases linked to the food industry, and they affect animal welfare with the potential to give rise to public health problems. As in many countries, in Iran shiga toxin-producing Escherichia coli (STEC) strains have been frequently isolated from cattle, raw meat and young humans.

**Purpose**: In this study, we have explored the epidemiology of diarrheagenic Escherishia coli (DEC), Shigella spp., Salmonella spp., and Campylobacter spp. from differing sources in the Tehran province of Iran.

**Materials &Methods:** A total of 445 samples, including 235 domestic cow feces collected from 3 semi-urban community farms, 134 ground beef samples from slaughtered bovine/sheep sources (specifically, a Tehran abattoir), and 76 stool samples acquired from human children (1 to 60 months of age) with acute diarrhoea, were sequentially examined for stx1, stx2, eae, lt, st, Pcvd435, O157, H7,  $\alpha$ -hly, and Shigella spp., Salmonella spp., and Campylobacter spp. genes via a polymerase chain reaction (PCR) approach.

**Results**: Shiga-toxin producing Escherichia coli strains were isolated from 41% of meat, 64%, of cattle feces, and 24% of children's fecal samples. PCR analysis indicated that 16 samples in total were positive for O157:H7. Also, 14% of human children and 0.85% of cattle species were shigella spp.-positive. The most commonly-isolated STEC bacteria were from the O146, O112a and O44 serogroups for all 3 sources.





Remarkably, none of the STEC strains proved to be from the O145, O111 and O26 serogroups. Moreover, only 0.05% and 0.4% of samples were Salmonella-positive in cattle feces and children's stool samples.

Conclusions: High levels of shiga toxin-producing E. coli in cattle and raw beef samples were observed at high rates, and STEC colonization is widespread amongst healthy Cattle in Iran. These observations provide strong evidence that STEC is one of the major causes of diarrhoea in developing countries, mainly in children. The panel of assays employed offer simple strategies for the widespread detection and characterization of Diarrheaogenic E. coli isolates from a range of sources. DEC detection in this manner facilitates our understanding of their prevalence, clinical characteristics, and epidemiology, and will also serve to support the future development of further food safety control strategies which target all STEC serotypes.

**Key words**: Enteropathogenic bacteria, Cattle, Meat, Children & Public health.





# EARLY SKIN-TO-SKIN CONTACT BETWEEN MOTHER AND TERM NEWBORN AND ITS EFFECTS ON THE NEWBORN, AND COMPARISON BETWEEN TWO HEALTH INSTITUTIONS

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**Introduction**: The skin-to-skin contact is defined as placing the newborn on the mother, in the first 5 minutes after birth for at least an hour, according to international recommendations, regardless of the mode of delivery.

**Purpose**: Test the benefits of skin-to-skin contact in term newborns in the measures temperature, peripheral oxygen saturation and heart rate during the first postpartum hour and influence of other variables (gestational age, mode of delivery, Apgar index and breastfeeding in the first hour) in these measures. Compare these data between a public institution inland (Hospital Sousa Martins - Guarda) and a private institution in the central coast (Clínica de Santo António Amadora - Lisboa).

**Materials and Methods**: Grid filled with data relating to childbirth and newborn. The measures temperature, peripheral oxygen saturation and heart rate were filled in 60 minutes after childbirth. Descriptive analysis was performed, as well as t-test, ANOVA test, chi-square test and correlations with the Pearson test, wich were considered significant on p <0.05.

**Results:** The sample consisted of 142 members, of which 68% corresponded to Hospital Sousa Martins and 32% to Clínica de Santo António. Regarding the beginning of the skin to skin contact, early form (first 5 minutes post-partum) was mainly observed in the public institution (76%, p <0.001). The average contact duration was superior in public institution (p <0.001), almost 108 minutes. In the relationship between the measures and the institution, it was found that the peripheral oxygen saturation was higher in the private institution (p <0.001) while the heart rate was higher in the public institution (p <0.001). Newborns contactless obtained the peripheral oxygen saturation higher and those who started after 5 minutes postpartum had a lower value (p <0.05). In the comparison between the duration of the contact, the peripheral oxygen saturation decreased with increasing duration (60 minutes or more, p <0.05). Heart rate was higher for those who had at least 60 minutes of contact (p <0.05).

**Conclusions**: The Hospital Sousa Martins presented better indicators in terms of skin to skin contact – earlier onset and longer duration (fulfilling the minimum time recommended internationally). It is noteworthy that the temperature, peripheral oxygen saturation and heart rate remained within the physiological intervals throughout the sample, proving that this contact does not confer risks or disadvantages for the newborn, and should be encouraged in all health institutions..



## CARDIOVASCULAR RISK FACTORS AND LIFESTYLE HABITS OF SCHOOLCHILDREN IN BETIM, MINAS GERAIS, BRAZIL

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**Introduction**: Cardiovascular Disease (CVD) is among the leading causes of death worldwide. Studies have presented evidence that CVD start in childhood, so it is believed that primary prevention should start the earliest possible, especially through educational process aiming cardiovascular good health, emphasizing the need to follow proper diets, to maintain an active lifestyle and to monitor weight.

**Purpose**: To describe the lifestyle and the presence of cardiovascular risk factors in children of a school in Betim, Minas Gerais, Brazil.

Materials and Methods: A cross-sectional and descriptive study with students of the 6th and 7th grades of a public school in the city of Betim. The study was implemented after the approval of the Ethics Committee and the authorization from students parents or guardians. The students answered a questionnaire with 45 objective questions about eating habits and 11 questions about physical activities. They had their blood pressure (BP) checked and anthropometric measurements, including weight, height, body mass index calculation (BMI) and waist circumference (WC), were taken and registered.

Results: 83 children were assessed, 60.5% of them were female, and the mean age was 12.37 years old. The anthropometric evaluation indicated overweight in 16.9% of students, according to BMI, and abdominal obesity in 7.8% of children, according to their WC. BP analysis identified 8 children with borderline blood pressure values, 1 child classified with hypertension grade I and 2 children with hypertension grade II. The analysis of eating habits showed that 43.37% of children usually add some salt in their already prepared meals; 22.89% eat breakfast daily; 59% have four or more meals a day and 36.14% usually exchange their lunch for a snack. It was observed a low consumption of raw salads, cooked vegetables and fruits. On the other hand, it was revealed a high consumption of fried food, cookies, processed snacks, soft drinks, instant noodles, sausages, sweets, preserves and canned food. Among the children evaluated, daily physical activity for 60 minutes or more, was reported by 11.39% of them. About 40% of children reported spending more than 2 hours a day with entertainment media activities (television, computer or video game).

**Conclusions**: The study confirms that a high proportion of children have lifestyles considered unhealthy in relation to eating habits and physical activity, which may negatively impact their future cardiovascular health. Thus, stands out the importance of start the primary prevention as soon as possible.





## IMPACT OF REPRODUCTIVE HEALTH EDUCATION ON THE KNOWLEDGE OF MID ADOLESCENTS BOYS OF URBAN POPULATION OF HARYANA

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Escorts Hospital and Research Centre Limited Faridabad ,India

**Abstract**: Overall objective was to study impact of reproductive health education on knowledge of midadolescents boys of urban population with special reference to reproductive health.

**Study design**: The study was cross-sectional type conducted over a time period of six months.

**Methods**: The study subjects were drawn from three schools, of urban population of Faridabad, in Haryana. The present study was designed to evaluate the existing knowledge and impact of reproductive health education amongst mid-adolescent boys, related to adolescent health with special reference to secondary sexual characteristics, menstrual cycle, pregnancy and motherhood, AIDS and family planning practices.

**Sample Size**: A sample size of 250 students was selected for this study. Study group: comprised of mid adolescent boys and girls of 14-16 years, studying in co-educational senior secondary schools. Data from students was collected using a structured self-administered questionnaire.

**Conclusion**: There was marked improvement in knowledge of same adolescents after education on the reproductive health in almost each and every field. The fact that children engage in sexual behavior before they have a clear understanding of what it is all about, places them at very high risk of a variety of adverse experiences that can impact negatively on their development. Adolescents whom mothers were housewives were more aware of their reproductive health as compare to working parents. But parent's education doesn't produces significant difference in their knowledge. Conversely, although many adolescents have sexual knowledge, this knowledge does not always influence their behavior.

#### **RECOMMENDATIONS**

Based on the observations of our study, we conclude with following recommendations-

- Reproductive health education should be a part of students curricula, where "adolescent friendly cells" are formed purposely avoiding the unacceptable terms 'sex education'. Questions related to adolescent health including reproductive child health are invited from adolescents and answered by a person who is acceptable, influential and well trained in this field.
- 2. Besides educating adolescent teachers, parents and grandparents, few students among peers and other influential person should be taken in confidence and educated separately, who in later stages could possibly function as resource person educating and spreading the correct knowledge related to Reproductive and child health in community.
- 3. The role of media needs not to be overemphasized.
- 4. Larger longitudinal studies on heterogeneous population will definitely help the planners to improve the knowledge related to adolescent health including reproductive health among future parents.
- 5. Students must also be taught about life-skills to combat many dangerous real life situations.





## URINARY TRACT INFECTION: DEMOGRAPHIC, CLINICAL AND LABORATORIAL DIFFERENCES DEPENDING ON THE ETIOLOGICAL AGENT.

Authors: Helena Ferreira, Carla Ferreira, Marta Alves, Cristina Ferreira, Cláudia Tavares

**Introduction**: Urinary tract infections (UTI) are one of the most frequent infectious diseases in pediatric age.

**Purpose**: This work aims to identify demographic, clinical and laboratorial differences between UTI caused by Escherichia coli (E.coli) and less common agents.

**Materials and Methods**: Retrospective study of UTI diagnosed between january and december 2014 of a secondary care hospital. UTI were organized in two groups: caused by E.coli and by other less common agents. Demographic, clinical and laboratorial parameters were analyzed by SPSS.

**Results**: Between january and december of 2014, 278 UTI were diagnosed, 81% in females. The average age of diagnosis was lower in males (p=0.02) and in pyelonephritis (p<0.001). The most common agent was E.coli(80,9%), follow by P.mirabilis(11,9%), Klebsiella spp(2,2%), P.aeruginosa(1,4%), E.faecalis(1,1%). The most prescribed antibiotics were amoxicillin clavulanate(70,9%), cefuroxime(12,2%) and fosfomycin(3,6%). Antibiogram showed greatest resistance rates to ampicillin(43,5%), cotrimoxazole(18,8%), amoxicillin clavulanate(16,4%) and nitrofurantoin(14,5%). UTI caused by others agents than E.coli were most common in males (p<0.001) and adolescents (p=0.043) and were more frequently responsible for cystitis than pyelonephritis (p=0.006). The antibiogram showed major resistance rates for amoxicillin clavulanate (p=0.05), fosfomycin (p<0.001) and nitrofurantoin (p<0.001) in the group of less common microbiological agents. There were no significant differences in these two groups depending on the existence of previous UTI. Furthermore, there was no difference in the resistance rate for cefuroxime and cotrimoxazole.

**Conclusions**: This study demonstrates significant differences depending on the UTI agent. UTI caused by less common agents were more frequent in boys and adolescents and in this group there were major resistance rates to some antibiotic. This could justify the use of other antibiotics in these patients.





#### ACUTE ANEMIA DE NOVO: SAME SIGN DIFFERENT ETIOLOGIES

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**Introduction**: Anemia is defined as a hemoglobin level of two standard deviations below normal for age and sex, and its severity depends on many factors including the clinical context. Usually, it's a manifestation of acute exacerbation of previously known disease, but may be evident as the initial manifestation of several diseases, acquired or inherited.

**Clinical Cases**: The authors present nine clinical cases of selected outpatient pediatric hematology patients whose first manifestation was acute anemia. All patients had hemoglobin levels <7 g/dL. The diagnosis was made after etiological investigation and was subsequently established therapeutic approach.

Five cases of acquired etiology: four iron deficiency anemias (two of them because of inadequate oral iron intake and the other two due to excessive blood loss such as menorrhagia and another in the framework of pulmonary hemosiderosis) and a case of autoimmune hemolytic anemia.

Four cases of hereditary etiology: two cases of hereditary spherocytosis (with aplastic crisis after Parvovirus B19 infection and another with hemolytic crisis in context of viral infection), a case of enzymatic deficit (enzyme glucose 6-phosphate dehydrogenase) triggered by ingestion of fava beans and other with sickle cell crisis with concomitant hemolytic anemia.

All were addressed in inpatient settings depending on the clinical severity and underlying etiology, with favorable outcome.

**Conclusion**: In the etiological investigation of an acute severe anemia is essential its characterization based on all available hematological parameters. Assertive diagnosis is indispensable, considering the different implications for the approach, follow-up and prognosis.





#### OPHTHALMOLOGIC SCREENING IN SCHOOL-AGED CHILDREN

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**Introduction**:Amblyopia prevalence is 5% in preschool children and increases with age mostly due to the anisometropic type. Children with anisometropic amblyopia lack obvious external abnormalities of the eyes and their visual functioning appears normal because they see well with the fellow eye. This explains why parents often don't seek medical attention in early ages.

**Purpose**: To determine the prevalence of ophthalmological pathology among a population of school-aged children.

Materials and Methods: Prospective study from April to June 2014 including children from every elementary school in an urban area (Coimbra, Portugal). A previously validated Paediatric Ophthalmologic Screening exam (by the Portuguese Pediatric Society and the Portuguese Ophthalmology Society) was applied. Children who failed the screening exam received a letter to inform their primary care physician (PCP) about the need to referral to a pediatric ophthalmology appointment for further evaluation.

**Results**: Were screened 631 children from 10 schools, median age 8 years (6-11 years), 51% male. Among these, 102 (16%) were suspected to have ophthalmologic pathology: 81 had decreased visual acuity, 20 suspected strabismus and 1 anomalous external ocular examination. Of these 102 children, 42 attended the hospitalar ophthalmology consult to which they were referred to after the screening, 47 weren't referred by their PCP and 12 failed the appointment. Of the 42, 28 (67%) had a normal evaluation, 6 strabismus, 4 myopia, 2 hypermetropia, 1 astigmatism and 1 anisometropia.

**Conclusions**: The identification of ocular disease in 33% of children raises the concern to the urgent need for a systematic ophthalmologic screening in children performed by PCP and pediatricians. Regarding effectiveness of the screening exam, although a high sensitivity is desirable to detect as many affected children as possible, specificity is also important because low specificity is associated with false-positives and over-referrals.



#### **TESTICULAR MICROLITHIASIS - CASE REPORT**

Author: Bhargavi B Kola; Co-Authors: Vivekananda Dasari, V Agusala, Allen Zhong.

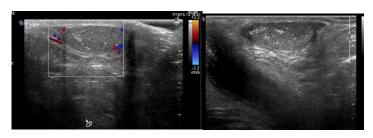
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**Introduction**: A nine-year old, African American boy presented to his sports physical exam. His physical exam was positive for overweight (body mass index > 90% for age and gender) with acanthosis nigricans on the neck and left undescended testis. After explaining the physical exam findings the mother recollects that he did have accidental injury to his private area 4 months ago, evaluated in the emergency department and discharged home. His past medical history was significant for intermittent asthma well controlled on rescue inhaler. Family history was positive for biological father with undescended testis but no history of any malignancy. Due to the clinical presentation and history of trauma the boy was referred to urologist and a scrotal ultrasound was ordered that revealed interesting findings of multiple microlithiasis within the right testis and also confirmed our diagnosis of left undescended testis.

**Purpose**: Identification of rare but incidental presentations and how to manage the family's expectations on the need to follow up.

Materials and Results: Testicular microlithiasis refers to the accumulation of many small calcifications in the seminiferous tubules and associated with benign and malignant disorders of testis 1. They are usually impalpable and painless 1. The etiology is usually unknown and possible theories include include liquefaction of a spermatocyte's dendritus or consolidation of colloids in the testes.. They are usually detected on incidental ultrasound (as in our case) and more commonly associated with testicular malignancy in adults. They are commonly associated with fragile X syndrome, downs syndrome and Kleinfelter syndrome which could be indication of degenerative process.

Conclusion: This case stands out, as usually testicular microlithiasis is observed bilaterally, but the calcifications are observed in only one testis. With regards to treatment, the condition itself is largely asymptomatic and non-progressive so will need serial follow ups. Although some specialists suggest that self-testicular examination will be sufficient in patients no risk factors 2 while some recommend annual ultrasound with self-testicular examination in absence of risk factors (malignancy). Due to the fact that patient has other associated conditions namely cryptorchidism and relating to the latest recommendations and observe the patient with annual US. It is important for a clinician to thoroughly investigate such rare clinical conditions as it significantly impacts the patient and his family in terms of what to expect and how to follow up.







# ETHNIC DIFFERENCES IN CUMULATIVE EXPOSURE TO FOOD INSECURITY AND RISK OF CHILDHOOD ASTHMA

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1 Nutritional Sciences, The University of Texas at Austin, United States and 2 PopulationResearch Center, The University of Texas at Austin, United States.

**Introduction:** Prevalence rates of asthma have steadily risen in the U.S. and are higher in non-Hispanic black (NHB) than in non-Hispanic white (NHW) or Hispanic children. Likewise, NHBs are at higher risk for food insecurity than the other 2 ethnic groups. Little is known about the relationship between cumulative exposure to household food insecurity and childhood asthma.

**Purpose**: To determine the relationship between exposure to food insecurity and asthma in NHW, NHB and Hispanic school-aged children.

Materials & Methods: Data from 4 waves of the Early Childhood Longitudinal Study-Kindergarten cohort (ECLS-K) were analyzed beginning in kindergarten through 8th grade (N=6,031). Food insecurity was measured with the 18-item USDA module and at each wave of data collection, an episode is defined as household food insecurity during the prior year. Ever-diagnosis of asthma and sociodemographic characteristics were parent-reported; anthropometric data were collected in person. Multivariate logistic regression models were stratified by race to test the association between cumulative exposure to food insecurity and ever being diagnosed with asthma, controlling for covariates.

Results: Among NHWs, odds of asthma were highest in children in households that had two episodes of food insecurity and were ever poor (OR 2.80, 95% CI 2.69-2.92). Among NHBs, one episode of food insecurity and ever being poor were associated with the highest odds of asthma (OR 2.05, 95% CI 1.97-2.14). Among Hispanics, one episode of food insecurity alone was associated with the highest odds of asthma (OR 1.63, 95% CI 1.58-1.69). Contrasting results appeared by ethnic group for parental depression, with odds for NHWs (OR 1.74, 95% CI 1.72-1.75) higher than Hispanics (OR 1.06, 95% CI 1.05-1.08) and NHBs (OR 0.98, 95% CI 0.96-0.99). Results were adjusted for child sex, birth weight, health insurance status, overweight or obesity, and maternal nativity and education.

**Conclusions**: In 2014, 19% of U.S. households with children experienced food insecurity, which we have previously demonstrated is associated with asthma. These results demonstrate that asthma is associated with strong ethnic differences in life course exposure to food insecurity and poverty. Thus, recent pediatric healthcare policy urging screening for food insecurity at pediatric visits may potentially reduce interethnic health disparities in asthma outcomes.





# THE FACTOR GUIDANCE IN DURATION OF EXCLUSIVE BREAST FEEDING IN MOTHERS OF MATERNITY OF PUBLIC JOINVILLE- SC

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**Objective**: The aim of this study was to evaluate the time of exclusive breastfeeding after nutritional counseling to pregnant women attending a maternity of Joinville-SC.

**Methods**: In the period from 2013 to 2014, 108 mothers were selected randomly in a maternity hospital in Joinville-SC and randomly divided into experimental group and control group. In the postpartum, both groups answered a questionnaire with demographic information, socioeconomic and desire in the time of exclusive breastfeeding, and mothers who were included in the experimental group received guidance on breast feeding, based on UNICEF's Booklet. To track the time of exclusive breast feeding during the period of 2, 4 and 6 months was conducted via telephone questionnaire.

Results and Conclusions: This study showed that many mothers had never received any guidance on the time of exclusive breast feeding and the guidance received from half the mothers in the experimental group continued to exclusively breastfeed their children until the fourth month, while the mothers of the control group only one quarter the sample still breastfeeding exclusively. Already in the sixth month, no mother in the control group still breastfeeding and only 8% of the experimental group continued to breastfeed, thus emphasizing that health professionals should show more interest in passing this knowledge to ensure an increase in the prevalence rate and duration of breast feeding.

**KeyWords**: Exclusive breastfeeding, guidance on post birth, weaning.



## PRETERM INFANT WITH BREAST MILK-ACQUIRED CYTOMEGALOVIRUS INFECTION: CLINICAL FINDINGS AND AUTOPSY

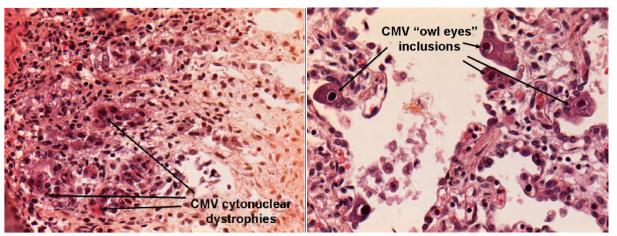
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**Introduction**: Non-pasteurized, non-frozen, fresh breast milk from mothers with positive cytomegalovirus (CMV) serology was initially contraindicated to very low birth weight infants because of the risk of milk-acquired CMV infection. Recently, the severity of this infection was increasingly discussed and the international guidelines now differ. Since 2012, the American Academic of Pediatrics recommends nutrition through raw breast milk for all preterm infants.

Case report: We report the case of an infant born prematurely at 27 weeks and 4 days and fed with raw breast milk from day 12 of life (D12). He presented with a late-onset of CMV infection from D39. The CMV PCR, negative on D3, was strongly positive on D49, as well as the PCR on breast milk. He had CMV-specific IgM while his mother had only CMV-specific IgG. All the other sources of contamination have been ruled out. On D52, he deteriorated further with septic shock, and a fatal cardiac arrest on D54. His twin presented an asymptomatic CMV infection. The autopsy and histological examination showed evidence of numerous organs damage caused by CMV (with differences compared to congenital infection) with a gastroinstestinal involvement but no evidence of bacterial infection.

**Conclusion**: Although rare, postnatal CMV infections transmitted by raw breast milk given to very low birth weight infants can have dramatic consequences.



Histological examination results: Gastric glands with cytonuclear dystrophies typical of CMV infection and pneumocytes with typical "owl eyes" inclusions.





## IMPROVING PHYSICIAN WELLNESS: THE SECOND VICTIM SYNDROME AND QUALITY OF CARE

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Improving quality of care logically includes optimizing the duty-readiness and well-being of the healthcare provider. Medical errors and poor outcomes adversely impact the involved providers as well as the patients and their families. Unfortunately our current system does little to support these "second victims" who experience various degrees of emotional and psychological stresses including confusion, loss of confidence and debilitating anxiety. These factors contribute to the alarmingly high rates of professional "burn-out," substance abuse and suicide of healthcare providers as well as increasing the likelihood of subsequent medical errors. Mindful efforts to improve the healthcare culture and develop personal support systems can help physicians become more resilient, provide higher quality patient care and have longer productive professional lives. Institutional support systems are also necessary to assist "second victims" to recover from the impact of an adverse patient event.





### EFFECT OF GLUTEN FREE DIET ON GROWTH OF NEWLY DIAGNOSED CHILDREN WITH CELIAC DISEASE

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**Introduction**: Celiac disease is a common,often neglected health care problem with avoidable mortality and morbidity in Indian population with a prevalence of 0.9 to 1%.

**Purpose**: To look for effect of gluten free diet, the only established treatment till date, on growth of newly diagnosed children in Indian population where other causes of malabsorption coexist with underlying celiac pathology. Also, to formulate an optimum follow up schedule according to the expected changes in anthropometry and avoid unnecessary hospital visits and school absenteeism.

Materials and methods: 55 children, with no known chronic disorder, between 1 - 10 years were diagnosed using ESPGHAN 2012 guidelines. Height/length for age, weight for age, BMI(>5 years) and weight for length(<5 years) were assessed using WHO standards. Gluten free diet introduced with diet charts and counselling sessions. Children were followed up at 1 mo, 3 months and 6 months post GFD. At each visit, compliance was ensured and anthropometry repeated. Change in Anthropometry of 51 patients, who completed 6 months follow up was analyzed.

Results: 31/51 were girls and 20/51 boys (3:2 ratio) with a slight female preponderance. 14 (27.4%) were under 5 years of age with youngest being 19 months old. Mean age of presentation was 74 months (6yrs2mo±2yrs4mo). 26patients(50.9%) had malabsorptive symptoms like chronic diarrhea, abdominal pain, distension, vomiting. 13(25%) presented with refractory anemia, 7(13%) with short stature and 5 were diagnosed on sibling screen. Among rare associations, we had Autism spectrum disorder, enamel hypoplasia and atopy. At enrollment, 27(52.94%) patients were below -3SD for weight for age, post GFD highly significant weight gain at 6 months (p=0.0001) was observed with only 5(9.8%) below -3 SD. For Height/Length for age, after 6 months of GFD, percentage of patients below -2SD was brought down from 74.5%(38) to 56%(29), (p=.0252). Similarly BMI/WT for length also improved significantly (p=0.0002).

**Conclusions**: Probable reason for delayed diagnosis in our population could be lack of awareness and difficult access to diagnostic tests .Due to this delay, some of the patients were too decompensated at presentation that even after significant weight/height gain they continued to stay below 3SD for that age.GFD brings about symptomatic relief as early as 3-4 weeks, though significant weight gain occurs after 3 months of GFD, "6 months" is the optimum scheduling for follow up to witness significant height and weight gain for age. If 6 months of GFD fails to show significant height gain,other co-morbidities like type 1 DM, Thyroid disorders should be considered.





### SOCIAL CONDITIONS AND A HIGH SEVERITY OF DENTAL CARIES IN 5-YEAR-OLD CHILDREN

Authors: Márcia Mª Dantas Cabral de Mello 1, Wayner Vieira de Souza 2, Maria Cristina Tavares 3

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**Introduction**: despite global improvements in oral health, the distribution of caries experience remains heterogeneous among preschool-aged children. In Brazil, the most recent oral health survey showed that the average rate of decayed, missing and filled primary teeth (dmft) was reduced only 18% among five-year-olds. Furthermore, 80 % of these children had untreated decayed teeth.

**Purpose**: to identify factors associated with high levels of caries in the primary teeth of five-year-old children living in at-risk urban areas in Recife City, Brazil.

Materials and Methods: this was a case-control study, part of a prior investigation of the prevalence of dental caries in the primary dentition conducted in 2006 in public health services in Recife, Brazil (The mean of dmft scores in this population: were equals 3.36). Cases had a dmft score  $\geq$  4 and controls had a dmft score $\leq$  3. The cutoff point was based on the dmft scores mean value of the study population. Categories of independent variables were sociodemographic, family structure, oral health behavior, and use of oral health services. Crude odds ratios and 95% CI were calculated. Variables associated with dmft  $\leq$ 4 at a significance level of P $\leq$ .20 in univariate analyses were included in multivariate logistic regression models and permanence criterion in the final model of P $\leq$ .10. Results: included 479 children:171 cases and 308 controls. After controlling confounding variables, factors associated with a dmft score  $\geq$  4: children living in households with at least 6 people, residence in a poor area, caregiver's low educational level, consumption of sweets between meals, and the reason for and location of oral health care seeking.

**Conclusions**: a dmft score ≥4 in five-year-old children living in poor conditions in a large city in Brazil was influenced by: lower socioeconomic status; an overcrowded household; caregiver's low educational level; seeking dental services only for emergency treatment and a diet rich in sucrose.





# AUTOIMMUNE HEMOLYTIC ANEMIA ASSOCIATED WITH MYCOPLASMA PNEUMONIAE AS A INITIAL MANIFESTATION OF SYSTEMIC LUPUS ERYTHEMATOSUS IN A PEDIATRIC PATIENT - CASE REPORT

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1 Medical students of Pontificia Universidade Católica de Minas Gerais, Minas Gerais, Brazil; 2 Medical Pediatrician of University Hospital of the Federal University of Juiz de Fora, Minas Gerais, Brazil. 3 PhD in Internal Medicine by the Federal University of Minas Gerais, Brazil.

**Introduction**: Systemic lupus erythematosus (SLE) is frequently associated with autoimmune hematological abnormalities. Autoimmune hemolytic anemia (AIHA) is the most common variant in SLE pediatric patients and it is associated with positive serology for Mycoplasma pneumoniae in several cases reported in medical literature.

**Purpose**: We report the case of a 9-year-old boy with severe AIHA following Mycoplasma pneumoniae infection at the onset of SLE.

**Materials and Methods**: This is a case report study. Data were collected from hospital and out patient medical records, that included image and laboratory diagnostic methods of the patient. We conducted a review of publications describing the SLE onset and AIHA in pediatric patients. We searched MEDLINE and Scielo up to April 2016.

Results: A previously healthy boy, at admission in the hospital, presented severe anemia (Hb: 3.74 g/dL), hematocrit 10.4%, reticulocytosis 23%, reticulocyte index 5.69%, Reticulocyte Production Index 2.27%, leukocytes 6,177 /mm3, platelets 75,900 /mm3, LDH 1,581 mg/dL, positive direct coombs and serology for Mycoplasma pneumoniae, IgG values 1,928 U/mL (>p97) and IgM 166 U/mL (>p97). Based on these and further examination, the pacient was diagnosed with complicated AIHA, secondary to the Mycoplasma infection and the treatmente was based on azithromycin. The diagnosis of SLE was made during follow-up and evaluation visits, once he satisfied four of the diagnostic criteria of the American College of Rheumatology's Lupus classification: malar rash, mouth painless ulcers, proteinuria 1.3 mg/dL, hemolytic anemia, leukopenia, C3 and C4 decreased, positive anti-Sm, anti-DNA reagent. Terapy included prednisone and pulse therapy with methylprednisone, administered orally. The patient presented favourable clinical and laboratory evolution, achieving remission and was discharged and scheduled to return within 30 days.

**Conclusion**: The current report and literature review highlight the debate about the importance of SLE therapy in pediatric patients with AIHA arising after a bacterial infection. AIHA in pediatric patients is uncommon, and one must be aware of associated infections, mainly by M. pneumoniae, once the laboratory diagnosis for this entity is not performed in ordinary clinical practice.



### A CASE OF EARLY ONSET MITOCHONDRIAL NEUROGASTROINTESTINAL ENCEPHALOMYOPATHY

Authors: Maria Immacolata Spagnuolo\*, Vincenza Gragnaniello\*, Manrico Morroni\*\*, Eugenia Bruzzese\*, Simona Fecarotta\*, Alfredo Guarino \*

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**Introduction**: Mitochondrial neurogastrointestinal encephalomyopathy (MNGIE) is a rare autosomic recessive disorder characterized by: ptosis; progressive external ophthalmoplegia; gastrointestinal dysmotility; cachexia; peripheral neuropathy; and leucoencephalopathy. The disease is caused by mutations in the TYMP gene encoding thymidine Phosphorylase. The enzyme replacement by allogeneic hematopoietic stem cell transplantation lead to a biochemical improvement, but the clinical effects are unknown.

**Purpose**: The average age of disease onset is 17.9 years (range 5 months to 35 years), but the majority of patients remain undiagnosed for many years. We review the literature and present an additional case to emphasize the importance of the intestinal biopsy, especially in the patients that initially have gastrointestinal symptoms.

**Materials and Methods**: we report the case of a newborn, which was the product of a heterologous fertilization. At age 20 days she was noted to have a poor appetite and vomiting. Examination revealed failure to thrive and ophtalmoparesis. She was found to have metabolic acidosis e gastrointestinal dysmotility, which required parenteral nutrition.

**Results**: The intestinal biopsy samples shown by electron microscopy megamitochondria with marked reduction of cristae in the cytoplasm of the smooth muscle cells (figure 1). Prior reports have shown similar abnormal mitochondria in patients with MNGIE. Brain MRI revealed diffuse leukoencefalopathy, leading to the diagnosis of MNGIE.

**Conclusions**: The possibility of a mitochondrial disease, particularly MNGIE, should be deliberately pursued in patients with chronic intestinal pseudo-obstruction. A relatively noninvasive intestinal biopsy containing muscularis mucosae may be sufficient to establish a diagnosis. Pathologists should closely evaluate the morphology and ultrastructure of gastrointestinal smooth muscle cells in patients with chronic intestinal pseudo-obstruction.

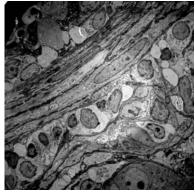


Figure 1: Megamitochondria





### PREVENTIVE EFFECTS OF POSTNATAL WEIGHT GAIN ON RETINOPATHY OF PREMATURITY

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**Introduction**: Retinopathy of prematurity is an ischemic-proliferative condition characterized by abnormal retinal vascularization caused by an interruption in development. It is the most common cause of childhood blindness and visual disability. Good nutrition of neonates, adapted to their energy requirements, facilitates proper secretion of insulin-like growth factor-1 (IGF-1) and vascular endothelial growth factor (VEGF), and provides better protection against external harmful agents. Low postnatal weight gain in the first 4-6 weeks of life has been identified as an independent risk factor for retinopathy of prematurity. It is the only modifiable factor included in the WINROP scale.

**Purpose**: To analyze the influence of postnatal weight gain on the incidence and severity of retinopathy of prematurity.

**Materials and Methods**: Data of serial examinations of 309 premature newborns selected by "Programa de cribado para la retinopatía del prematuro en España" were collected. An observational, analytical, and prospective analysis was performed to analyze the incidence of retinopathy of prematurity. It was carried out a bivariate analysis of retinopathy degree and weight gain in the first 4-6 weeks of life.

**Results**: The incidence of the retinopathy of prematurity decreased in neonates with weight gain equal to or greater than 7 g/day in the first 4-6 weeks of life. There was a negative relationship between postnatal weight gain in the first 4-6 weeks of life and severity of retinopathy of prematurity (p<0,0001). It was obteined a greater strength of this relationship in multiple birth infants (p>0,0001).

**Conclusions**: The incidence of advanced stages of retinopathy of prematurity is lower in newborns with postnatal weight gain equal to or greater than 7 g/day in the first 4-6 weeks of life. Proper postnatal weight gain is associated with lower degree of retinopathy of prematurity.





#### SCREENING OF AMBLYOPIA RISK FACTORS IN PRESCHOOLERS

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**Introduction**: Amblyopia is the leading cause of decreased vision among children and is dued to inadequate visual input or abnormal binocular interaction early in life. Equal and good quality input from both eyes is necessary for the brain's vision centers to develop normally. Ocular processes that interfere with the development of the visual pathways (amblyopia risk factors - ARF) may result in amblyopia, which is preventable and reversible when timely identified and treated.

**Purpose**: Screening of amblyopia risk factors in preschool children.

Materials and Methods: Prospective study from June to September 2014 including children from every preschool in an urban area (Coimbra, Portugal) in whose informed consent of legal representative was obtained. Data on gender, age and previous ophthalmologic problems were collected through parental questionnaires. Screening of ARF was performed through photoscreening technology. Children who met the referral criteria for ARF were scheduled for a pediatric ophthalmology appointment for further evaluation.

**Results**: Were screened 409 children from 8 preschools, median age 45 months (13-77 months). Among these, 49 (12%) met referral criteria: 15 were already regularly evaluated by an ophthalmologist and the remaining 34 were referred to an ophthalmology appointment. Of these, 27 attended the after-screening appointment: all had normal extra ocular movements and normal anterior segment and 1 had an alteration of the ocular fundus (optic disc drusen). Regarding visual acuity, 19 (70%) had an abnormal exam: 8 astigmatism; 5 aniso-astigmatism; 4 aniso-hypermetropia; 1 myopia; 1 aniso-myopia.

**Conclusions**: If the children identified as having a major amplyopia risk factor hadn't been screened and adequately treated in the first years of life, they would probably progress to irreversible vision loss. Photoscreening is particularly useful in assessing visual function in preverbal children, with a high positive predictive value (70% in our study).





#### ABSTRACT FOR WORLD SUMMIT ON PEDIATRICS 2016

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**Introduction**: The national survey of neonatal surgery commenced in 1964 and has been carried out every 5 years since, yielding extremely valuable data for understanding the development and progress of neonatal surgery in Japan.

**Purpose**: To discuss the chronological changes observed in a national survey of neonatal surgery in Japan performed every five years by the Committee in the Japanese Society of Pediatric Surgeons. Patients and Methods: We analyzed the survey data for the 20 years from 1993, when it became an official event of the Committee of Academic Survey & Advanced Medical Science on Japanese Society of Pediatric Surgeons, to 2013, and report on the chronological changes.

Results: The number of summarized cases was the least in 1993 with 2,806 cases, but it increased to 3,753 cases in 2013. The number and rate of maternal transport increased from 549 cases,19.6% in 1993 to 1309 cases,34.9% in 2013, respectively. Mortality rate with maternal transport was improved from 22.7% in 1993 to 11.7% in 2013 (p=0.0386). The ratio of low birth weight infants definitely increased from 27.2% in 1993 to 39.3% in 2013. Wherein, the increase in extremely low birth weight infants was remarkable, increasing from 4% in 1993 to 9.9% in 2013, with an annual rate of +0.39% (p=0.0014). From the view point of the chronological change in mortality observed in birth weight range, a significant decline was observed in extremely low birth weight infants, from 48.1% in 1993 to 13.7% in 2013, with an annual rate of -1.68%(p=0.0010). Chronological changes of overall mortality linearly declined from 12% in 1993 to 6.6% in 2013, with an annual rate of -0.26% (p=0.0002). Many major diseases are observed with a decline in mortality by the same inclination as overall mortality. The decline in the mortality rate was most robust with respect to congenital diaphragmatic hernia (CDH). The mortality rates, except for that of CDH, omphalocele, esophageal atresia and intestinal perforation, declined to 5% or lower by 2013.

**Conclusions**: These results might be due to remarkable progress in perinatal management.





#### I CAN'T TURN MY PAINFUL NECK

Authors: Pek Jen Heng

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**Introduction**: Acute retropharyngeal infection due to cellulitis or abscess is commonly seen in the paediatric population.

Purpose: We aim to describe an unusual case of retropharyngeal cellulitis presenting with torticollis.

Materials and Methods: Case report.

Results: 13-year-old girl with no past medical history presented to the Emergency Department with inability to turn her neck associated with fever for 5 days. She just recovered from an episode of upper respiratory tract infection. On examination, her temperature was 37.5oC. There was torticollis to the right with painful and limited range of motion of the neck. Multiple lymph nodes were felt along the right cervical chain. Blood analysis showed high degree of inflammatory reactions with a total white count of 18.5 x 109/L, ESR of 115 mm/hr and CRP of 143 mg/L. A lateral neck x-ray done was normal. CT neck showed features consistent with retropharyngeal cellulitis with thin sliver layer of fluid tracking along the retropharyngeal space and multiple enlarged cervical lymph nodes on the right. She was managed conservatively with intravenous co-amoxiclav and ampicillin and kept on Holter traction during her admission. Inflammatory markers improved and she was discharged with oral augmentin and Aspen collar. She recovered well at her follow-up visit.

**Conclusion**: This case described inflammatory torticollis as a result of retropharyngeal cellulitis. The inflammation caused spasms of the prevertebral muscles, eventually leading to torticollis. This atypical presentation is common in the paediatric age group and a high index of suspicion is necessary to diagnose and manage the underlying condition.





# EXAMINING OF THE RELATIONSHIP BETWEEN WAIST TO HEIGHT RATIO, THE DIETARY HABITS AND BODY MASS INDEX (BMI) OF STUDENTS IN A VOCATIONAL HEALTH HIGH SCHOOL

Authors: Rabia Keçialan\*, Rengin Kosif \*\*

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**Introduction**: The waist to height ratio is a criterion in obesity the importance of which has been increasing. It increases the risk for cardiovascular disorders. Dietary habits are closely associated with gaining weight. No studies have been conducted on the relationship between the dietary habits and the waist to height ratio of high school students.

**Purpose**: The aim of the study is to assess the relationships between the waist to height ratio, the dietary habits and the BMIs of students in a vocational health high school.

**Materials and Methods**: A descriptive research design was used in this study. It was conducted with 127 students, 74 females and 53 males, in the department of Health at the Izzet Baysal Golyuzu Vocational and Technical Anatolian High School. Their anthropometric measurements, dietary habits and BMIs were recorded.

Results: Of the students, 58.3% were female, 41.7% were male, and their mean age was 16.5. Of them, 63.8% were found to have breakfast, 86.6% to have lunch and 95.3% to have dinner, regularly. The mean of BMI of the female students was 21.3. It was 21.2 for male students. Of the students, 11% were found to be slim, 12.6% to be obese and 3.1% to be slightly obese. The measurement of waist circumference in the students showed that of them, 66.1% were below the 90th percentile, while 33.9% were above the 90th percentile. The waist to height ration mean of the female students was 0.43, and that of the male students was 0.45. The waist to hip ratio was found to be 0.74 for female students and 0.83 for male students. A moderate, positively significant correlation was found between waist to height ratio and BMI (r=0.693). A very weak positive correlation (r=0.204) was found between the waist to hip ratio and BMI, while a moderate positive correlation (r=0.543) was found between the waist to hip ratio and the waist to height ratio. A very weak, positively significant relationship (r=0.226) was found between acid-containing beverages and the waist to hip ratio. No correlation was found between nutritional meals and waist circumference values.

**Conclusions**: The waist to height ratio was found to be correlated with the waist to hip ratio and BMI for the age group with whom this study was conducted. Of the students, 37% were found to consume acid-containing beverages. The waist to hip ratio of these students was found to be higher.

Keywords: Student, waist to height ratio, BMI, nutrition





### THE EMOTIONAL AND PSYCHOSOCIAL PROBLEMS EXPERIENCED BY THE CHILDREN EXPOSED TO SEXUAL ABUSE

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**Introduction**: Child and adolescent sexual abuse is an overwhelming problem in the world. The experience of being sexually abused is associated with a wide range of psychiatric symptoms and difficulties, and these problems can persist over years.

**Purpose**: This study aimed to determine the behavioral problems and difficulties experienced by the children after being exposed to sexual abuse.

**Methods**: This study was conducted in a Child Monitoring Center subordinate to a third stage hospital in Antalya, Turkey between November 2012 and January 2014. The study sample consisted of 443 children aged between 0 and 18 years who have a history of sexual abuse out of 518 children who referred to the Child Monitoring Center, along with their parents. The approval of Ethics Committee, the written permission of the administration of the hospital where the study conducted, and the informed consents of the children and parents were obtained to conduct this study. The study data were analyzed using the SPSS 20.0 package through numbers and percentage distribution.

**Results**: Of the children included in the study, 90.3% were females and average age was 14.00±2.93. The children were aged between 3 and 18 years. The average age of the first sexual abuse was 13.21±2.88. The frequent types of abuse included: vaginal penetration (53.3%), touching (38.1%), and anal penetration (13.3%). The children were observed to experience introversion/quietness (53.5%), despair (46.5%), fear to be exposed to the same incident again (44.2%), distrust to people (36.8%), difficulty in falling asleep (32.7%), hopelessness for the future (32.1%), feeling as if they were experiencing the same incident (29.6%), and other psychological and psychosocial problems.

**Conclusions**: Pediatric nurses have significant roles and functions preventing child abuse, determining the risk factors regarding abuse, minimizing the trauma of the children by providing them with psychosocial support in case of abuse, and helping the children to move on in a healthy manner at an optimal level.

**Key Words**: Sexual abuse, emotional problems, psychosocial problems, Turkey

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## EFFECT OF HONEY BEE PRODUCTS ON UPPER RESPIRATORY TRACT INFECTIONS IN CHILDREN

Authors: Sibel SILICI 1, Yılmaz Secilmis 2, Adnan Ozturk 2, Fatmagül Demirkan 2

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**Introduction**: Upper respiratory tract infections (URI or URTI) are the illness caused by an acute infection which involves the upper respiratory tract: nose, sinuses, pharynx or larynx. Besides being the leading reasons for children missing school URTIs may cause indirect costs for parents of children who have URTI, eg., time lost from work to care for children, take them to medical visits, and time spent in hospitals. Therefore children's URTIs also impose a significant economic burden. Bee products such as honey, royal jelly and propolis have been used for many years to treat many diseases, and recently with a large number of scientific studies their useful biological properties have been shown.

**Purpose**: In this study it is aimed to investigate the effect of the bee products mixture (BPM) i.e honey, royal jelly and propolis, on children of 5-12 years of age, who are diagnosed with acute URTI.

Materials and methods: A double-blind, randomized, placebo-controlled trial scheme used. Assay carried out in Erciyes University Mustafa Eraslan-Fevzi Mercan Children's Hospital with 200 children, at the age of 5 to 12, who have sore, throat, dysphagia that define tonsillopharyngitis. In addition to blood tests of CBC, CRP, ESR, ASO and anti VCA IgM, throat culture analyze and quick Strep A tests performed and Breese clinical scoring used for group A Beta hemolytic streptecoccus. Children with bacterial ethiology divided into two randomized groups, of the one on antibiotic treatment only, while the other one administered with BPM (20 g/day for <30 kg , and 40 g/day for > 30 kg ) in addition to the antibiotic treatment for 10 days. Children who are considered with viral ethiology (60 volunteer patients) also divided into two randomized groups, of the control group that received plecebo treatment, while the other one administered with BPM. Children whose temperature is above 38 oC treated with paracetamol and ibuprofen. CARIFS scale assessed by the parents of the children (10-day follow-match) and URTI symptoms of the groups compared to each other. Ten days later, the patients called for out patient clinic and findings evaluated. Results: There was difference in duration between URIs treated with honeybee products or placebo. There was also difference in the overall estimatte of severity of URI seypmtoms between the 2 groups.

**Conclusion**: The supporting role of bee products which have been recommended for throat infections for a long time, determined on children with URTIs.

Keywords: Upper respiratory tract infections (URI), honey, royal jelly, propolis, tonsillopharyngitis





#### PUNE LOW BIRTH STUDY - BIRTH TO ADULTHOOD

Authors: Sudha Chaudhari

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**Introduction**: Neonatal care had just started improving at the end of the last century in India, but there were absolutely no studies on long term follow up.

**Purpose**:: A long term follow up study of low birth weight (LBW) (<2000gms) infants was planned and was done in 5 phases.

#### **Material and Methods:**

**Phase I**: (0-30 months) Tone was assessed by the method described by Amiel – Tison. Development was assessed by the Bayley Scales of Infant Development.

**Phase II**: Intelligence was assessed by the Stanford-Binet test at school entry (6 years) Bender-Gestalt test was done for visuo-motor perception.

**Phase III:** IQ was repeated at 12 years by Weschler's intelligence scale (WISC). Wide Range Achievement Test (WRAT) was done to detect reading, writing, mathematics disability. A bone age was determined and prediction of final height was done.

**Phase IV:** Final growth was assessed by usual anthropometry at 18 years and measurements for adiposity.

**Phase V:** Early predictors of "Metabolic syndrome" (Met-S) were looked for - a glucose tolerance curve, insulin, lipid profile, abdominal fat estimation by a MRI of the abdomen.

**Results**: 201 LBW infants discharged from a Neonatal Special Care Unit were enrolled along with 90 controls. 161 (80%) were available for the final follow up. 60 of these were preterm SGA (39.2%) and 38 were (24%) full term SGA.

**Phase I:** Incidence of cerebral palsy was 3.8% and mental retardation was 4.2%.

**Phase II:** 14% of LBW children had "borderline" intelligence (70-84).

**Phase III:** Incidence of "borderline" IQ rose to 24.4%. Visuo-motor perception was poor, mathematics score was poor in preterm SGA and VLBW children.

**Phase IV:** Preterm SGA subjects were not only short, but also showed the lowest IQ. Maternal education had a great impact on the IQ even in preterm SGA subjects. There was good correlation between predicted height and actual final height.

**Phase V**: Hypertension was the first manifestation of Met-S. Although 3 components of Met-S were present in only 3 cases and 5 controls, 25 subjects had 2 components (P=0.046). Sum of 4 skinfold thickness was a stronger determinant of Met-S compared to BMI, waist circumference and MRI fat. "Small at birth and big at 22 years" had increased insulin resistance.

**Conclusion**: Preterm SGA children were short and had the lowest IQ. Hypertension was the first manifestation of Metabolic syndrome at 22 years. Excessive weight gain should be avoided by LBW children.





## ADOLESCENT E-CIGARETTE USE AND SMOKING ONSET: DIFFERENTIAL EFFECT ON LOWER-RISK YOUTH

Authors: \*Thomas A. Wills, James D. Sargent, Ian Pagano, Frederick X. Gibbons, & Rebecca Schweitzer

University of Hawaii Cancer Center, Norris Cotton Cancer Center (JDS), University of Connecticut (FXG)-USA

**Introduction**: Over the past 4 years there has been a large increase in the use of electronic cigarettes among adolescents in the US, Europe, and Asia. This presentation considers the implications of e-cigarette use for the future of adolescent health.

**Purpose**: At present, four longitudinal studies with samples of adolescents and young adults have demonstrated that using e-cigarettes makes persons more likely to begin smoking tobacco cigarettes. This has been demonstrated with statistical control for a range of demographic and psychosocial risk factors, hence has major public health implications. Nonetheless, some critics have argued that the adolescents who began smoking were simply high-risk youth who were going to smoke anyway (supposedly because of associated risk factors) and their e-cigarette use had little to do with smoking onset. We tested this proposition in a longitudinal study of high school students.

**Methods**: A school-based sample of adolescents in Hawaii (N = 2,338; M age 14.7 years; 47% male) was initially surveyed by trained research staff in 2013 (Time 1) and resurveyed 1 year later (Time 2). The questionnaire contained measures on e-cigarette use and cigarette use and on psychosocial variables that are demonstrated predictors of teenage cigarette smoking. A score reflecting predisposition to smoke was the sum of standardized values for three variables known to confer high-risk status: rebelliousness (4 items, alpha = .83), low parental support (7 items, alpha = .94), and willingness to smoke (3 items, alpha = .90). The proposition was tested with a logistic regression analysis conducted for participants who had never smoked at baseline.

**Results**: Smoking status at T2 (never smoked vs. ever smoked) was predicted from scores for T1 predisposition to smoke, T1 e-cigarette use, and their cross-product (i.e., interaction). E-cigarette use had the largest relation to smoking onset among youth at the lowest levels of risk (25th and 50th percentiles) and less effect among youth who were at high risk for smoking (75th percentile). The interaction was significant (p < .01).

**Conclusions**: These results make it difficult to argue that the effect of e-cigarette use on later smoking onset is merely attributable to high-risk youth using e-cigarettes. In fact, the results indicate that e-cigarettes differentially promote the onset of smoking among lower-risk youth (Wills et al., Pediatrics 2015). These findings argue for governmental policy to restrict access to e-cigarettes by youth and educational programs to make adolescents more aware of the risks of e-cigarette use.





#### POSTAURICULAR LYMPHADENITIS AFTER BCG VACCINE

Authors: Tijana Nikolić

Health center Niš, Serbia

**Introduction:** Purpose of BCG vaccine is immunization of all newborns and high risk infants in order to prevent severe clinical forms of tuberculosis disease. It contains live, attenuated strain of Mycobacterium tuberculosis bacile, named Bacillus Calmette Guerin. Expected reactions after injection are red, tender or indurated papule which may progress to be ulcerated, but healing after 2-5 months leaving a superficial scar. Swelling of the ipsilateral regional lymph nodes may also occur with dimensions up to 1cm.

**Purpose:** The aim of this case report was to show example of late postvaccinal reaction, 4 months after applied vaccine, with appearance of postauricular lymphadenitis as a very rare reaction, as well as supraclavicular and axillar lymphadenitis.

**Materials and methods:** Methods used in diagnostics were: anamnestic details about applied BCG vaccine, clinical exam of pediatrician, hematologist and surgeon, laboratory exam and ultrasonography of affected lymph nodes.

**Results:** Clinical and laboratory results showed that existing postauricular nodes, together with axillary and supraclavicular nodes were assumed to be reactive lymphadenitis as a part of immune reaction after BCG vaccine, and should not be suspected of possible malignancy or inflammation process.

**Conclusions:** Although BCG is considered to be a safe vaccine, there are possible adverse events, most commonly as an injection site reaction and regional lymphadenitis. Postauricular lymphadenitis is not often mentioned in literature and its possible appearance in first months of life is explained by postvaccinal reaction. In this case report, shown lymphadenitis was non-suppurative, without need for drug or surgical treatment. After few weeks, spontaneous regression of lymph nodes has been noted.

Key words: BCG, postvaccinal reaction, postauricular lymphadenitis





### FOREIGN BODY ASPIRATION IN CHILDREN: TEAMWORK IS THE KEY TO SUCCESSFUL OUTCOME

Authors: Vinod Prem Singh

College of Medicine King Khalid University, Abha - Saudi Arabia

**Introduction:** Foreign body aspiration is a Common cause of Toddlers in the age group of One to Three Years presenting as Pediatric emergency with Respiratory distress. The Pediatric team does the Primary assessment and decides on the further line of Management. Our experience from November 2009 to October 2012 in a Tertiary Care Centre with these children was scientifically studied.

Purpose: To identify the Key factors for Success in the Management of this group of patients

Materials and methods: Medical records of 60 patients admitted over the Three Year Period with a Chief complaint of Respiratory distress were studied. The Pediatric team maintained a high index of Suspicion for Foreign body aspiration. The four Pediatric consultants reviewed them within a couple of hours of admission. 45 patients were suspected to be having Foreign body aspiration based on Positive history from mother and/or Clinical findings. All 45 underwent a Rigid bronchoscopy in the Operation theatre with a Proper team of competent Pediatric Surgeon and anesthetists.

**Results**: The procedure was Uneventful in all 45 patients. A foreign body (Vegetative: Peanut in 30/36) was removed in 36 patients. A good bronchial toilet was done in those where foreign body was not found. Patients with Foreign body made a dramatic recovery and were discharged within One to three days. 6 out of the other 9 also showed a marked improvement following good bronchial toilet.

**Conclusions**: A high index of Suspicion should be maintained in the age group of one to three years of a possible foreign body aspiration. A good team work between the Pediatrician, a Competent Pediatric surgeon and anesthetic team leads to a favorable outcome of this potentially life threatening problem.





### RANDOMIZED CONTROLLED TRIAL OF ABSTINENCE AND SAFER SEX INTERVENTION FOR ADOLESCENTS IN SINGAPORE: 1 YEAR FOLLOW-UP

Authors: Mee Lian Wong 1, MD, FFPH, Junice Yi Siu Ng 1, BSc, Roy Kum Wah Chan 1,2, MRCP, FRCP, Martin Chio 2, FRCP, FAMS, Raymond Boon Tar Lim 1, MBBS, MPH, David Koh 1,3, MBBS, MSc (OM), PhD

Saw Swee Hock School of Public Health, National University of Singapore

**Introduction**: Adolescents are experiencing the most rapid increase in sexually transmitted infections (STIs) worldwide. More than 50% of the adolescents in the world live in Asia, and South and Southeast Asia report the largest number of STIs in the world.

**Purpose**:To assess the efficacy of an individual-based behavioral intervention on STI-risk reduction behaviors

Materials and Methods: We conducted a randomized controlled trial of a behavioral intervention compared to usual care at the only public STI clinic in Singapore. The inclusion criteria were sexually active heterosexual adolescents aged 16 to 19 years attending the clinic. The intervention included four on-site skills-based sessions targeting individual, relational and environmental influences on sexual behaviors, followed by phone or online support. Primary outcomes were abstinence, number of partners and consistent condom use for vaginal sex. The secondary outcome was incident acute STIs diagnosed by laboratory tests for gonorrhea, chlamydia, trichomoniasis, syphilis and herpes simplex infection (Type II). Participants completed a self-administered questionnaire at baseline and at 6 and 12-month follow-up.

Results: We recruited 337 adolescents to the intervention and 350 to usual care (controls) between 2010 and 2014. Fifty-six percent of intervention participants (86 males, 101 females) and 54% controls (90 males, 98 females) completed follow-up at 12 months in December 2015. More males in the intervention than the control group reported abstinence post-intervention at 12-month follow-up (42.1% vs. 24.3%, adjusted risk ratio (RR) 2.27, 95% CI: 1.36-3.80). The effect was not significant for females (20.9% vs 21.5%, adjusted RR 0.97, 95% CI 0.54-1.72). More females in the intervention than control group reported consistent condom use (36.8% vs 17.4%,adjusted RR 2.76, 95% CI 1.53-4.99) compared to no significant between-group difference in males (34.8% vs 26.9%, p=0.283). There was also an intervention effect on keeping to one partner in both genders (males: RR 2.37, 95% CI 1.29-4.35; females: 1.94, 95% CI: 1.08-3.48). The incident STI rate was lower in the intervention group than the control group but did not achieve statistical significance.

**Conclusion**: The intervention, compared to usual care, led to a significant effect on abstinence in males; consistent condom use in females and keeping to one partner in both genders.





### PARENTAL BONDING DURING CHILDHOOD AFFECTS STRESS COPING ABILITY AND STRESS REACTION

Authors: Yuh Ohtakia), Yuichi Ohi b), Shun Suzuki a), Kazuya Usami b), Shinichiro Sasahara b), Ichiyo Matsuzaki b)c)

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**Introduction:** It was reported that children who experienced parental separation had poorer academic achievement, psychological adjustment, and social relationships, while children who experienced abuse demonstrate higher levels of aggression, depression, anxiety, and anger. In addition, adults who have experienced parental divorce tend to depend on unemployment insurance, while adults who have experienced child abuse tend to have separation anxiety, alcohol dependence, and are likely to engage in antisocial behavior.

**Purpose:** There are serious concerns that poor parental bonding during childhood can have negative psychological impacts in adulthood. However, no previous study has examined the relationship between parental bonding and performance on the stress coping ability and stress reactions among adults on a large scale. Therefore, we studied the impact of bonding during childhood on stress coping ability and stress reactions among adult workers, using the data from a large epidemiological study.

Materials and Methods: An online survey was conducted with 21,922 workers. The questionnaire items asked about basic attributes and bonding factors experienced before age 20 (physical/sexual abuse, neglect, loss of a parent, parents' divorce, parent's remarriage, parent's disappearance, having a foster parent, domestic violence, parent's mental problems, parents' overprotection, parents' non-interference policy, and parents' recognition). The questionnaire also contained the Sense of Coherence Scale (SOC-13), General Health Questionnaire (GHQ), and Self-rating Depression Scale (SDS). Those who had a poor score for any one of the bonding factors were grouped into the poor bonding group, while those who did not have a poor score for any item were grouped into the optimal bonding group.

**Results:** The data from 9,525 participants (6,042 men and 3,483 women) were analyzed and the response rate was 43.4%. The average age was  $42.1 \pm 10.1$ . Analyses of covariance by sex with age as a covariate were conducted for the SOC, GHQ, and SDS scores for 9,525 participants (optimal bonding group: 4,592 men, 2,408 women; poor bonding group: 1,450 men, 1,075 women). For both sexes, the scores of the poor bonding group were significantly lower for the SOC and significantly higher for the GHQ and SDS compared to the optimal bonding group.

**Conclusions:** This study confirmed that those who experienced poor parental bonding during childhood have significantly lower stress coping abilities and significantly stronger stress reactions. These results suggest that bonding during childhood can affect wellbeing throughout adulthood.





#### HETEROTOPIC GASTRIC MUCOSAL PATCH IN THE DISTAL ESOPHAGUS

Authors: Valeriu V. Lupu, Ancuta Ignat, Marin Burlea

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Heterotopic gastric mucosa (HGM) represents a congenital anomaly consisting of abnormally placed gastric mucosa outside of the stomach. It can be found almost anywhere within the gastrointestinal tract. HGM is most commonly found in the upper esophagus. The diagnosis of HGM is confirmed via endoscopy with biopsy. On endoscopy, HGM is clearly distinct from the esophageal squamous mucosa. HGM located in the distal esophagus needs differentiation from Barrett's esophagus. Barrett's esophagus is a well-known premalignant injury for adenocarcinoma of the esophagus. Despite the benign nature of HGM, important complications have been reported. Malignant progression of HGM occurs in a stepwise pattern, following the metaplasia—dysplasia—adenocarcinoma sequence. We present a rare case of a teenage girl with HGM located in the distal esophagus, associated with chronic gastritis and biliary duodenogastric reflux. Endoscopy combined with biopsies is a mandatory method in clinical evaluation of metaplastic and nonmetaplastic changes within HGM of the esophagus.

Key words: heterotopic gastric mucosa; teenager; Barrett's esophagus





#### RESPIRATORY DISORDERS IN NEONATES

Authors: Sridhar Kalyanasundaram

Consultant Neonatologist, Chief of Pediatrics, American hospital, Dubai

Respiratory distress is one of the commonest reasons for admission in the NICU. In this presentation, we review lung development, various factors involved in successful respiratory gas exchange (including lung development, surfactant, neuromuscular function, pulmonary vasculature etc.) followed by case presentations on some common conditions associated with respiratory distress. Respiratory distress in a neonate is defined as presence of two or more of tachypnea, increased work of breathing manifest as retraction (subcostal or supraclavicular) and grunting. We discuss a preterm baby with respiratory distress due to surfactant deficiency lung disease, along with a brief overview of the condition, role of antenatal steroids to help prevention and management including surfactant therapy, invasive and noninvasive ventilation and supportive treatment. We also review cases of Meconium aspiration pneumonia, Congenital pneumonia, transient tachypnea of newborn, air leaks and some common congenital anomalies presenting as respiratory distress like congenital diaphragmatic hernia and tracheo-esophageal fistula/esophageal atresia.



### POSTER PRESENTATIONS

WSP-PP001

# VALIDATION OF WIDE BAND TYMPANOGRAM VS CLASSIC TYMPANOGRAM IN THE DETECTION OF OTITIS MEDIA WITH EFFUSION IN A PORTUGUESE PEDIATRIC POPULATION

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**Introduction:** Otitis media with effusion (OME) is caused by accumulation of fluid in the middle ear, without the signs or symptoms of an acute infection. Tympanometry assess the acoustic energy transfer through the middle ear system and is considered an objective method for the diagnostic of OME in children. The standard tympanometry probe tone frequency is 226 Hz. Tympanometry is reported to present high specificity but relatively low sensitivity as a diagnostic test for OME. The Wide Band Tympanogram (WB) is a tympanogram whose impedance measurements can be measured from 226 Hz to 8 KHz, providing data objectives of physiological middle ear structures.

**Purpose:** The objective of this study was to determine the discrepancy between the standard tympanometry with a probe frequency of 226 Hz and the recently introduced WBT in the detection of OME in a Portuguese pediatric population.

**Methods:** A total of 479 children, aged between one and eight years, attending two Portuguese educational institutions, were invited to participate. Two hundred and eighty-one children were included in the study and performed otoscopy along with standard tympanogram at 226 Hz and WBT. The tympanometer used in the study was Titan/IMP440 (Interacoustics, Middelfart, Denmark).

**Results:** The tympanograms were classified into B, C2, C1 and A according to Jerger. There were non-significant discrepancies regarding the number of ears classified as A, C1 and C2 tympanograms with each method. However the number of ears classified as B by standard tympanometry was 137 compared to 3 with WBT (p<0.0001).

**Conclusion:** Our data confirm the previous findings regarding the low sensitivity of the standard tympanogram. The present guidelines for diagnostic of OME require the performance of proper hearing test, which might be practically difficult in a general practitioner setting. WBT may provide a more accurate objective method for the detection of OME in children.





### NEUROPROTECTIVE EFFECT OF POSTNATAL MAGNESIUM SULFATE IN TERM NEWBORNS WITH PERINATAL ASPHYXIA: A META-ANALYSIS

Authors: Ana Katherina Rodriguez, Mark Benjamin Quiazon, Leonila Dans, Resti Bautista

Philippine General Hospital

**Introduction:** Perinatal asphyxia is a devastating phenomenon which may cause Hypoxic Ischermic Encephalopathy (HIE) in newborns. Emerging studies in magnesium sulphate investigate its neuroprotective potential in newborns with HIE.

**Purpose**: To analyze effect of magnesium sulphate in reducing incidence of neurologic abnormalities in newborns with Hypoxic-Ischemic Encephalopathy; and to determine mortality and adverse outcomes related with magnesium sulphate.

Materials and Methods: MEDLINE, Cochrane Database of Systematic Reviews and Cochrane Central Register of Controlled Trials were searched. Hand search through various search engines and references of relevant articles was done. Randomized controlled trials on term infants with perinatal asphyxia; who were given magnesium sulphate within 72 hours of life. Primary outcome was prevention of short-term neurologic abnormalities. Secondary outcomes were mortality and adverse events. Two authors assessed eligibility and extracted data from the studies. Statistical analysis was done using Review Manager 5.3 (RevMan).

**Results:** Four randomized controlled trials were included in the analysis. Magnesium sulphate was shown to decrease the number of patients with abnormalities in neurologic examination (RR 0.39; 95% CI 0.17 - 0.62), in CT scan (RR 0.62; 95% CI, 0.40 - 0.98), in EEG (RR 0.62; 95% CI 0.40 - 0.98) and in oral feeding ability (RR 0.45; 95% CI, 0.26 - 0.77) on discharge. Overall, magnesium sulphate reduced the incidence of composite of unfavorable short-term outcomes – abnormalities in neurologic examination, CT Scan, EEG, or oral feeding on discharge (RR 0.44, 95% CI, 0.29 - 0.67). Reduction in mortality for magnesium sulphate compared to control was not significant (RR 0.99; 95% CI, 0.51 - 0.93). Adverse events include apnea which was only observed in one study.

**Conclusion:** Magnesium sulphate has been shown to significantly decrease short-term neurologic abnormalities in newborns with HIE, but has no significant effect on mortality.



# DUNSTAN BABY LANGUAGE EFFICACY IN DECREASING THE PARENTING STRESS LEVELS OF HOUSEWIVES WITH 0-2 MONTH OLD INFANTS VS. STANDARD CARE USING A QUASI-EXPERIMENTAL STUDY DESIGN

Authors: Pineda, Angelica Marie (presenter); Pineda, Roza Clara; Pinos, Henry; Rirao, Loubelle; Rivera, Rogelio Jr.; Roque, Mary Christine; Sabate, Raiza Jane; Sanchez, Sandy; Santos, Jose Lorenzo; Santos, Joshua

**Introduction:** Literature shows that infant distress and care giving can be sources of stress of primary care givers, especially for first time mothers. The researchers wanted to determine whether Dunstan Baby Language (DBL) is efficacious in decreasing parenting stress among these primiparous women with 0-2 month infants over those utilizing standard newborn care.

**Materials & Methods:** This research utilized a quasi-experimental approach, where 18 participants were gathered and divided into control (standard care) and experimental (DBL) groups. Descriptive statistics were used in the interpretation of the demographics, while a repeated measures mixed model was used for the Parental Stress Scale (PSS) results.

**Results:** A total of 27 participants were enrolled in the study. The experimental group had 18 participants, with a subsequent loss to follow up of 9, while the control group had 9 participants. These participants had babies with a mean age of 1 month in the experimental group, and 2 months in the control group. An apparent decrease was noted in the Time 1 to Time 2 and the Time 2 to Time 3 PSS scores in the experimental group, as opposed to the control group having minimal changes in their PSS mean scores, but p-values failed to demonstrate any significant difference among them (p-values ranged from 0.053-0.415).

**Conclusion:** Use of DBL among newborn babies led to decreased parenting stress levels among primiparous mothers as reflected in the downward trend of PSS mean scores during the observation period. However, the difference was not statistically significant versus the standard newborn care.

Keywords: Dunstan Baby Language, parenting stress



## CHANGES IN LYMPHOCYTE SUBPOPULATIONS AND CD3\* HLA-DR+ IN CHILDREN WITH GAUCHER DISEASE.

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(1) Clinical Pathology Department, South Egypt Cancer Institute, Assiut University, Egypt. (2) Pediatric Department, Faculty of Medicine, Assiut University, Egypt.

**Introduction:** Gaucher Disease (GD) is the most prevalent lysosomal storage disease. GD is associated with remarkable alterations in the immune system, and GD patients are more susceptible to infections and are at a higher risk of developing autoimmune disorders and malignancies.

**Purpose**: to determine the changes in lymphocyte subpopulations and activated T lymphocytes (CD3+ HLA-DR+) in children with GD under enzyme replacement therapy (ERT) managed in Assiut Children university hospitals.

Materials & Methods: This prospective case-control study was conducted among 18 children aged from 2-14 years (10 males and 8 females) with GD type 1 under enzyme replacement therapy (ERT) admitted to Assiut children university hospitals. Three-color flow cytometric immunophenotyping was used for determining the frequency of lymphocyte subpopulations and activated T lymphocytes in these patients.

Results: A significant increases was found in the frequencies of total lymphocytes, CD19+, CD3+, CD4+ and CD8+ in children with GD1 when compared to healthy control. The frequencies of activated T-Lymphocytes (CD3+ HLA-DR+), activated CD4 (CD4+ HLA-DR+) and activated CD8 (CD8+ HLA-DR+) were significantly higher in GD1 as compared to healthy children.

**Conclusion**: The increased proportion of activated T-lymphocytes in children with GD1 raises the issue of their involvement in the pathogenesis of the immune dysfunction seen in these patients. Activated T-lymphocytes could play a role in the clinical course of GD1.

**Keywords**: Activated T Lymphocytes; Children; Gaucher Disease.





### GM1 GANGLIOSIDOSIS TYPE 1 WITH EARLY RESPIRATORY MANIFESTATIONS-CASE REPORT.

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University Clinical Center of Republic of Srpska, Clinic of Pediatrics, Banjaluka, Bosnia and Herzegovina.

**Introduction**: GM1 gangliosidosis is a rare lysosomal storage disorder characterized biochemically by deficient beta-galactosidase activity and clinically by a wide range of variable neuro-visceral, ophthalmological and dysmorphic features because deficient enzyme activity leads to toxic accumulation of gangliosides in body tissues, and particularly in the central nervous system (CNS).

Prevalence at birth is estimated to be approximately 1:100,000 to 200,000 live births. Researchers classify this condition into three major types based on the age at which signs and symptoms first appear: a severe rapidly progressive infantile form with onset before six months of age (type 1 GM1 gangliosidosis), a late infantile or juvenile form (type 2 GM1 gangliosidosis), and an adult, chronic (type 3 GM1 gangliosidosis)

Case report: We have presented a case of female prematurely born child, in 35th week of gestation with early, infantile type of gangliosidosis(GM1). She was a first born child, from her mothers first pregnancy, concieved by IVF after 12 years of sterility.

During the first few months of life, besides the verified mild generalized type of hypotonia, macrocrania and congenital displasia of hip there were also frequent respiratory infections occuring. After the fourth month of life, it was possible to notice the facial dismorfia (coarsened facial features developed over time, depressed nasal bridge, macroglossia, hypertrophic gums, frontal bossing), short neck, hepatomegalia and later splenomegaly along side with enlarged kidneys, swallowing disorder and feeding difficulties, regression of neurological development with generalized seizures and development of hipertrofic cardiomiopathy and kyphoscoliosis. Hands are broad, and fingers are short and stubby. After the first year of life there was a development of the lung hypertension and respiratory insuficiency with oxigen therapy dependance. In terminal phase i.e. during the 20th month of life the child was in vegetative stage: no spontaneous moves, disponoic with frequent apnoic crisis, blind, deaf, with amimic face, facial and peripheral oedema and recurrent convulsive seizures. The definitive diagnosis was established based on the genetic analysis by which the homozygote mutation was verified c.808T>G; p.Tyr270Asp in exon 8 GLB1 gene.

**Conclusion**: Gangliosidosis is a rare disease and a greater awareness of its features may help to reduce misdiagnosis and promote early detection. Efficent treatment of gangliosidosis without specific therapy is not possible. We hope that new efficient cure will be found thanks to the new researches.

**Key words:** progressive infantile form GM1 gangliosidosis (type I), frequent respiratory infections, clinical features.





### PREVALENCE AND ASSOCIATED FACTORS OF CARDIOVASCULAR RISK AMONG ADOLESCENTS IN JACOBO Z. GONZALES MEMORIAL NATIONAL HIGH SCHOOL.

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UNIVERSITY OF THE EAST RAMON MAGSAYSAY MEMORIAL MEDICAL CENTER, Barangay Doña Imelda, Quezon City, Philippines.

#### Introduction:

Cardiovascular disease (CVD) is one of the leading causes of serious illness and death worldwide. Screening for the risk factors of CVD (i.e. hypertension, hyperglycemia, hypercholesteremia, and obesity) allows for early prevention and decreased risk of the development of CVD. We looked at the prevalence of these risk factors among adolescents at Jacobo Z. Memorial National High School Laguna, Philippines. An analytical cross-sectional design was done using a convenience sampling of 303 adolescents aged 12-17 in Jacobo Z. Gonzales Memorial National High School. The information on dependent and independent variables were determined through questionnaires, actual measurements and blood chemistry analysis. Data was analyzed using State SE to determine the Odds Ratio for each group. The groups were divided based on diet, physical activity, familial history of disease and smoking status. The prevalence of hypertension, hyperglycemia, hypercholesterolemia, central obesity, and obesity was 36.33%, 48.51%, 38.94%, 35.31%, and 7.61%, respectively. Attributes related to hypertension included a family history of diabetes. Those related to hyperglycemia were passive smoking and a family history of heart disease. Attributes related to hypercholesterolemia were sodium consumption above the daily allowable limit. There are certain variables that increase the odds of developing different risk factors. Family history of heart disease, being a passive smoker and low physical activity increase the odds of having hyperglycemia. Sodium consumption above allowable daily intake increases the odds of having hypercholesterolemia. Family history of diabetes mellitus is associated with increased odds of developing hypertension.

#### **Biography (Research Proponent)**

Christine Eloise B. Pascua is currently a 3rd year medical student at the University of the East Ramon Magsaysay Memorial Medical Center, Inc. (UERMMCI). She graduated with a Bachelor of Science in Health Sciences at the Ateneo de Manila University (AdMU) with an award-winning thesis entitled "AsTig (Asensong Tubig): A Quasi-experimental Study of Point Source Chlorination, Cloth Filtration and Adsorption by Activated Carbon to Treat Pump Water". She will finish with a Doctor of Medicine on May 2017.





A CROSS SECTIONAL STUDY ON THE RELATIONSHIP BETWEEN PARENTAL DEMOGRAPHICS AND KNOWLEDGE ON VACCINE PREVENTABLE DISEASES AND IMMUNIZATION PRACTICES; AND THE IMMUNIZATION COMPLETENESS OF THEIR CHILDREN.

Authors: Clarisse Marie S. Eugenio, MD

Institute of Pediatrics and Child Health, St. Luke's Medical Center, Quezon City, Philippines

Immunizing a child significantly reduces costs of treating diseases, thus providing a healthy childhood and reducing poverty and suffering. Clearly, certain sociological factors put children at risk of partial vaccination. Health care providers must practice disseminating practical information at the time of each well child visit. Parents' good understanding of vaccine preventable diseases, how vaccination works, and the vaccination schedule will lead to children being vaccinated.

This study is a cross sectional, prospective, 3 month study which aimed to evaluate the relationship between parental demographics, parental knowledge on vaccine preventable diseases, vaccines, immunization practices and policies in the Philippines; and their children's immunization completeness. The study is conducted among 124 mothers of pediatric patients at the Out Patient Department of St. Luke's Medical Center. A questionnaire detailing children's immunization was used. Parental demographics, reasons for partial or nonvaccination were enumerated and knowledge scores about immunization were determined and correlated with children's immunization completeness. Demographic factors associated with immunization status were analyzed using Chi-square test. Reasons for partial vaccination were presented in percentages and proportions. The knowledge on immunizations was scored using Mann Whitney U test.

Results showed that children of parents who are living in urban areas, has tertiary level of educational attainment and being married are more likely to have fully vaccinated children. The reasons most commonly cited for partial vaccination include lack of knowledge, missed schedules, accessibility problems, financial problems and vaccines not being available at the time of health visit. Parents obtaining a higher knowledge score about immunizations were more likely to have appropriately vaccinated children.





## MACROPHAGE ACTIVATION SYNDROME IN JUVENILE SYSTEMIC LUPUS ERYTHEMATOSUS: A CASE REPORT.

Authors: Ebner Bon G. Maceda, MD, James Albert Edward Benitez, MD, Karen Joy Kimseng, MD

Department of Pediatrics, Philippine General Hospital, University of the Philippines Manila

**Introduction**: Macrophage activation syndrome is a rare complication of childhood rheumatic diseases, usually associated with juvenile idiopathic arthritis. In systemic lupus erythematosus, it may be an under recognized fatal complication that needs prompt intervention.

Purpose: To present a case of macrophage activation syndrome in juvenile systemic lupus erythematosus

Case: A thirteen year old female presented with a 3 month history of malar rash with photosensitivity and hair thinning. She later on had periorbital edema, fever, oral ulcers and multiple erythematous to hyperpigmented papules and macules on the face, trunk, and extremities. The patient was worked-up and was diagnosed with Sysetemic Lupus Erythematosus using the SLICC criteria fulfilling seven clinical criteria (acute cutaneous lupus, oral ulcer, non-scarring alopecia, serositis, nephritis, lymphopenia, thrombocytopenia) and 2 immunologic criteria (elevated ANA, low complement). The patient was managed with prednisone, hydroxychloroquine, antihypertensives, blood transfusion, and antibiotics for associated infection. During the hospital stay, the patient developed nonremitting fever, jaundice, and hepatosplenomegaly. Work-up done showed hyperferritinemia (> 1000 ng/ml) and hemophagocytosis on bone marrow aspiration, hence, definite macrophage activation syndrome was considered. The patient was aggressively managed with broad spectrum antibiotics and methylprednisolone pulse therapy. However, the patient succumbed to septic shock.

**Conclusion**: In recent years, macrophage activation syndrome in juvenile systemic lupus erythematosus is seen more often than before and usually is fatal. Hence, prompt diagnosis using a diagnostic criteria and tailored treatment strategies must be addressed in future works to improve survival.





### COURSE AND PROGRSSION OF CHILDREN ADMITTED BEFORE 4 YEARS OF AGE IN A FRENCH WELFARE CENTER.

Authors: S.Fanello, M.Tanguy

UFR de médecine, département universitaire de sante' publique, France

**Aim**: The purpose of this study was to determine the institutional trajectory and future of young children in child welfare.

Materials and methods: A catamnestic study-based on data from the child welfare office in Maine and Loire, France, from1994 to 2001 —was conducted by a child psychiatrist and a psychologist. Medical, judicial, and educational data (development, health, pathways in child protection services) were collected and analyzed regarding the status of these children15 years later, adding information gathered by interviewing the child welfare and foster family consultant.

Results: We included 128 children admitted to the child welfare office before 4 years of age. Admission to the child welfare system suffers from care delays (a mean of 13.1 months between the first child protection referral and placement) with an average entry age of 17 months and frequent cases of child abuse(e.g., seven Silverman syndrome cases). The physical and mental health status of these children was poor (poorly monitored pregnancies, prematurity, low birth weight). More than one third of the children had growth failure at admission, with catch-up in half of the cases. The average length of stay in the child welfare system was13.2 ±4.6 years. At the end of the follow-up, there were specific measures to safe guard vulnerable adults: "young adult" (24cases), 'major protection'(eight cases) and 'disabled living allowance'(nine cases). One hundred and sixteen children suffered from psychiatric disorders at entry and 98 at the end. The general functioning of children as assessed by the Children's Global Assessment Scale (CGAS) showed a statistically significant improvement. One out of two young adults showed problems integrating socially with chaotic pathways: many foster placements, unsuccessful return to the family, and academic failures.

**Conclusion**: The clinical situations of children in the child welfare office and their long-term progression confirm the importance of this public health problem. Although the measures can greatly improve their physical and psychological recovery, with evidence of thriving, this remains limited: only a few of these children are well integrated socially and academically.





# KARTAGENER SYNDROME OCCURRING SIMULTANEOUSLY IN A FILIPINO CHILD WITH 5P- (CRI DU CHAT) SYNDROME.

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**Introduction**: Kartagener syndrome (KS) is a genetic disease caused by defects of the structure and function of the cilia that leads to abnormal mucociliary clearance causing disease of the sinus and pulmonary regions. KS is characterized by the triad of bronchiectasis, paranasal sinusitis and situs inversus totalis. The most common gene affected is DNAH5 which encodes ciliary dynein axonemal heavy chain. DNAH5 is linked to chromosome 5p which is the primary chromosome affected in Cri Du Chat syndrome (CdCS). CdCS is a genetic disease resulting from a deletion of a variable size of the short arm of chromosome 5 (5p-).

**Purpose**: To associate 2 rare syndromes simultaneously occurring in 1 patient.

Materials and Methods: The patient is a 7 month-old female born to non-consanguineous Filipino couple born term with good Apgar scores, but small for gestational age. Upon birth, she was noted to have progressive respiratory distress. Since birth she had recurrent respiratory tract infections with perisitent nasal congestion. She was also noted to have high pitched cry, hypertelorism, microcephaly, broad nasal bridge, low set ears, hypotonia, slow growth and developmental delay which are the common features of CdCS as well as situs inversus totalis, recurrent respiratory infections and bronchiectasis which point to a concomitant KS.

Results: The patient presented here had a partial deletion in chromosome 5p13-5p15.3 causing deletion of one allele of DNAH5 which resides on chromosome 5p15-p14. A biallelic mutation of DNAH5 must occur to manifest features of Kartagener Syndrome. KS can be caused by hemizygous DNAH5 mutation in combination with a 5p segmental deletion which can be attributed to CdCS on the opposite chromosome. Immunoflourescent staining done showed complete absence of DNAH5 and the transmission electron microscopy of nasal cilia also confirmed the absence of the outer dynein arms, hence, we conclude that there was a mutation in the remaining allele of DNAH5.



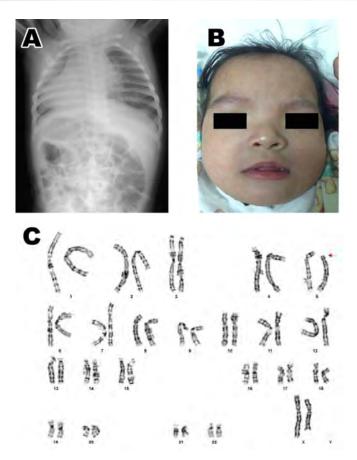
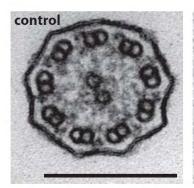


Figure 1

**A.** Chest Xray of patient showing situs inversus totalis. **B.** Patient with Cri du Chat Syndrome with facial dysmorphism **C.** Chromosomal analysis of patient showing breakpoints involving 5p13-5p15.3 confirming Cri du Chat Syndrome.



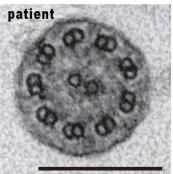


Figure 2

Transmission electron micrographs of patient show absence of outer dynein arms when compared to a control.

**Conclusion**: We report two genetic syndromes occurring in one patient, thus, we conclude that there is a link between CdCS and KS because both syndromes are associated with chromosome 5p





#### AUTOINFLATION FOR TREATMENT OF SEROUS OTITIS MEDIA.

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The object of this study performed in 17 children group consisted of understanding if the self-inflating medical device was effective in the treatment of a specific pathology, Serous Otitis Media (SOM).

For this purpose it was used two objective measurements, tympanometry and audiometry that were performed before and after treatment with the self-insufflation device. This allowed us to check one of the clinical criteria for inclusion in the study, because only children with a tympanometry curve different of A, according J. Jerger, 1970, complied with this clinical criteria for inclusion in the study and simultaneously obtain analytical readings before and after treatment with the self-inflating device allowing an assessment about of the effectiveness of treatment in this group of children.

In addition to these analytical measurements it were conducted an oto microscopy to each of the ears of the children in the group, as well as physical examination directed to the sphere ORL by an otorhinolaryngology physician. The tutors of the children were asked to complete a questionnaire with epidemiological character, issues related to the clinical history collection and also issues with a focus on behavioral and subjective perception of cohabiting at the time of inclusion of children in the study.

The tutors were asked to complete a questionnaire throughout therapy where it was collected information regarding the effectiveness of treatment and subjective perception of improvement / worsening of symptoms and satisfaction of tutors.

The obtained values show that the children in this study after statistical processing of data obtained results of tympanometry and audiometry in which there was a marked change of these analytical values between measurements before and after treatment. This variation was towards the normalization of the hearing pressure evaluated by audiometry and the normalization of pressure inside the middle ear evaluated by tympanometry.





# PROFILE OF PEDIATRIC PATIENTS WITH ATTENTION-DEFICIT HYPERACTIVITY DISORDER IN AN OUTPATIENT DEPARTMENT IN A TERTIARY HOSPITAL.

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**Introduction**: Attention-deficit hyperactivity disorder (ADHD) is the most common neurobehavioral disorder of childhood.

**Purpose**: To determine the profile, co-morbidities of patients with attention-deficit hyperactivity disorder in an outpatient department in a tertiary hospital.

**Methods**: This is a descriptive study with retrospective mode of data collection. Participants were ADHD patients, 4 -18 years of age, seen at the pediatric outpatient department (OPD) in a tertiary hospital, from May 2013 to May 2015. There were 60 cases of patients with ADHD during the study period. In the logbooks, 48 ADHD patients were identified. In the medical records section, 11 patients were lost to follow up and 2 had incomplete chart records; total of 35 ADHD patients were included in the study. Descriptive statistics such as mean, percentages and frequency tables and graphs were used to analyze the data using SPSS program and Microsoft Excel 2010.

**Results and Conclusion**: There were 7 ADHD cases per 1000 patients seen. They comprised 11% of OPD developmental pediatric consults. Majority were attending regular school, with more males than females. The most common type of ADHD was the predominantly hyperactive-impulsive type. Mean age was 10 years. Most mothers were high school graduates and were housewives. The top four most commonly associated conditions in patients with ADHD in this study were other developmental pediatric conditions (learning disorder, communication disorder), seizure disorder, bronchial asthma, and allergic rhinitis.





## FIBROBLAST GROWTH FACTOR-23 AND BONE TURNOVER MARKERS IN PREPUBERTAL OBESE CHILDREN.

Authors: Joanna Gajewska 1, Witold Klemarczyk 2, Jadwiga Ambroszkiewicz 1, Magdalena Chełchowska 1, Małgorzata Więch 2, Halina Weker 2

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**Introduction**. Fibroblast growth factor-23 (FGF-23) is a circulating phosphaturic factor that plays important role in the reabsorption of inorganic phosphate and in renal vitamin D metabolism. FGF-23 is expressed predominantly by osteocytes and osteoblasts, but an influence of this factor in modulating bone mass remains to be established. Recent studies have hypothesized that FGF-23 may negatively affect bone mineralization.

**Purpose**. The aim of this study was to evaluate the relationship between FGF-23 and biochemical markers of bone turnover in prepubertal obese children.

Materials and Methods. We determined serum intact FGF-23 (iFGF-23), C-terminal FGF-23 (cFGF-23), bone alkaline phosphatase (BALP), osteocalcin (OC), C-terminal telopeptide of type I collagen (CTX-I), body composition and bone mineral density (BMD) (by dual-energy X-ray absorptiometry) in 30 prepubertal obese children (z-score BMI≥2SD). The exclusion criteria were: (a) the presence of endocrine disorders or genetic syndromes, including syndromic obesity; (b) chronic medical conditions; (c) taking medications that could affect growth, pubertal development, nutritional or dietary status. The control group consisted of 25 non-obese children (z-score BMI <-1+1>).

**Results**. The obese children had significantly greater fat mass, lean tissue mass, total bone mineral content (BMC), BMD and BMI in comparison with the non-obese subjects. The obese patients had higher concentrations of iFGF-23 ( $9.33\pm3.72$  pg/ml vs  $6.51\pm3.91$  pg/ml; p<0.01) and cFGF-23 ( $62.9\pm15.4$  RU/ml vs  $38.1\pm18.3$  RU/ml; p<0.001) than controls. Differences in profile of bone turnover markers between studied groups were also found. The levels of OC and CTX-I were higher in patients by 15% (p<0.05) and 10% (p<0.05), respectively. Only little higher values of BALP was found in obese than non-obese subjects. However, we observed negative correlation between BALP activity and concentrations of iFGF-23 (r=-0.352, p<0.05) in obese group.

**Conclusions**. Our preliminary results show differences in bone metabolism between obese and non-obese children. We suggest that obesity during prepubertal period may be associated with an increased bone mass and turnover. Intact FGF-23 may be involved in disturbances of bone formation process in these patients.





## ALLERGY SKIN TEST PROFILE AMONG PEDIATRIC PATIENTS TESTED IN ST. LUKE'S MEDICAL CENTER-ALLERGY CENTER.

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**INTRODUCTION**: The increased prevalence of allergic diseases is a major public health concern worldwide. However, there are limited local data to date reflecting skin test profile of childhood allergy.

**OBJECTIVES**: To determine the skin test profile of different allergic diseases among pediatric patients based on data gathered from St. Luke's Medical Center Allergy Center from 2009 to 2013.

**METHODOLOGY**: This is an observational study with retrospective chart review of patients suspected to have allergic rhinitis, atopic dermatitis, some types of asthma or other symptoms of possible allergic mechanisms. Inclusion criteria included patients aged 18 years and below who had clinical manifestations of allergy seen at St. Luke's Medical Center- Allergy Immunology Center from 2009-2013. STATA v12 will be used for data processing and analysis.

**RESULTS**: This study involved 407 participants with mean age of 7.46 years. Out of these, 56.76% were males and 43.24% were females. The top three indications for skin prick testing for this population were: rash (50.86%); rhinitis (42.51%); followed by cough (5.90%). Among the 407, 80.84% were positive for multiple allergens. For the skin prick test results, only 3.93% tested positive for single allergen which were mostly classified as indoor allergens that include: house-dust mite D. pter (37.5%); house-dust mite D. far (31.25%); cat (23.08%) and feather (6.25%). Only 1 out the 16 had allergy to food item which was chicken. The rest of the participants (n=329) tested positive for multiple allergens. The top ten include: house-dust mite D.pter 81.16%; house dust mite D.far (70.21%); cockroach (28.88%); cat (13.98%); crab (13.37%); shrimp (12.16%); egg (10.33%); peanut (9.73%); mugwort (7.60%); and johnson (6.38%). The same items were also identified when grouped and combined. The two house-dust mite combination was ranked first at 29.18%.

**SUMMARY/CONCLUSION**: In summary, dust mites were the most frequent inhalant allergen while crab was the most prevalent food allergen among children in this study. A full understanding of the profile of allergen sensitization would help early diagnosis and intervention of atopic diseases in children. The findings of this study might contribute towards the development of preventive actions especially in urban communities.





#### THE KEY ISSUES OF HELICOBACTER PYLORI INFECTION OF CHILDREN.

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Oral H. pylori Lab, Seattle USA

**Introduction:** Helicobacter pylori (H. pylori) infection in childhood is the most important age group that showed significant familial aggregation and the main source of infection are H. pylori infected family members, especially the closest contact with the child 's mother; through the medium of the saliva, by oral - oral transmission.

**Purpose:** In the present study, we aimed to explore the existence of a second colonization site of Helicobacter pylori (H. pylori) in the oral cavity of children.

Materials and Methods: A total of 122 children were recruited and evaluated using the saliva H. pylori antigen test (HPS), the urea breath test (UBT C13).

**Results:** The participants were sorted into UBT+ and UBT- subgroups. For the UBT+ individuals, the positive rates of HPS were 61.56 and UBT C13 62.88%, respectively, which indicated a H. pylori stomach infection. For UBT- individuals, the positive rates of HPS was 10.80%, which indicated a H. pylori oral infection.

**Conclusions:** The results indicated that a second colonization site of H. Pylori exists in the oral cavity.





# SUSCEPTIBILITY OF STAPHYLOCOCCUS AUREUS ISOLATED FROM THE AIRWAYS OF CHILDREN WITH CYSTIC FIBROSIS TO ANTIMICROBIAL PEPTIDES AND CONVENTIONAL ANTIBIOTICS.

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1 Department of Oral Microbiology, Medical University of Gdansk, Gdansk, Poland; 2 Department of Inorganic Chemistry, Medical University of Gdansk, Gdansk, Poland; 3 Department of Medical Microbiology, Medical University of Gdansk, Gdansk, Poland

**Introduction**: Cystic fibrosis (CF) is a common hereditary disease of humans. Staphylococcus aureus is an early pathogen involved in chronic respiratory infections of CF children. Frequent use of antibiotics in the treatment and prevention of staphylococcal infections results in emerging antibiotic resistance. Antimicrobial peptides (AMPs) may be an alternative to conventional antibiotics.

**Purpose**: The aim of the study was to analyze the susceptibility of S. aureus isolated from children with CF to antimicrobial peptides and conventional antibiotics.

Materials and Methods: A total of 163 S. aureus isolates from throat swabs, sputum and bronchoalveolar lavage were analyzed. The isolates were stratified according the age of CF children: under 5 years of age (group I, n=48), 5-9 years (group II, n=34), 9-13 years (group III, n=46), and 13-18 years (group IV, n=35). Antimicrobial peptides (aurein 1.2, CA(1-7)M(2-9), citropin 1.1, IB-367, pexiganan, temporin A, uperin 3.6) were synthesized by 9-fluorenylmethoxycarbonyl (Fmoc) solid-phase method and analyzed by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF). Minimal inhibitory concentrations (MICs) for tested AMPs were determined using a broth dilution method in line with the Clinical Laboratory Standards Institute (CLSI) guidelines. Susceptibility to antibiotics (penicillin, erythromycin, azithromycin, roxithromycin, clindamycin, lincomycin, ciprofloxacin, tetracycline, amikacin, netilmicin, gentamicin, sulfamethoxazole/trimethoprim) was tested with disk diffusion method.

Results: All isolates turned out to be susceptible to AMPs used at the following concentrations: CA(1-7)M(2-9) from 4  $\mu$ g/mL to 32  $\mu$ g/mL, pexiganan from 4  $\mu$ g/mL to 32  $\mu$ g/mL, citropin 1.1 from 16  $\mu$ g/mL to 64  $\mu$ g/mL, temporin A from 16  $\mu$ g/mL to 64  $\mu$ g/mL, IB-367 from 16  $\mu$ g/mL to 128  $\mu$ g/mL, uperin 3.6 from 64  $\mu$ g/mL to 128  $\mu$ g/mL and aurein 1.2 form 128  $\mu$ g/mL to 256  $\mu$ g/mL. No significant differences were found in the susceptibility of isolates from various age groups. The isolates were insusceptible to penicillin (group I: 79.2%, group II: 82.4%, group III: 89.1%, group IV: 82,9%), macrolides (16.6%, 50%, 63% and 62.9%, respectively), lincosamides (18.8%, 41.2%, 43.5% and 54.3%, respectively), ciprofloxacin (0%, 11.8%, 32.6% and 11.4%, respectively), tetracycline (4.2%, 5.9%, 15.2% and 8.6%, respectively), aminoglycosides (4.2%, 2.9%, 4.3% and 8.6%, respectively), and sulfamethoxazole/trimethoprim (4.2%, 0%, 0% and 5.7%, respectively).

**Conclusions**: Irrespective of patient age, S. aureus isolates from the airways of children with CF show similar susceptibility to AMPs. In contrast, their susceptibility to conventional antibiotics decreases with age.





### THE EFFECTS OF DARK MAROON SWADDLE ON BODY TEMPERATURE OF TERM HEALTHY NEWBORNS.

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**Introduction**: Dark clothes absorb more light which tend to produce more heat. No study has been conducted regarding the use of dark swaddle in newborns to help increase body temperature.

**Purpose**: To investigate whether swaddling newborns with dark colored linen will increase their body temperature. If proven that dark colored swaddles help increase neonatal body temperature, this will eventually help decrease the incidence of neonatal hypothermia. The results of this study will be more beneficial in institutions where warmers, incubators, or drop lights are less available for neonatal thermoregulation.

**Methodology**: Term healthy newborns at St. Luke's Medical Center Quezon City with unremarkable prenatal and delivery course were included in the study. Fifty (50) newborns were divided equally and randomly into 2 groups, the control group who used the white linen for swaddling, and the experimental group who used the dark maroon linen. Core body temperature, heart rate, respiratory rate, and thermal environment of both groups were monitored and recorded for 2 hours. Data were analyzed using an independent T-test correlation analysis.

**Results**: The population characteristics in terms of sex, mode of delivery, birth weight, and age of gestation between the two groups were all comparable. At the end of two hours monitoring, there was significant increase in the body temperature (0.2°C) and heart rate (5 bpm) of the maroon group (37°C, 141bpm) compared to the white group (36.8°C, 136bpm), with p values of 0.001 and 0.024 respectively. Two babies developed hypothermia (36.3°C) from the white group, but this result is not significant compared to the maroon group (p-value 0.149).

**Conclusion**: The use of dark maroon linen for swaddling newborn babies had a statistical significant increased in the body temperature by 0.2°C compared to those who used the white linen. However, this may be not clinically significant since normal daily body temperature variations can be 0.25°C to 0.5°C.





### INCIDENCE OF TRAUMAS AND BURNS IN CHILDREN BETWEEN 0-17 YEARS IN REPUBLIC OF MOLDOVA AND MUNICIPALITY CHISINAU IN 2014 - 2015.

Authors: Mihai Bagrinovschi, Boris Golovin, Alexandru Ghidirimschi

Public Health – care Institute, National Centre of Prehospital Emergency Medicine1, Chisinau, Republic of Moldova .

**Introduction:** Traumas is frequently encountered in children between 0-17 years, is the leading cause of death and disability. Burn —related injuries are prevalent worldwide, the situation also is dramatical in Republic of Moldova. Every day a lot of children are suffering as a result of accidents in home conditions. At least six children up to 5 years arrive daily at the hospital after injuries at home or in the street. Over 100 children ages 0 to 17 are treated in emergency rooms for traumas and burn-related injuries and two children die as a result of complications.

Materials and metods: The data presented here is taken from the Public Health – care Institute, National Centre of Prehospital Emergency Medicine. The analysis given detailed information about traumas and burns in children between 0-17 years in Republic of Moldova and in municipality Chisinau in years 2014 - 2015.

**Result**: Conform statistics dates in Republic of Moldova in 2014 were recorded 13 107 children with different types of trauma,707 from this were recorded in municipality Chisinau. Children with a burns were 1152 in Republic of Moldova and 77 in municipality Chisinau. In 2015 in Republic of Moldova were recorded 13 221 children with trauma and 950 children in municipality Chisinau. Children with a burns were 1184 in Republic of Moldova and 192 in municipality Chisinau. According to retrospective analysis, most important predictors of mortality are the size of burn, localization of trauma, age of patient, and worst base deficit in the first 24 hours.

**Conclusion:** The incidence of traumas and burns in Moldova is quite high, although there is an educational campaign for parents. The most frequently traumas and burns in children can be prevented by parents. Due to anatomical and physiological particularities in children emergency physicians must act quickly and promptly to stabilize a traumatized child.

Keywords: Trauma, burn, children





## AN EVALUATION OF DOCTORS AND MEDICAL STUDENT'S KNOWLEDGE OF PAEDIATRIC VACCINATIONS IN PAKISTAN.

Authors: Nighat Nadeem

University of Lahore - Pakistan

**Introduction:** Medical Students now have decreased exposure to Vaccine Preventable Diseases (VPDs) as successful vaccination programs have decreased their prevalence. This combined with the media's negative portrayal of vaccines may cause misconceptions and misinformation. Medical professionals are trusted sources of information; their knowledge can influence parental acceptance of vaccinations.

**Purpose:** The aim of this study was to explore doctors and student's knowledge of paediatric vaccinations, highlight knowledge gaps, identify training needs and make recommendations for future training.

Materials and methods: Vaccination knowledge of medical students from four Pakistani hospitals and one medical school was assessed by an anonymous, self-administered, cross-sectional, internet-based survey from 14 April 2015 to 14 July 2015. Questions addressed vaccine guidelines, schedules, administration, handling, contraindications and adverse events. Analysis included comparison of proportions with the use of descriptive statistics. Ethical approval was obtained from King's College, London.

Results: In total, 103 doctors participated from four institutions in Karachi, Pakistan. 86/103 (83.4%) of doctors reported feeling either 'very' or 'somewhat' confident in their knowledge and understanding of children's vaccinations. The most correctly answered question was related to the ideal age of administration of the BCG vaccine. This was the best answered question in all 4 institutions and was answered correctly by 98/103 (95.1%) of doctors. The most poorly answered question was also the same in all 4 institutions. The question asking whether a 5 week old baby is too young to receive primary vaccinations was answered incorrect or 'don't know' by 90/103 (87.4%). 29 medical students from one institution in Pakistan participated, all of whom were in their final year and all were aged less than 30 years of age. 20/29 (68.9%) reported their confidence in children's vaccines as being either 'very' or somewhat'. The mean knowledge score was 3.2/10 (32%). As with Pakistan's doctors, the most correctly answered question was related to the ideal age of administration of the BCG vaccine. This was answered correctly by 29/29 (100%) students. The most poorly answered question by the students was related to whether children's vaccines can be frozen to maintain their potency and all 29 students either answered incorrectly or answered with a 'don't know' response.

Conclusion: This study identifies gaps in knowledge amongst doctors and medical students in Pakistan and the findings form a platform upon which to develop educational interventions which can be integrated into formal educational curriculum. Recommendations include developing up-to-date core competencies and Continuing Medical Education (CME) should be tailor-made to suit individual departments. Teaching methods used in various institutions should be analysed and compared to determine the most effective teaching strategies. Specific communication skills training in the role-play setting should also be promoted. Teaching methods used in various institutions should be analysed and comparisons made to determine the most effective teaching strategies.





### THE PREDICTIVE VALUE OF PEDIATRIC TRAUMA SCORE IN A PEDIATRIC EMERGENCY UNITE.

Authors: Sabiha Sahin

Eskisehir Osmangazi University Faculty of Medicine - Turkey

**Introduction**: Traumatic injuries are the most common causes of mortality in children. The aim of this study to evaluate of the important of PTS (Pediatric Trauma Score) for a pediatric emergency unite.

**Methods**: Between 1 Jan 2015 and 31 December 2015, 1680 pediatric trauma cases(1-17 years old) who were admitted to the Pediatric Emergency Unite of ESOGU Medicine Faculty were evaluated according to type of trauma, sex, age, PTS, GCS (Glascow Coma Score), duration of intensive and overall care and morbidity and mortality.

**Results**: 672 patients were girls (40 %) .The mean age of patients was  $4\pm1.64$ . PTS values ranged between 5-12. PTS showed no significance difference between males and females. PTS values of 49 patients (2,91 %) were under eight and GCS values were correlated with PTS (P<0.05) .Them, 28 patients remained in hospital more than 7 days (p <0.001), and five of them (17.8%) died. In four patients a permanent sequelae occurred.

**Discussion**: PTS is a predictor of severity injury. We detected a significant correlation of PTS between hospital stay and life stiuating stands.





#### HEAD TRAUMAS IN CHILDREN IN A UNIVERSITY HOSPITAL

Authors: Sabiha Sahin

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Introduction: Head trauma in pediatric age worldwide leads to mortality and morbidity.

**Aim**: We aimed to determine the common causes of head trauma under age of 18 and radiodiagnosic tools to be preferred diagnosis.

**Methods**: 159 cases who were diagnosed that head trauma which were admitted to the Pediatric Emergency Department of Osmangazi University between 1 january and 31 december 2015, were evaluated retrospectively.

Results: 101 ( 63.5 %) of the cases were male and 58 of the cases were female. The ratio of the male cases was high and it was meaningful statistical. When these cases were evaluated according to the age groups; there were 83 cases ( 52.3 %) who were between the age of 0-6, 76 cases (47.7 %) were between the age of 6-18. The head trauma rate of the 0-6 age group was meaningful high in boys ( 57 %) and the main reason of head trauma was falling ( 49.2 %). In the age group of 6-18, striking with an object to the head were seen more often (42.8 %), followed by accident in vehicle accidents ( 3.1 %) and out of vehicle accidents ( 4.4 %). The cases occurred most frequently in the summer and spring. When physical examination findings at presentation were evaluated, it was seen that their was loss of consciousness in 9 cases ( 5.6 %), hematoma (17.2 %), intersection ( 39. 6 %), ecchymosis and periorbital oedema. The neurological state of the patients were assessed by Glasgow Coma Scale. When the plain radiography findings, linear fractures 8 cases ( 5 %), depressed fractures in 2 cases (1.3 %), comminutted fractures in 1 case ( 0.6 %) were determined.143 x- ray findings were evaluated normally. But Cranial Tomography (CT) scan findings scalp fractures were in 12 cases ( 7.5 %), and subdural hematomas in 2 cases ( 1.2 %) and intracerebral hemorrhage in other 2 cases ( 1.2 %) and cerebral oedemas in 2 cases ( 1.2 %). These 18 cases were evaluated with neurosurgeons and hospitalized. Two cases were dead.

**Conclusion**: Although plain radiograms are helpful in the diagnosis of head trauma, CT scans are found much more useful for this purpose.

Key Words: head, trauma, childhood





#### A CASE STUDY OF SECONDARY INTESTINAL LYMPHANGIECTASIS

Authors: S. Punj, A. Godse

**Introduction**: Intestinal lymphangiectasis is a rare condition, that causes hypoalbunaemia, lymhopenia and hypogammaglobunaemia. It is protein losing enteropathy caused by dilated lacteals and lymph leaking into the bowel lumen. Primary intestinal lymphangiectasis is due to congenital malformation of the lymphatic system whilst secondary is usually due to obstruction to lymphatic flow.

Case Report: This case study is of a 22month old child (EMP) who initially presented with a history of diarrhoea, weight loss and abdominal bloating. She was treated for primary intestinal lymphangiectasis where she was started on a trial of low fat diet. This showed improvement in her symptoms. Incidentally on one of her follow up appointments, she was found to have had an undiagnosed congenital diaphragmatic hernia. She underwent an emergency laparotomy and had it repaired which subsequently cured her of her symptoms.

**Conclusion**: This case study illustrates the importance of further investigating children diagnosed with intestinal lymphangiectasis. In the case of EMP it was a congenital diaphragmatic hernia causing obstruction to lymphatic flow leading to secondary lymphangiectasis.





#### BURKITT'S LYMPHOMA IN A CHILD

Authors: Ancuta Ignat, Ingrith Miron, Marin Burlea, Vasile Valeriu Lupu

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Burkitt lymphoma is a highly aggressive B cell non-Hodgkin lymphoma characterized by an increase in B lymphocytes in the blood and bone marrow. We present the case of a 6-year-old male admitted at "St Mary" Children's Emergency Hospital with complaints of abdominal pain, fever and vomiting 7 days prior to the consultation. On palpation of the right flank an immobile, hard tumoral formation of approximately 8 cm could be felt, causing pain and discomfort to the patient. On percussion, the inferior margin of lungs and abdomen produced dull sounds. Auscultation of the patient's lungs revealed no vesicular murmurs on the inferior 1/3 of the right hemi thorax. Laboratory tests: blood biochemistry and cell count revealed inflammation syndrome, neutrophilia, metabolic acidosis. X-ray, CT and echography showed lymphadenopathy masses in the mediastinum in proximity to the celiac trunk; bilateral pleurisy seen mostly on the left thorax; metastasis infiltration in the pleura, pericardium, peritoneum and kidneys; a solid tumoral formation of approximately 10 cm in the right flank with peritumoral collateral circulation; portal hypertension and liquid in the peritoneal cavity. In the evolution, the patient aggravated presenting dyspnea, tachycardia and increase in bowel movement of bloody stools. He was admitted into Intensive care for emergency intervention. Further examination of pleural effusion cytology identified blasts 66%. The bone marrow aspiration was normal and immunophenotyping examination revealed CD45 + CD19 +. The results of the investigation demonstrate that the diagnosis is (sporadic) Burkitt's lymphoma stage IV.

The serious clinical condition of the patient and increased anesthetic risk (ASA IV) requires joint surgical, oncology and pediatric consultations for laparotomy, chemotherapy and treatment. Lymphomas are very rare in children. And nonspecific symptoms that appear late in the evolution make early diagnosis difficult for Burkitt lymphoma.

Keywords: Burkitt's lymphoma, multiple tumors, child





### OBESITY IN JORDANIAN SCHOOLCHILDREN AND ITS ASSOCIATION WITH MATERNAL FEEDING PRACTICES

Authors: Dr. Walid AlQerem

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**Introduction**: Obesity has become a significant worldwide contributor to morbidity with an alarming increase in incidence of childhood obesity. Few studies have evaluated parental feeding practices and their impact on children obesity in the Middle East. The Comprehensive Feeding Practice questionnaire (Musher-Eizenman & Holub, 2007) was validated in different age groups and in different countries, however no previous studies have validated the questionnaire in the Middle East.

**Purpose:**This study validated the questionnaire in the Middle East to evaluate children and adolescent obesity and parental feeding practices

Materials and Method: In this study, 970 children aged 6-12 completed the Arabic translated version of the CFPQ. The height and weight of the children were also measured. The children BMI, BMI z-scores and obesity status was determined. Confirmatory factor and Exploratory Factor Analysis were used to evaluate different factor models. General linear model regression was conducted to evaluate the association between maternal feeding practices, maternal BMI and education level and child's weight status (normal, overweight, and obese)

Results: Confirmatory Analysis of the CFPQ determined that the original 12 factors structure of the questionnaire was not suitable for this sample. The analysis suggested that the most suitable structure was an 11 Factors model (CMIN/DF=2.18, GFI= 0.92, CFI= 0.93, TLI= 0.92 and RMSEA= 0.03) that included modelling, monitoring, child control, food as a reward, emotional regulation, involvement, restriction for health, restriction for weight control, environment, teach and encourage and pressure. The results indicated that 12.6% of the children tested were obese and 25.1% were overweight. The regression showed that restriction to health and weight, emotional regulation and maternal BMI were positively associated with child weight status, while modelling, monitoring, child control, environment, involvement, and teach and encourage were negatively associated with child's weight status

**Conclusion:** This study indicated that Jordanian schoolchildren aged 6-12 had high prevalence of overweight/obesity and this was associated with negative parental feeding practice.



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