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ABSTRACT

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ORAL PRESENTATIONS

WSP-OP001

INCIDENCE, SEROGROUPS AND GENOTYPES OF ROTAVIRUS AND NOROVIRUS CAUSING ACUTE DIARRHEA AND TO COMPARE THEIR DISEASE SEVERITY, ESTIMATED FROM A PROSPECTIVE STUDY IN MUMBAI, INDIA

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ABSTRACT:

Objective:To study the incidence of Rotavirus and Norovirus diarrhoea, their serogroups, genotypes and to compare disease severity between them. **Design:**Cross sectional study. **Setting:**Tertiary Care Centre. **Participants/patients:**All children less than 60 months of having diarrhea as defined by WHO. Children having bacterial diarrhea after clinical and lab evaluation were excluded. **Material and Methods:**Fresh stool samples were subjected to microscopy followed by ELISA. The positive samples were stored at -20°C for further RNA extraction and genotyping. Rotavirus positive samples were further sub-typed by genotyping in RT-PCR. Samples found negative on ELISA were electrophoretotyped to detect rotavirus escaping ELISA and those found positive are further genotyped. Rotavirus negative samples were subjected to Norovirus ELISA. These subtypes were clinically correlated in terms of disease severity on the basis of modified 20 point Vesikari score. **Results:**Of total 226 patients with diarrhea screened, 56 were excluded. 170 patients were enrolled in the study with mean age of 23.35 months and male predominance(56%). Other associated symptoms were vomitings(29%), fever(14%), cough(14%), breathlessness(5%) and lethargy(3%). 22(13%) were positive for Rotavirus,10 patients by ELISA and additional 12 by electropherotyping. Out of 22, 19 were of long arm pherotype type, 1 short arm pherotype and 2 mixed type. Norovirus was found positive in 7(7.7%) out of 90 patients. Rotavirus diarrhea is significantly($p=0.04$) present in younger age(18.7 months) as compared to non-rotaviral diarrhea(24 months). Frequency of stool and duration of illness is significantly($p<0.001$) more in rotavirus diarrhea(9.6 times/day and 7 days) as compared to nonrotaviral diarrhea(7.6 times/day and 5.4 days). Disease severity was more in rotaviral diarrhea than nonrotaviral by vesikari scoring, whereas norovirus diarrhea was mildest. **Conclusions:**Incidence of rotavirus and norovirus diarrhea is 13% and 7.7% respectively. Rotavirus causes the more severe diarrhea with increased rate of dehydration and longer duration of illness as compared to nonrotaviral diarrhea.

WSP-OP002

CLINICO-LABORATORY STUDY AND RESPONSE TO THERAPY IN CHILDREN WITH AUTO-IMMUNE HEPATITIS.

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Aims: To assess clinical manifestations, biochemical features, therapy and outcome of AIH in children.

Material and Methods: A retrospective analysis, where we studied clinical and laboratory features, immunological data, radiological findings, liver biopsy findings and response to therapy in patients with AIH from the hepatology clinics during the period from August 2003 to June 2013.

Results: We diagnosed 30 patients with AIH. The mean age at diagnosis was 94.23months(range 9-212 months), with female predominance of 56.7%.Clinical presentation was jaundice-23(76.7%), splenomegaly-23(76.7%),hepatomegaly-19(63.3%),ascites-15(50%),edema-11(36.7%),bleeding diathesis-11(36.7%) and altered sensorium-5(16.7%).Presentation was acute hepatitis in 2(6.7%), chronic liver disease(CLD) 17(56.7%), acuteliver failure/acute on chronic liver failure(ALF/ACLF) 11(36.6%).Nineteen(63.3%) were of type I,7(23.3%) type II and 4(13.3%) unclassified. In CLD patients mean values were bilirubin T/D-4.3/2.0mg/dl, SGOT/SGPT-601/442,GGT/SAP-68/634,albumin-3.1,INR-1.3,IgG-2436. In ALF/ACLF patients mean values were bilirubin T/D-11.7/6.1mg/dl,SGOT/SGPT-380/171,GGT/SAP-47/469, albumin-2.7,INR-3.5,IgG-3041. In CLD group 12 liver biopsies were done which showed hepatocyte degeneration,fibrosis and cirrhotic changes.In ALF/ACLF group explanted liver biopsies showed extensive hepatocyte degeneration,fibrosis and cirrhotic changes.In CLD(n=17) group 10 were started on prednisolone alone of which 4 needed azathioprine later due to nonresponse, 5 were started on prednisolone and azathioprine and 2(11.7%) were liver transplanted due to decompensation.Six patients on low dose steroids required second course of high dose steroids and azathioprine due to relapse.In ALF/ACLF(n=11) group 7 were medically treated, 5 responded and 6 (54.5%) undergone liver transplantation(LT). The mean follow up is 49.38months (range 5-118 months). Outcome of liver transplantation is good with survival rate of 7/8(87.5%). 1 patient died posttransplant due to hepatic artery thrombosis and 1 patient required retransplantation after 16 months. Conclusion: Pediatric AIH mostly present as advanced chronic liver disease and ALF.AIH type I constitute 2/3rd of cases. One-third present as acute liver failure.Two-third respond well to medical management while rest require LT. Outcome of LT is good both in decompensated cirrhotic disease and ALF.

ETIOLOGICAL SPECTRUM OF CHILDREN PRESENTING WITH RAISED LIVER TRANSAMINASES AND THEIR OUTCOME IN A TERTIARY CARE PEDIATRIC FACILITY AT NAVI MUMBAI, INDIA

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Objectives: Etiology and outcome of children presenting with raised liver transaminases and to analyze liver functions with various etiologies. **Design:** A Prospective analytical study. Setting: Tertiary care centre. **Material and methods:** Children from 3 months to 18 years of age who presented with symptoms and clinical signs suggestive of liver disease or any one showing raised transaminases level in their laboratory report were included in the study from December 2013 to July 2014. Relevant demographic data, history and detail clinical examination were recorded to arrive at a presumptive clinical diagnosis. Investigations were further done in accordance with the presentation and clinical setting of the case to arrive at a final diagnosis. **Result:** Out of the 1020 children screened, total of 203 cases were enrolled with mean age at presentation of 71 months and 60% were male. The causes of hypertransaminasemia were infectious in 97(48%) [viral 33 and non-viral 64], metabolic in 11(5%), structural defects /surgical conditions in 20(10%), hemodynamic abnormality in 14(7%), obesity/NASH in 11(5%), toxic in 23(12%), immunological in 13(6%) and miscellaneous in 14(7%). Mode of presentation is acute hepatitis, acute liver failure, acute on chronic liver disease and chronic liver disease in 150(73%), 28 (14%), 7(4%) and 18(9%) respectively. Mean ALT/AST was significantly ($p=0.004/0.001$) higher in metabolic and infectious causes as compared to other causes. Mean total bilirubin was significantly ($p<0.001$) raised in structural defects and metabolic conditions (6.3mg/dl) as compared to other (2.7mg/dl). Twenty five out of 78 patients followed for more than 3 month had showed persistent hypertransaminasemia (Wilson's disease 5, Glycogen storage disease 4, galactosemia 2, Tyrosinemia 1, acute viral hepatitis-B 4, drug induced hepatitis 5, Duchenne's Muscular Dystrophy 2 and thalassemia 2). **Conclusion:** The study underlines existence of a considerably large group of conditions apart from the conventional impression of viral hepatitis causing hypertransaminasemia.

PREVALENCE OF OBESITY AND ITS ASSOCIATED COMPLICATIONS AMONG SUBURBAN SCHOOL CHILDREN OF NAVI MUMBAI, INDIA

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Abstract:

Introduction: Childhood obesity is a complex, multifactorial, challenging problem that has been escalating at an alarming rate in the western world and also paradoxically in the developing nations like India due to change in life style and physical activity attributed to the phenomena of westernization and rapid urbanization.

Objectives: To determine anthropometric measurements of school going children and estimate the prevalence of overweight and obesity among them. To assess the dietary habits, lifestyle patterns and prevalence of associated complications in obese children. **Design:** Cross sectional study. **Setting:** Tertiary care centre.

Participants: Students from government school in the age group of 5 to 15 years.

Methods: The anthropometric measurements, blood pressure, dietary history, duration of physical activity and TV viewing were recorded on a predesigned proforma. Blood investigations were done in overweight and obese children.

Outcome Measures: Prevalence of obesity and associated complications.

Result: Prevalence of obesity is 9.3% with male predominance. Prevalence of obesity was higher as per waist hip ratio (WHR) as compared to body mass index (BMI) with strong correlation between WHR and BMI for the measurement of obesity. Obese children had a higher caloric intake, a heavy dinner, and more junk food. No significant association between the duration of physical activity and obesity. Obese children viewed TV for longer periods. Fasting RBS did not have a significant association with obesity, however fasting serum insulin levels may be a more reliable marker. Lipid profile seemed to be significantly deranged in obese and over-weight children. Subclinical hypothyroidism was associated with obesity in 10.6% of obese children. CRP was non-reactive in all the children who were obese.

Conclusions: Obesity is prevalent in school going children in India. Obese children had a higher caloric intake and sedentary life style. There is increased association of obesity with dyslipidemia and subclinical hypothyroidism.

QUALITY OF CARE OF EGYPTIAN ASTHMATIC CHILDREN: PATIENT'S PERSPECTIVES.

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Introduction: An understanding of the needs and behaviors of asthma patients is an important issue in developing asthma-related healthcare policy.

Purpose: To assess patient perspectives on key issues in asthma and its management.

Materials and Methods: In this study a written questionnaire with different topics were added to achieve our objectives, this questionnaire was fulfilled by 338 patients (or parents), 60% (n=201) were males and 40 % (n=137) were females. The interview with them had been done in outpatient clinic of children's hospital, Faculty of medicine, Ain Shams University in Cairo, Egypt.

Results: 62.7% of our study patients used controllers, 69.8% of them (which represent 43.8% of the study group) were adherent to medicine. Causes of non adherence to therapy from the patients points of view in our study were mainly due to miss trust of medicine (68%), cost (31.2%), fear of dependence (25%), and fear of side effects (20%). 32.8% of patients had good knowledge about asthma and its treatment, 39.1% of them perceived asthma as a controllable disease and 24% of them thought that medical staff do not put their point of view into consideration. There was statistically significant relation between asthma control from one side and adherence to controllers, presence of good information about the disease and medicine, affordable medical cost, bronchial asthma perceived as a controllable disease, satisfaction with emergency department doctors, and belief that following physician instruction equals better control ($P < 0.050$).

Conclusions: knowledge about asthma, belief that asthma is controllable disease, satisfaction and confidence of physician besides adherence to controllers contributes a big role in asthma control.

AN UNUSUAL CAUSE OF HEART FAILURE AND PULMONARY HYPERTENSION IN INFANT: CONGENITAL VASCULAR FISTULAS (3 CASE REPORTS)

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Introduction: Congenital vascular fistulas are rare and represent a diagnostic challenge to the clinician. The diagnostic of these vascular malformations is often delayed in children because of the uncommon clinical and imaging features.

Purpose: This study aims to review particularities of clinical features, imaging findings and management of children with congenital vascular fistulas.

Materials and Methods: Review of charts of all patients with congenital vascular fistula who were hospitalized in the pediatric department of Sahloul hospital (1998 to 2014) revealed three cases. We analyzed clinical, para-clinical data, management and outcome of each child.

Results: Three cases were confirmed as congenital vascular fistulas in our department: 2 girls and 1 boy. The average age in the diagnosis was 8 month-old. All the patients presented on admission with congestive heart failure. Physical exam showed severe hypotrophy, acute heart failure and heart murmur in the 3 cases. Their heart echocardiography revealed dilated left ventricle with ever-depressed systolic function and pulmonary hypertension in all cases, atrial septal defect and restrictive ventricular septal defect in one case and grade II mitral regurgitation in one case. The pulmonary hypertension and the congestive heart failure in our patients remained unexplained until a hidden vascular fistula was discovered. Doppler echography investigations found extra-cardiac shunting in two cases (cerebral arteriovenous fistula and portocaval fistula) and aortopulmonary fistula in one case. Among the three patients, only one had an attempt to close his porto-caval fistula by embolization. But this procedure had failed. All the three infants died secondary to a refractory congestive heart failure.

Conclusion: Our patients teach us that in front of an infant with congestive heart failure associated to pulmonary hypertension and without congenital heart defect, we should search a congenital vascular fistula.

COLPOCEPHALY IN AN INFANT WITH CONGENITAL CMV

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Dr Harcharan Singh, Speciality Doctor, Paediatrics, Royal Alexandra Hospital, Paisley

Dr Graham Stewart, Consultant Neonatologist, Royal Alexandra Hospital, Paisley

Colpocephaly is a rare abnormality of the brain, described as persistence of primitive foetal configuration of lateral ventricles. It is a disorder of multiple and diverse aetiologies. Herein we report a case of colpocephaly with periventricular calcification and abnormal simple cortical folding following congenital CMV infection in the first trimester.

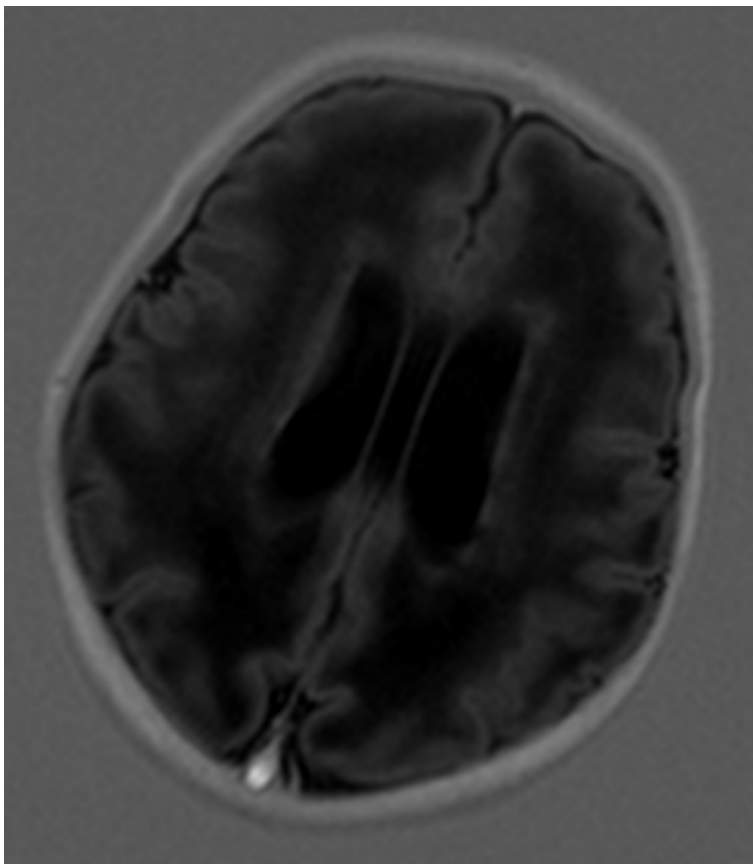


Fig: Axial section of Brain MRI showing parallel orientation of the bodies of the lateral ventricle. Early periventricular calcification, abnormal simple cortical folding and hypointense cerebral white matter is evident.

Disclosure: This case report has been accepted as a poster for a regional UK conference, REASON 2015.

WSP-OP008

EFFECTIVE BIOMARKERS FOR DIAGNOSIS OF EARLY ONSET SEPSIS IN NEONATES IN CONJUNCTION WITH C-REACTIVE PROTEIN (CRP) MEASUREMENT: A LITERATURE REVIEW

Author: Dr Althaf Ansary, University of Glasgow, Glasgow. Dr Andrew Powls, Neonatology Department, Princess Royal Maternity Hospital, Glasgow

Aim: CRP has diagnostic weakness during the early phases of early onset sepsis (EOS) in neonates. This review investigates whether combination of CRP with new biomarkers compensates for its diagnostic weakness and provides reliable sensitivity during the early phases of EOS.

Methods: Literature search

Results: 6 articles were relevant for inclusion based on a review of the abstract and full text. There were 2 articles each of Procalcitonin and Interleukin-8 and one each of Interleukin – 6 and CD-64 studied in combination with CRP. There is no standard definition of clinical sepsis in and this inconsistency is a major confounding variable when assessing biomarker studies in neonatal sepsis. PCT, IL-6, IL-8 and CD64 are sensitive markers when compared to CRP during the early phase of the sepsis. Serial measurement of infection markers as well as the use of multiple markers will certainly improve the diagnostic sensitivity of these tests.

Conclusion:

CRP which is the most widely used test for neonatal EOS has the best diagnostic accuracy when combined with another infection marker that compensates for its diagnostic weakness and provides reliable sensitivity during the early phases of sepsis. Suitable “early sensitive” markers include PCT, IL-6, IL-8 and CD64. These promising markers may be used for early termination of antibiotic treatment in non-infected infants. Judicious use of diagnostic algorithm combining clinical judgment, measurement of CRP and new diagnostic markers will help us to safely withhold antimicrobial treatment in babies with suspected EOS infection.

Disclosure: This article has been accepted as a poster for a regional UK conference, REASON 2015.

PULSE OXIMETRY: SCREENING TEST FOR CRITICAL CONGENITAL HEART DISEASE IN NEWBORNS.

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Background: Congenital cardiovascular malformations are the most common category of birth defects, occurring in 6.6 to 8.1 per 1000 live births and responsible for more deaths in the first year of life. Approximately one quarter of these children will have critical congenital heart disease (CCHD), which requires surgery or catheter intervention in the first year of life.

Aim: To evaluate pulse oximetry as a screening test for critical congenital heart disease (CCHD) in term newborns.

Material and Methods: This was a prospective hospital-based study conducted in the Neonatology Unit of Pediatric Department at AVBRH, Sawangi, Wardha, from April 2012 to March 2015. A thorough clinical examination was carried out in all live newborns. Measurements of oxygen saturation were performed on the all four limb by pulse oximeter on day 1 life of all newborns. All suspected neonates were investigated with blood pressure, roentgenograms, electrocardiograms, and echocardiography and were followed up for a period of 3 months.

Results: During the study period there were 8496 live born neonates at AVBR Hospital. Low SpO₂ (<90%) was found in 24 babies within 4 hours of birth, 21 of them had critical congenital heart disease (CCHD), including seven with transposition of the great vessels, six with tetralogy of fallot, four with tricuspid atresia, two with truncus arteriosus, one with total anomalous of pulmonary venous connection and one with coarctation of aorta (sensitivity: 95.45%; specificity: 99.96%; positive predictive value: 87.50%; negative predictive value: 99.99%). Other congenital heart disease (Atrial septal Defect, Ventricular septal defect, Patent ductus arteriosus, patent foramen ovale, tricuspid regurgitation and endocardial cushion defect) was found in 332 babies on routine echocardiographic.

Conclusion: Pulse oximetry is safe, feasible and noninvasive, can be used as screening tool for detecting CCHD in clinically normal newborn.

ATYPICAL PRESENTATIONS OF NESIDIOBLASTOSIS IN INFANT

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Introduction: Nesidioblastosis or persistent hyperinsulinemic hypoglycemia of infancy (PHHI) indicates an abnormal formation of islets and endocrine pancreatic cells. The condition manifests with hypoglycemia, seizures and thrombocytopenia. It is often misdiagnosed as a urinary tract infection.

Purpose: To report a case of nesidioblastosis in an infant with atypical manifestations such as epilepsy.

Material and Methods: Clinical patient monitoring at the main children's hospital of Porto Velho - Western Amazon, followed by an extensive review of the literature.

Results: An 18 month-old male child had been presenting convulsions from the first month of birth. He was born at full term, through vaginal delivery, presenting thrombocytopenia, cyanosis and urinary tract infection. Phototherapy and antibiotic therapy was needed. Following hospital discharge, the patient had several episodes of seizures and was readmitted to the hospital. During this period, the neurologist made the diagnosis of epilepsy and the patient was given phenobarbital. Some months after returning home, the seizures recurred and the child was hospitalized. It was verified that the patient also presented hypoglycemia, and diazoxide was administered. After additional seizure activity, an MRI was ordered, which demonstrated an increased pancreatic volume.

Conclusion: The classic presentation of PHHI includes loss of appetite, hypothermia, lethargy, seizures and coma. Nesidioblastosis should be considered in patients whose hypoglycemia is difficult to control and have high levels of insulin. Suppressors of insulin secretion are used as first-line therapy. The prolongation of the hypoglycemic condition may lead to neurological sequelae; thus, subtotal pancreatectomy is indicated, as it was performed in this case. However, the patient might develop diabetes as a complication. After four months the patient made satisfactory progress. The blood glucose levels normalized and the seizure activity decreased.

GRAPHOLOGY AND AUTISM. “STUDY AND ANALYSIS OF HANDWRITING AND DRAWING IN CHILDREN WITH ASD”

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Pediatrician and Expert graphologist - Prato – Tuscany (Italy)

Introduction: The ASD (autism spectrum disorders) is characterized by "severe and pervasive impairment in two areas of development: about communication skills and social interaction". This definition means that the disorder affects each person in different ways ranging from a mild to severe symptoms.

Purpose: The research aims to identify two key points of the autistic child: the development of drawing and handwriting in relation to ASD and the deeper meaning of hidden communication **Materials and Methods** I studied and analyzed 25 drawings and writings of autistic children according to the classical categories of reference.

Results : Drawings and handwriting indicate the variety of the autistic spectrum



M-4-Italy



<http://it.opinionspost.com>

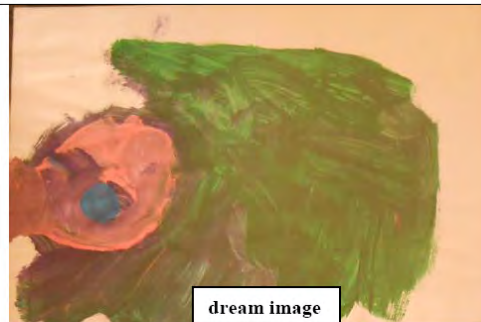
<http://www.ibtimes.co.uk>

Paintings by Iris Grace, a 5 year old with an extraordinary talent to express herself through painting.



realism

M-11-France



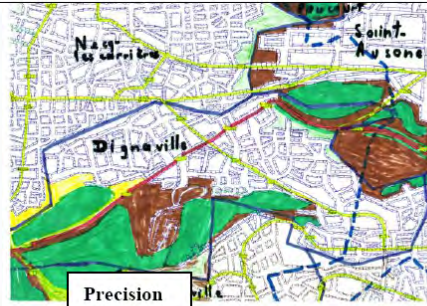
dream image

F-9-France



symbolism

M-10-France



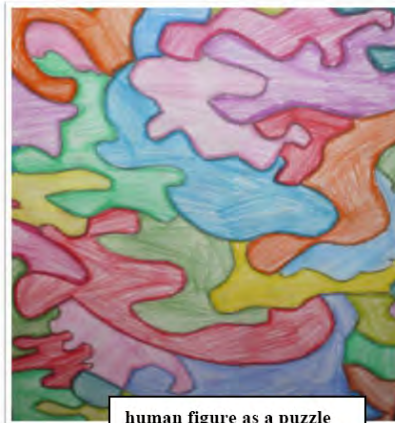
Precision

M-14-France



Precision in detail: obsessiveness

M-7-Canada



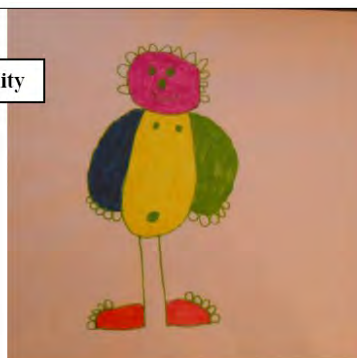
human figure as a puzzle

M-11-Canada

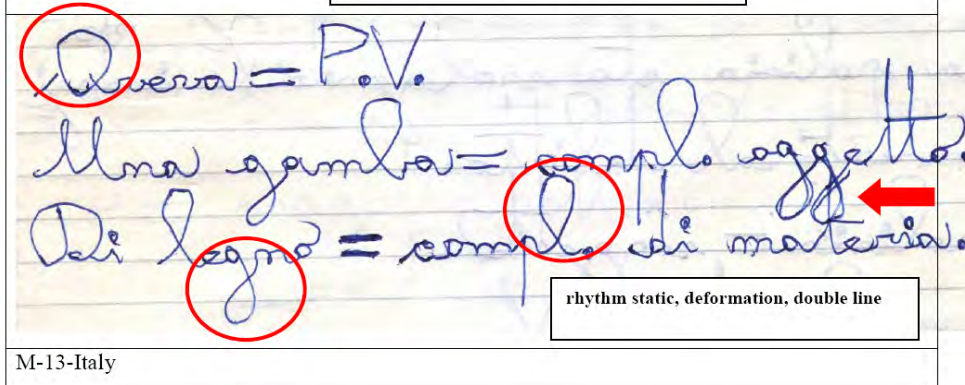
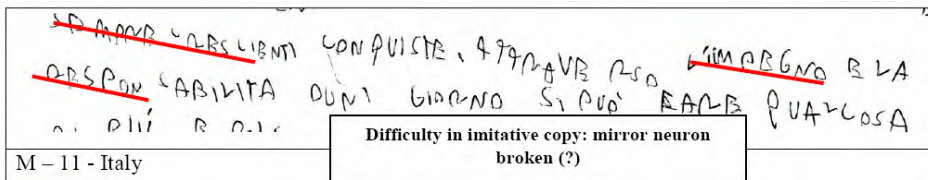
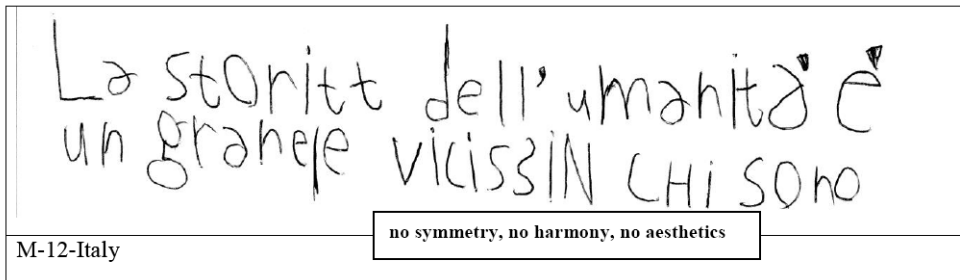


cognitive disability

M-17-France



M-11-France



Conclusions: The drawings of children with autism are not forms, colors or images of silence but expressions of the soul and those feelings that the child has within himself but can not express them in an appropriate and correct. The free drawing and handwriting help us to understand in depth some aspects of the mind and the emotional interference.

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NEONATAL CONGENITAL PANCREATIC CYST: A REPORT OF THREE CASES

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Introduction : Neonatal congenital pancreatic cyst is rare. It can be isolated or associated to other malformations. Early management is recommended because of possible severe complications.

Purpose: The aim of our work is to report our experience with three newborns with congenital pancreatic cyst.

Patients and method: A five year (2010-2015) retrospective study is carried. Data were collected from medical files of three different patients.

Results: Diagnosis was prenatal in two patients. The Cyst was associated to Ivemark syndrome in two cases and solitary in one. Cystic complications were infection in one case and pancreatitis with liver cirrhosis in another case. These pancreatic cysts were successfully managed by surgery. One patient succumbed as a result of heart failure.

To our knowledge we report the first case of congenital pancreatic cyst complicated with liver cirrhosis.

Conclusions: We concluded that prompt diagnosis is important to prevent severe complications. Prognosis is dependent on early management and on life threatening associated malformations.

THE EFFECT OF MALUNGGAY (MORINGA OLEIFERA) IN LOWERING THE TOTAL CHOLESTEROL LEVEL OF OVERWEIGHT AND OBESE SCHOOL-AGE CHILDREN: A DOUBLE-BLIND RANDOMIZED CONTROLLED TRIAL

Principal Author: Crystal M. Divino, M.D.

Co-Authors: Aida Yason, MD, DPPS; Maximo Abuel, MD; Oscar Padua, MD

Background and Rationale: Obesity, which is commonly associated with hypercholesterolemia, is an increasing global epidemic, and Filipino children are not spared. Aside from the side effects and inapplicability of anti-lipidemic drugs to younger children, as a developing country, we are in need of most of natural and practical ways to address this growing health problem. *Moringa oleifera* has been recognized as a possible solution to micronutrient deficiency in our country, and its other properties are currently of interest to many researchers around the globe—one of which is its cholesterol-lowering property. In this regard, several studies have been done in both animals and adults to determine its effect on cholesterol, but no study has been found that verifies it on children.

Objective: This study aimed to determine the effect of *Moringa oleifera* in the lowering of total cholesterol levels among overweight and obese school-age children.

Methods: A total of 86 children studying in three private schools and from OPD clinic were included in the study, randomized, and was found to be comparable as to age, gender, educational level, and BMI classification. Both the researcher and subject were blinded as to randomization.

Results: After intervention of 30 days, both the *malunggay*-supplemented and non-*malunggay* supplemented groups had lowered cholesterol. However, between pre- to post-intervention changes, the *malunggay*-supplemented group registered a significantly more decrease total cholesterol compared to the control group.

Discussion: The cholesterol-lowering effect can be attributed to the phytochemicals in *malunggay*—glucosinolates, flavonoids, phenolic acids, beta-sitosterol, and β -carotene—which are anti-oxidants that scavenge free radicals in the first stages of lipid oxidation or break the oxidative chain reaction of cholesterol formation. These antioxidants react with fatty acid peroxy radicals to form stable antioxidant radicals, which are either insufficiently reactive for further reactions or form non-radical products.

Conclusion: The significant lowering of cholesterol levels detected in the *malunggay*-supplemented group suggests that the cholesterol-lowering property of *M. oleifera* is applicable to children with a significant effect.

PERCEPTIONS OF THE FACTORS WHICH INFLUENCE HEALTHY EATING IN UNDERPRIVILEGED CHILDREN IN MEDELLIN, COLOMBIA.

Author: Edemanwan Andah, Liverpool School of Tropical Medicine, UK

Introduction: Adequate nutrition is essential for human life and is particularly vital in the early years of life (UNICEF, 2015) (FAO, 2000). Many however do not have sufficient access to this basic human need. Currently, under nutrition accounts for about 3 million deaths per year in children under-five worldwide and is a problem mainly encountered in developing countries (UNICEF, 2015). The problem of over nutrition is also significant, predisposing children to non-communicable chronic diseases such as diabetes, hypertension and cardiovascular disease (WHO, 2015). Colombia is a developing, middle-income country in which one third of the children under-five in the country are malnourished and 5% are overweight (Attanasio et al., 2004) (World Bank, 2015) (UNICEF, 2015). This phenomenon is known as the dual burden of malnutrition. Not eating healthily is a key factor that can perpetuate this burden. It is therefore paramount that this problem of malnutrition, which has devastating effects on those affected, is tackled, and research is a key tool which can be utilised.

Purpose: The aim of this research project is to explore a range of perceptions on factors which influence healthy eating in underprivileged children in Medellin, Colombia.

Materials and Methods: To conduct this research, a qualitative approach was utilised. In depth-interviews with 23 participants were conducted in order to collect primary data. A literature review was conducted to collect secondary data and primary data was triangulated against the secondary data. The data was analysed using an inductive framework analysis approach.

Results: From the primary and secondary data collected, several inter related factors, which influence healthy eating, were elicited. These factors were economic (cost of food, time constraints), educational (low level of knowledge, wrong perceptions of healthy eating), social (family dynamics, culture, media/advertising), environmental (availability and accessibility of food) and personal (mood and food preference).

Conclusions: In conclusion, it was perceived that educational, economic, environmental, social and personal factors were influential on the healthy eating habits of underprivileged children with the economic and educational factors being highlighted as more significant factors. To tackle these factors a multi factorial approach including the education of parents and children in this situation is absolutely vital in helping to forge new healthy eating habits and ensure a better, healthier future for this group of

children. Further research is also needed in this area to elicit more ways in which healthier eating patterns can be established among this population.

WSP-OP015

GRADE III INTRAMEDULLARY ASTROCYTOMA IN A 21-MONTH-OLD PATIENT: CASE REPORT

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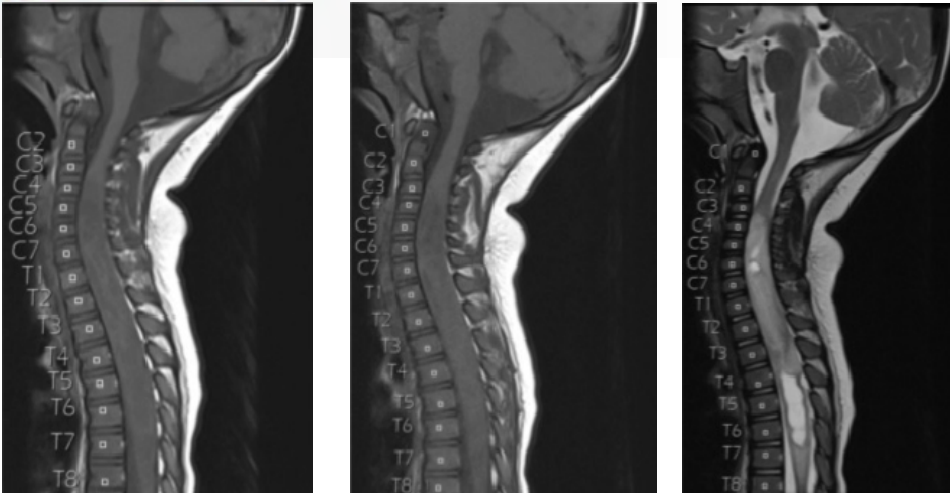
Introduction: Central nervous system (CNS) tumors represent 15-20% of all childhood tumors. Primary spinal cord tumors are rare entities that only for 4-10% of all primary tumors of the CNS. Intramedullary tumors are the least common, representing only 35% of spinal tumors. The most common intramedullary tumor is astrocytoma in 75% of the cases, being grade III the least common with a frequency of 25%.

Purpose: To raise awareness about the wide variety of clinical manifestations that spinal tumors may present with in children.

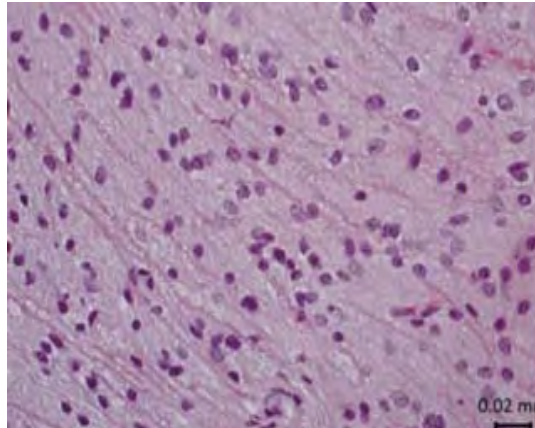
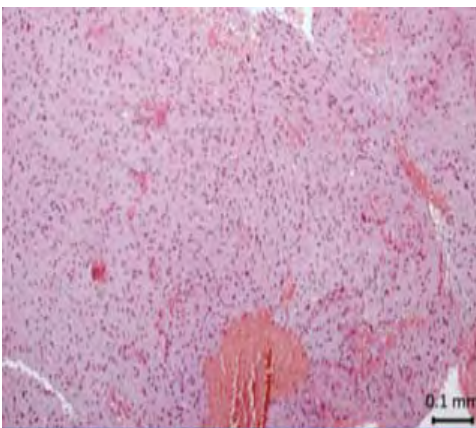
Materials and Methods: We present the clinical manifestations and diagnostic approach of a grade III intramedullary astrocytoma in a 21-month-old female with no prior history of illnesses. Symptoms started 11 days prior to admission, as limping of the left foot, as well as weakness, diminished movements and inability to handle objects with the right arm.

She was well oriented, with age-appropriate neural development, cranial nerves without alterations, sensorial exploration unreliable due to lack of cooperation, but apparently normal. Eutrophic extremities with diminished strength 3/5 (distal portion), 4/5 (proximal portion) of left extremities, right extremities 5/5. She had no trouble standing, Babinski (-), muscle reflexes 2/4, Brudzinkski and Kernig (-).

Column and hip radiographies, as well as a head CT were reported normal. Head and spinal MRI, simple and contrasted, reported an heterogenic intramedullary lesion that went from C3 to T3 with hypo-intense areas in T1 and hyper-intense areas in T2, 7.6 cms long which obliterated sub-arachnoid space



A biopsy reported a fibrillar hyper cellular, astrocytic neoplastic lesion with hemorrhagic areas. Neither necrosis nor mitosis were found. Grade II intramedullary astrocytoma was diagnosed following WHO criteria. At patient's parents request, a second biopsy was taken, reporting 2 active mitosis, thus upgrading diagnosis to grade III.



Results: Clinical features classify our patient in stage II according to McCormick's scale. The most widely accepted classification is the WHO's, which is based in biopsy findings, and because of the mitosis found, it would correspond to a stage III neoplastic lesion.

Conclusions: In order to achieve a diagnosis, a high level of suspicion is necessary. Nowadays there's no scales intended for pediatric population as all scales are inferred from adult studies. Therefore it is imperative that an age-specific scale be made in order to give more accurate staging, prognosis and diagnosis.

QUALITY ASSESSMENT OF NEONATAL TRANSPORT PERFORMED BY A MOBILE EMERGENCY SERVICES USING TRIPS

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Affiliation: Universidade Federal de Pernambuco-UFPE

To assess the quality of neonatal transport performed by Recife's metropolitan SAMU. A quasi-experimental study, comparing the before-after, from March to August 2013, in the Recife Metropolitan SAMU. The study included 33 newborns carried low risk maternity and Emergency Unit for maternity services with Neonatal Intensive Care Unit. The study was conducted using a (valid) instrument Evaluation of transport, the TRIPS score. Ethical principles are fulfilled during the research. Characteristics of the newborn, complications of medical aspect and mechanical (machinery and ambulance) and stability of newborn before and after transport were analyzed. Prevailed males and gestational age term, and 78.8% were born by vaginal delivery. Birth weight below 2500g was found in 39.4% of neonates transported. Respiratory complaints accounted for 42.4% of transfer requests, followed by prematurity (30.3%), 15 newborns were on mechanical ventilation (VMA), and 87.9% were transported during the first seven days of life. SAMU Recife did 69.7% of transport in the metropolitan area. The average transport time was 58 minutes without medical or mechanical complications. The score changed for more in only five patients. Body temperature was the only variable that showed the score change before and after transport. The carriage performed by the SAMU Metropolitan Recife was adequate for most newborns. Physiologic stability of newborns before transport and stability of the equipment were decisive factors for the success of transport.

WSP-OP017

MANAGEMENT OF NUTRITIONAL STRATEGIES IN PREVENTION OF AUTISM BEFORE AND DURING PREGNANCY

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Objectives: Autism is a neuro-developmental disorder that has negative effects on verbal, mental and behavioral development. Studies have shown the role of maternal dietary pattern before and during pregnancy. The relation of exerting of nutritional management programs in perevention of Autism has been approved. This review article has been made to investigate the role of nutritional management strategies before and during pregnancy in prevention of Autism.

Methods: This review study was accomplished by using the keywords related to the topic, 67 article were found (2000-2015) and finally 20 article with criterias such as including maternal life style, nutritional deficiencies and Autism prevention were selected.

Results: Maternal dietary pattern and health before and during pregnancy have important roles in incidence of Autism. Studies have suggested that high dietary fat intake and obesity can increase the risk of Autism in offspring. Maternal metabolic condition specially gestational diabetes (GDM) (pvalue<0.04) and folate deficiency (pvalue=0.04) is associated with risk of Autism. Studies have shown that folate intake in mothers with autistic children is less than mothers who have typically developing children (TYP) (pvalue<0.01). As folate is an essential micronutrient for fetus mental development, consumption of average 600 mcg/day especially in P1 phase of pregnancy results in significant reduction in incidence of Autism(OR:1.53, 95%CI=0.42-0.92, pvalue=0.02). furthermore, essential fatty acid deficiency especially omega-3 fatty acid increases the rate of Autism and consumption of supplements and food sources of omega-3 can decrease the risk of Autism up to 34% (RR=1.53, 95%CI=1-2.32).

Conclusion: regards to nutritional deficiency and maternal metabolic condition before and during pregnancy in prevalence of Autism, carrying out the appropriate nutritional strategies such as well-timed folate supplementation before pregnancy and healthy lifestyle adherence for prevention of metabolic syndrome (GDM) seems to help Autism prevention.

ANTIMICROBIAL RESISTANCE PATTERNS OF ESCHERICHIA COLI IN CHILDREN WITH URINARY TRACT INFECTION IN PRIMARY CARE CLINIC AND EMERGENCY DEPARTMENT

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Objective: To evaluate antibiotic susceptibility patterns in urinary isolates of *Escherichia Coli* (*E. coli*) from children in emergency department and primary care clinics and to identify risk factors associated with resistance strain *E. coli*.

Method This is a cross-sectional study of children 0 to 18 years of age reported to have *E. coli* positive UTIs who's medical and laboratory records were systematically reviewed.

Results: A total of 1,159 urinary isolates of *E. coli* from 886 different subjects were examined. Overall, 43.9% *E. coli* isolates were resistant to ampicillin, 20.5% to trimethoprim/sulfamethoxazole (TMP/SMX), and 18% to both ampicillin and TMP/SMX. About 8.9% were resistant to three or more antibiotics. Compared to girls, boys were 2.29 times (*CI* 1.30-4.02) more likely have *E. coli* isolates resistant to ampicillin, and 2 times more likely (*CI* 1.13-3.62) to TMP/SMX. Children < 4 years of age were more likely to have ampicillin resistant *E. coli* isolates compared to children older than 4 years of age (*OR* 1.61, *CI* 1.12-2.33). Patients with genitourinary abnormality were 1.57 times more likely to be resistant to ampicillin (*CI* 1.03-2.41) and 1.86 times to TMP/SMX (*CI* 1.18-2.94).

Conclusions: Higher rates of ampicillin and TMP/SMX resistant urinary *E. coli* isolates were observed among boys and children with history of genitourinary abnormality. Patient age and recent antibiotic prescription are also potential risk factors for antibiotic resistant. Knowledge on patient demographics, spectrum of pathogens, and their patterns of resistance in local communities are warranted to empirically select an effective antimicrobial agent.

MULTIPLE STRATEGIES IN PREVENTION OF METABOLIC SYNDROME RESULTS FROM VITAMIN D DEFICIENCY IN CHILDREN

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Introduction: Nowadays the prevalence of metabolic syndrome (Mets) has taken on a growing trend. Studies have shown the relationship between vitamin D deficiency (VDD) status and Mets in children. Also studies have recorded that exerting strategies for vitamin D status improvement can help to prevent Mets in children.

Purpose: This review study investigated multiple strategies in prevention of Mets result from VDD in children.

Methods: This review study has been done by using keywords related to the topic and 54 articles were found (2000-2015) that 25 were selected according to the indicators of Mets, supplementation and fortification of foods with vitamin D and attention to children environment and life style.

Results: Studies have suggested the correlation between serum levels of vitamin D with waist circumference ($p < 0.0001$), systolic blood pressure ($p = 0.01$), HOMA-IR ($p = 0.001$) and HDL cholesterol ($p < 0.0001$). An inverse correlation between serum 25 (OH) D and HOMA-IR ($p = 0.006$) and insulin ($P = 0.002$) has been proved in overweight group. Higher HOMASDS and triglycerides found in vitamin D deficient obese children compared to control group without VDD ($p = 0.04$). After supplementation with vitamin D, serum TG concentration decreases significantly ($p = 0.04$), and improves insulin resistance ($p = 0.02$). The prevalence of VDD is associated with time of watching TV ($P < 0.01$), hours of physical activity per week ($P = 0.01$), skipping breakfast ($P < 0.001$) soda intake ($P < 0.001$), and milk intake per day ($P < 0.01$).

Conclusions: According to the beneficial role of vitamin D in prevention of Mets and proven relationship between serum level of vitamin D and Mets indicators, we can prevent childhood Mets through the application of appropriate strategies such as supplementation and food fortification with vitamin D and positive changes in children life style with especial attention to physical activity in exposure of sunlight and their environment condition.

WSP-OP020

FAMILIAL WOLFRAM SYNDROME

Author: Mimouna BESSAHRAOUI

Departement of medecine ; oran, algeria

WOLFRAM SYNDROME (WS) is a rare autosomal recessive progressive neurodegenerative disorder, and it is mainly characterized by the presence of diabetes mellitus and optic atrophy. other symptoms such as diabetes insipidus, deafness, and psychiatric disorders are less frequent. the wfs1 gene, responsible for the disease and encoding for a transmembrane protein called wolframin, was loca-lized in 1998 on chromosome 4p16.

In this report, we present a familial observation of wolfram syndrome (parents and three chil-dren). the probpositus was a 6-year-old girl with diabetes mellitus and progressive visual loss. her family history showed a brother with diabetes mellitus, optic atrophy, and deafness since childhood and a sister with diabetes mellitus, optic atrophy, and bilateral hydrone-phrosis. thus, association of these familial and personal symptoms is highly suggestive of wolfram syndrome. the diagnosis was confirmed by molecular analysis (biology), which showed the presence of wfs1 homozygous mutations c.1113g > a (p.trp371*) in the three siblings and a heterozygote mutation in the parents. our observation has demonstrated that pediatricians should be aware of the possi-bility of wolfram syndrome when diagnosing optic atrophy in diabetic children.

WSP-OP021

CHILDHOOD TB IN HIV ERA- IN SUB SAHARAN AFRICA

Author: Dr Mir N Anwar MBBS, DCH, MPH (USA)

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Background- TB is surging much of the Africa because of HIV epidemic, it is observed that TB rate is much higher then what is reported it in public health system in developing country. In South Africa out of all TB case 16% are children.

Objective- Childhood mortality is increasingly higher in sub-Saharan Africa. To know the reason of child mortality- is it because of TB or HIV or both?

Method – TB & HIV infection in children in retrospective study was in our mind.

WHO endorsed in 2010 new diagnostic tool to confirm TB, like Gene XPRT, MDR/RIP, PCR based test even in children. Presently it is not widely available in Sub Saharan Africa because of high cost. South Africa lucky to have Gene XPRT test kit available even in district hospital.

BCG vaccine and Tuberculin skin test and its results interpretation helps for diagnosis and prognosis of childhood TB. In children, malnutrition, measles, and whooping cough increase the risk of progression to active TB disease.

Results:

Present deaths Worldwide, HIV: 6000/day, TB: 5000/day; South Africa, TB case Incidence: 4th in the world, Childhood TB- 16% of all TB cases. In 2010, 8.8 million new TB cases globally, 1.1 million deaths (excluding HIV). 1.1 Million new HIV associated TB cases worldwide, Out of all 82% living in Sub Saharan-Africa. About 50-60% of all HIV patients when start with ART, had TB in their life time. Co-infection of TB & HIV – Globally- 13%, South Africa- are around 25- 60% of amongst children. It is observed that the patterns of TB symptoms are also changing to that of conventional one.

Conclusion- Problem persists still on diagnosis of TB as 87% of the TB patients shows smear negative even with fluorescent microscope. It shows that smear negative TB patients have high mortality even with proper TB treatment. It also observed that HIV patients having low CD4 count had low TB organism in sputum. TB is a multisystem disease. TB is number one cause of death, in HIV infected patients specially children.

TB and HIV are correlated with each other; if we can decrease the incidence of HIV we can decrease the incidence of TB both in morbidity and mortality, I will discuss all these issue and facts in this topic.

Reference- WHO TB & HIV publication, Department of Health South Africa Publication, 2010- 2014.

WSP-OP022

ATOPIC DERMATITIS – IMMUNE DYSFUNCTION ASSOCIATED WITH ATOPY

Author : Coclici Sempronia

Emergency Hospital for children "Sf. Maria" Iasi

Introduction: The immune system shows a complex role to defend the body in response to "non-self" antigens, respond abnormally to antigens allergens (hypersensitivity and autoimmunity) and shows immune tolerance by lack of reactivity to its own structures (self).

Purpose: The aim of this study is to demonstrate that in atopic dermatitis immune system influences the development of atopy.

Material and methods: Following medical record review, 135 cases diagnosed with AD were included in the study. Statistical analysis was performed using SPSS v20 for determining the frequency and testing the hypotheses, for $p < 0.05$, by t tests and One-Way ANOVA.

Results: Of the 135 cases, 51,9% were male children and 48,1% female children aged 1 month to 127 months with a mean of 26,21. According to total serum IgE level, 64,4% of patients had elevated IgE levels, 35,6% normal levels. According to the SCORAD, children had mild AD in 20,7% of cases, moderate in 70,4%, and severe in 8,9%. IgA deficiency was found for 48,1% of cases, and for 51,9% normal. IgG deficiency was found in 38,5% of cases. The independent samples t tests showed *statistical significant* demonstrating correlations between IgE level and place of residence and personal history of allergy ($p < 0.01$), family history of atopy ($p < 0.05$), IgA and IgG level, SCORAD ($p < 0.05$).

Conclusions: Atopy in AD can be influenced by complex factors, both internal and environmental, but this remains a controversial topic. External factors acting on a background genetically predisposed to atopy trigger the manifestation of AD.

WSP-OP023

TWO-STAGE LAPAROSCOPIC APPROACHES FOR HIGH ANORECTAL MALFORMATION: TRANSUMBILICAL COLOSTOMY AND ANORECTOPLASTY

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Introduction: Trans-umbilical colostomy (TUC) has been previously created in patients with Hirschsprung's disease and intermediate anorectal malformation (ARM), but not in patients with high-ARM.

Purpose: The purposes of this study were to assess the feasibility, safety, complications and cosmetic results of TUC in a divided fashion, and subsequently stoma closure and laparoscopic assisted anorectoplasty (LAARP) were simultaneously completed by using the colostomy site for a laparoscopic port in high-ARM patients.

Methods: Twenty male patients with high-ARMs were chosen for this two-stage procedure. The first-stage consisted of creating the TUC in double-barreled fashion colostomy with a high chimney at the umbilicus, and the loop was divided at the same time, in such a way that the two diverting ends were located at the umbilical incision with the distal end half closed and slightly higher than proximal end. In the second-stage, 3 to 7 months later, the stoma was closed through a peristomal skin incision followed by end-to-end anastomosis and simultaneously LAARP was performed by placing a laparoscopic port at the umbilicus, which was previously the colostomy site. Umbilical wound closure was performed in a semi-opened fashion to create a deep umbilicus.

Results: TUC and LAARP were successfully performed in 20 patients. Four cases with bladder neck fistulas and 16 cases with prostatic urethra fistulas were found. Postoperative complications were rectal mucosal prolapsed in three cases, anal stricture in two cases and wound dehiscence in one case. Neither umbilical ring narrowing, parastomal hernia nor obstructive symptoms was observed. Neither umbilical nor perineal wound infection was observed. Stoma care was easily carried-out by attaching stoma bag. Healing of umbilical wounds after the second-stage was excellent. Early functional stooling outcome were satisfactory.

Conclusions: The umbilicus may be an alternative stoma site for double-barreled colostomy in high-ARM patients. The two-stage laparoscopic approaches for high-ARM, TUC and stoma closure with simultaneously LAARP are both technically feasible and safe with excellent cosmetic result.

THE EFFECT OF KANGAROO MOTHER CARE ON FUSS AND CRYING TIME IN COLICKY INFANTS

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Introduction: Infantile colic is a common complaint in the first few weeks of life. On the other hand, because of its unknown etiology, there is not a specific therapy for this complaint, but various therapeutic options for reducing pain and restlessness of these infants are recommended. Skin to skin contact by Kangaroo Mother Care (KMC) increases in pain threshold and it seems to be a suitable method for the care of these infants.

Purpose: This study was designed to evaluate the effect of KMC on infantile colic.

Materials and Methods: This case- control study was performed between March 2012 and March 2013. Subjects were 55 infants with exclusive breast fed infant, aged 15-60 days with excessive fuss and crying, referred to Infant and Child Clinic in Ayatollah Rohani Hospital in Babol, north of Iran. Babies whose weights were less than 2500 Grams and with inheritance and clinical diseases excluded from the study. Infants were subjected to KMC at least 2 hours a day. Standard questionnaire and Barr Scale were filled by interview. Data was analyzed by SPSS v.11.5 and T-test, a P- value less than 0.05 considered being significant.

Results: The fuss and crying time before the KMC was 2.21 ± 1.54 hours per day and decreased to 1.16 ± 1.3 hours per day after the implementation of KMC. ($p=0.001$)

Conclusions: Kangaroo mother care at home can be used as a simple and safe method for decreasing of cry and fussiness in colicky infants.

Keywords: Kangaroo Mother Care (KMC), fussiness, Colicky Infants, colic

NEUROPROTECTION BY SELECTIVE HYPOTHERMIA IN THE ANOXIC-ISCHEMIC ENCEPHALOPATHY NEWBORN FUTURES: EXPERIENCE THE NEONATAL INTENSIVE CARE UNIT OF THE UNIVERSITY HOSPITAL OF MARRAKECH

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Introduction: Controlled hypothermia has become a treatment of choice for post-neonatal asphyxia encephalopathy. However, its introduction requires good coordination between the obstetrics and neonatal resuscitation to ensure appropriate pre-referral treatment and meet the deadline of less than 6 hours to start the protocol. A selective hypothermia protocol was applied to the neonatal intensive care unit of the University Hospital of Marrakech Mohamed VI since July 2012.

Patients and Methods: This work is a prospective single-center study in the neonatal intensive care unit of the University Hospital of Marrakech, yielding a series of 19 newborns treated with selective hypothermia for a period of 31 months (between July 2012 and February 2015). All children included, met the criteria for inclusion in the protocol, they were admitted before the sixth hour of life.

Results: Eleven newborns were classified Sarnat II, while five were classified Sarnat III. 10 patients have shown clinical convulsions, and were put on phenobarbital. Six patients required sedation Midazolam with intubation and mechanical ventilation. The evolution was marked in 68.7% of cases by a clinico-electrophysiological improvement with a decline ranging between 1 month and 21 months. Complications were dominated by the infection and electrolyte disturbances and in one case an umbilical hemorrhage. A single incident was noted represented by rapid warming. Hypothermia is currently recommended in clinical practice. It is desirable that monitoring of these children is assured with the establishment of a national registry.

Conclusion: The results of the teams with sufficient perspective are very encouraging, demonstrating an effect on mortality and medium-term effects, hence the need to generalize to other CHU Morocco.

A PREMATURE INFANT WITH ELBW AND APLASIA CUTIS CONGENITA ON THE LOWER LIMB – CASE REPORT

Presenter and Co-authors: Agata Pajk*

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Introduction: Aplasia cutis congenita (AAC) occurs with an incidence rate of 1–3 cases per 10 000 live births. In 75% of cases it presents as a scalp lesion on the vertex of the head, but can also appear in other locations, such as limbs or trunk. Over 500 cases have been described worldwide. Congenital skin aplasia on the lower limb is very rare disorder. ACC is classified using the 9-group Frieden classification system.

Purpose: The Polish Registry of Congenital Malformations has gathered data on 168 cases of ACC occurring in the surveyed area between 1998 and 2008; 2 of which were cases with defect located on the lower limb. So far, ACC in infant with extremely low birth weight has not been described.

Material and Methods: We present the case of a male neonate, with a birth weight of 890 g, born after 25 full weeks of gestation by Caesarean section. The child was born in a fair condition, with signs of prematurity and breathing difficulties. After birth, the child was diagnosed with a focal skin defect of the right lower limb, sharply demarcated, extending into the subcutaneous tissues, ca. 4 cm long and 1.5 cm wide. This defect was located on the medial aspect of the thigh, involving practically its entire length, Figure 1



Figure 1: Aplasia cutis congenita in our patient.

Results: On the basis of the clinical picture of the defect and perinatal history, the following diagnosis was made: aplasia cutis congenita of the lower limb of a prematurely born infant with ELBW, type VII in the Frieden classification system. Due to the size of the wound, premature birth and extremely low birth weight, our patient's defect required surgical intervention. During the entire therapeutic process, full limb function was preserved and no shortening of the limb occurred. No blisters developed on the skin.

Conclusions: This case deserves attention because of the extreme prematurity and extremely low birth weight of the patient, as well as successful outcome.

POSTER PRESENTATIONS

WSP-PP001

HYPERDEHYDROEPIANDROSTERONE IN NEONATES WITH HYPOXIC ISCHEMIC ENCEPHALOPATHY AND CIRCULATORY COLLAPSE

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Introduction: Circulatory collapse is a very common complication of the critical illnesses in neonates including neonates with hypoxic ischemic encephalopathy, it can be the end result and cause of death of several conditions. Often, despite treatment with fluid resuscitation and vasopressor agents, circulatory collapse persist and the blood pressure can remain critically low, compromising adequate blood flow to vital organs and brain. Low blood pressure has been associated with increased mortality.

Purpose: To investigate adrenal function in term and preterm newborns who suffer circulatory collapse during hypoxic ischemic encephalopathy.

Material and methods: A total of 30 infants were analyzed in the study: 15 neonates in patient group (neonates had hypoxic ischemic encephalopathy with circulatory collapse) and 15 neonates in control group (neonates with hypoxic ischemic encephalopathy without circulatory collapse). All the studied patients were subjected to: history, examinations and laboratory investigation: serum cortisol concentrations and dehydroepiandrosterone levels.

Results: The cortisol concentrations did not differ significantly between the 2 groups: (12.1±2.4) µg/ dL and (12.9±4.3) µg/ dL in control and patient groups, respectively. There are highly significant differences between control and case groups regarding Dehydroepiandrosterone (33.4±16.5) µg/ dL, (342.1±101.3) µg/ dL respectively.

Conclusion: In this study, we found that serum cortisol concentrations did not differ between patient and control groups, but contrary to the expectation that critically ill patients should have higher cortisol concentrations than normal neonates. However, there is a marked increase in dehydroepiandrosterone causing abnormality in 11β-hydroxysteroid dehydrogenase 1 enzyme expression which is important since the enzyme is believed to amplify local glucocorticoid signaling, and its repression may cause decrease cortisol function, so those neonates having accumulation of dehydroepiandrosterone, and may suffering from manifestation of adrenal insufficiency although they may have normal cortisol level.

WSP-PP002

PROGRESS IN IDENTIFYING OF HEARING DISORDERS OF INFANTS ITALIAN EARLY HEARING DETECTION AND INTERVENTION (EHDI) PROGRAMS

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Introduction ; Identifying of newborns with hearing impairment during the first few months of life is a relatively new concept. Worldwide the development of statewide Early Hearing Detection and Intervention programs, had provided a improvement the rate of coverage of screening

Purpose : Aim of this study was to evaluate the state of implementation of Early Hearing Detection and Intervention (EHDI) programs in Italy and to determine the effect that legislation may have on their performance.

Material and Methods: Data were obtained during four national surveys performed in calendar years 2003, 2006, 2008, and 2011.

Results: By the end of year 2011, Early Hearing Detection and Intervention (EHDI) programs legislation was passed in seven out of 20 Italian Regions. The analysis of the data revealed that screening coverage rate had a steep increase on a national basis from year 2003 to year 2011 and remained low in a very few district areas only. In 2011, the average coverage rate was 78.3%. In twelve out of 20 Italian Regions the coverage was greater than 95%. Coverage rate was greater in Regions with implemented EHDI legislation than in Regions with no EHDI legislation. As a matter of fact, Regions which passed EHDI legislation screened at more than 95% of infants, whereas Regions without legislation reported a mean screening rate of nearly 67% of newborns.

Conclusion: Current results seem to suggest that legislation might have a positive effect on UNHS program performance.

Key words—EHDI, neonatal hearing screening, legislation, coverage rate, congenital deafness

TOBRAMYCIN SAFETY AUDIT

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At Birmingham Heartlands Hospital Paediatric Department we currently use once daily dosing of tobramycin to treat infections in patients with Cystic Fibrosis (CF), Primary Ciliary Dyskinesia (PCD) and Non-CF Bronchiectasis. To monitor the toxicity of this drug, which can lead to Acute Kidney Injury (AKI), The CF Trust suggests completing tobramycin trough levels before the second and eighth dose. There is no evidence to support this recommendation and currently Birmingham Children's Hospital only completes a pre-second dose level. We audited to see if the pre-eighth dose level was required when the pre-second dose level was normal. To complete this we performed a retrospective study to review all of the tobramycin levels, over the last 2 years, for our 49 patients with CF, PCD and bronchiectasis.

Over this two year period, 21 of the 49 patients received tobramycin. 14 patients received only one course, 4 patients received 2 courses, 2 patients received 6 courses and one patient received 7 courses. Of all of these patients, only one patient had a high pre-eighth dose level after a normal pre-second dose level, this was the patient who had received 7 courses of tobramycin.

We believe there are several reasons this level may have been high. Research (Downes et al.) has suggested a number of risk factors for AKI when tobramycin is administered which are:

- Less than 90 day intervals between treatment
- Long duration of treatment (Greater than 14 days)
- Concurrent use of inhaled tobramycin
- Low serum albumin/poor nutrition/ill health
- Evening doses

In this case, several of these risks are present:

- Dose of tobramycin was given at least 2 hours late, therefore reducing the time to 22 hours trough level.
- Evening dose
- 88 days since last treatment
- Patient unwell

Therefore to conclude, 1 out of 41 admissions had a higher pre-eighth dose level than pre-second dose level (2%). We suggest that only those at increased risk of AKI need the pre-eighth dose level as above.

NEONATAL FOOT LENGTH: AN ALTERNATIVE PREDICTOR OF LOW BIRTH WEIGHT BABIES IN RURAL INDIA.

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Introduction: Birth weight is an important parameter and a determinant factor regarding perinatal morbidity and mortality. However in rural area of developing countries, weighing facility may not be available for all home deliveries, where an alternative parameter like foot length may be considered in place of birth weight.

Purpose: The present study was undertaken to find out the best simple anthropometric parameter for identifying low birth weight (LBW) babies.

Materials and Methods: Study design: Hospital-based cross-sectional study.

Participants: Newborn babies born in AVBRH hospital, Sawangi (Meghe), Wardha.

Methods: All Consecutive full-term, Single ton, live born babies were included and anthropometric measurements carried out within 48 hours after birth.

Results: Out of 520 newborn babies, there were 267 male and 253 female babies. Foot length (FL) attained the highest correlation with birth weight ($r = 0.715$) while mid arm circumference (MAC) attained the lowest ($r = 0.355$). FL had the highest coefficient of determination (r^2 value= 0.511). Receiver operating curve (ROC) analysis was done to identify the optimal cut-off points of these anthropometric measures separately for LBW babies. The best discrimination of LBW, as detected by Area under curve (AUC), was obtained by FL (AUC = 0.909, 95% CI 0.0133- 0.93538) followed by length (AUC = 0.89, 95% CI 0.87642- 0.92969). Length of 49cm, head circumference (HC) of 33cm, MAC of 9.5cm, and chest circumference (CC) of 30cm and FL of 8cm were the corresponding cut-off values with the best combination of sensitivity and specificity for identifying LBW babies.

Conclusion: FL appears to be better indicators for picking up LBW babies. These parameter can be used at community level by health workers for early detection of LBW babies.

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