

MATERNAL EXPOSURE TO PARTICULATE AIR POLLUTION AND RISK OF CONGENITAL HEART DEFECTS

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Maternal exposure to ambient air pollution has increasingly been linked to congenital heart defects (CHDs). The objective of this study was to evaluate whether high levels of maternal exposure to PM_{2.5} and PM₁₀ are related to increased risk of CHDs in Wuhan, China. We used data from a large birth cohort that includes 105,988 live-born infants, stillbirths, and fetal deaths. The study included mothers living in the central districts of Wuhan during pregnancy over the two-year period from June 10, 2011 to June 9, 2013. For each study participant, we assigned 1-month and 1-week averages of PM_{2.5} and PM₁₀ exposure measurements obtained from the nearest exposure monitor to the living residence of mothers during their early pregnancy period. Logistic regression analyses were conducted to calculate the adjusted odds ratios (aORs) and 95% confidence intervals (CI) for the association between exposure to these ambient air pollutants during early pregnancy and CHDs. We observed an increased risk of CHDs overall and for ventricular septal defect (VSD) in relation to increasing PM_{2.5} exposure. Using 1 week averages, the strongest associations with VSD were observed for PM_{2.5} exposure between the 7th and 10th weeks of pregnancy, with aORs ranging from 1.11 to 1.17 (95% CI: 1.02 -1.20, 1.03 -1.22, 1.05 -1.24, 1.08 -1.26 separately) per a 10 µg/m³ change in PM_{2.5} concentration, which suggesting that this period in particular may be an important exposure window for risk of VSD in relation to PM_{2.5} exposure. Our study adds to the small body of knowledge regarding the association between in utero exposure to air pollution and CHDs, and provides a rationale for the need for stringent control of air pollution to reduce PM_{2.5} concentration.

CONSUMPTION OF ANTIBIOTICS IN THE COMMUNITY BY CHILDREN IN GREECE: A CROSS-SECTIONAL STUDY

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Background: Greece is among the European countries with the highest consumption of antibiotics in the community.

Objectives: We studied the antibiotic consumption of children in the community.

Methods: Cross-sectional study during May-June 2014.

Results: We studied 549 children (mean age: 6.4 years, range: 0.1-18 years). Of them, 247 (45%) had received 1 antibiotic course the past year (mean duration: 6.1 days). In total, 465 antibiotic courses were consumed by the children (mean number of courses the past year: 1.9), including 427 (91.8%) following examination by a pediatrician, 6 (1.3%) following phone consultation, 2 (0.4%) following suggestion by a pharmacist and 2 (0.4%) as self-medication (the antibiotic was already available at home). Prevalent reasons for consumption were acute otitis media (AOM) (27.3%), pharyngotonsillitis (25.4%), bronchitis (17.8%), other infection (6.5%), urinary tract infection (3%), pneumonia and skin infection (2.4% each). Prevalent antibiotics were amoxicillin-clavulanate for pharyngotonsillitis, urinary tract infection and skin infection (30.5%, 35.7% and 36.4%, respectively), amoxicillin for AOM and pneumonia (32.3% and 36.4%), and clarithromycin for bronchitis (27.7%). In the multivariate analysis, an age of 1-5 years and asthma were statistically significantly associated with a higher antibiotic consumption (p-values 0.001 and 0.028, respectively).

Conclusions: Antibiotic consumption of children in Greece is mainly driven by pediatricians. Good compliance of pediatricians with the international antibiotic guidelines was found in most clinical indications but pharyngotonsillitis. Continuing medical education is expected to further improve antibiotic prescription practices by pediatricians.

BACTERIA WITHOUT BORDERS: CARRIAGE OF MULTI-DRUG RESISTANT BACTERIA IN SYRIAN CHILDREN TREATED IN AN ISRAELI HOSPITAL

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Background: For five years, the most severely-wounded patients from Syria`s civil war have been secreted across the border to be treated in Israeli hospitals. Most pediatric patients arrive at Galilee Medical Center (GMC). Due to incomplete medical history in Syrian children, screening cultures for multi-drug resistant (MDR) bacteria are conducted upon arrival.

Objective: To describe the types and rates of MDR carriage and compare it to Israeli pediatric patients.

Methods: A prospective study including all Syrian pediatric patients admitted to GMC from 06/2013-07/2015. MDR Data were collected and compared to Israeli children admitted in 01-03/2014.

Results: Of 86 Syrian children, 70 were admitted with multi-trauma; 73 (85%) were tested for all MDR`s. Of these, 73% were MDR-positive: 77%, 4%, 8%, 5%, and 7% for Extended-spectrum beta-lactamase-ESBL, Vancomycin-resistant *Enterococcus*-VRE, Carbapenem-resistant *Enterobacteriaceae*-CRE, Methicillin-resistant *S.aureus*-MRSA, and MDR-*A. baumannii*, respectively. Most MDR`s were ESBL-producing *Escherichia coli*, also variably resistant to non-beta-lactams but not amikacin. More than one type of MDR was evident in 9% of the Syrian children. MDR carriage rate was significantly higher in Syrian children compared with Israeli children (6/40 [15%], p0.001, all were ESBL).

Conclusion: Alarming high rate of MDR carriage is evident among Syrian children treated in Israel. Contact isolation, until MDR carriage is ruled out, is paramount in Syrian children to prevent spread of MDR`s. In these children, meropenem and amikacin are used when infection is suspected; even this broad-spectrum combination might not be adequate in 5-8% of the children. Therefore, early MDR screening provides valuable information in sepsis.

EFFECT OF VITAMIN D THERAPY ON ASTHMA CONTROL IN CHILDREN WITH PERSISTANT ASTHMA

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Background: Asthma is a major health problem affecting 300 million people worldwide .Vitamin D has been found to be vital for good respiratory health. Low Vitamin D levels have been linked to increased airway hyper responsiveness, decreased lung function, frequent exacerbations and increased hospitalization rates. Though studies have shown that Vitamin D deficiency leads to adverse asthma outcomes there are few studies on the effects of Vitamin D supplementation on level of control in children with asthma, especially in vitamin D deficient children

Objectives: To study the effect of Vitamin D therapy on the level of Asthma control in children with persistant asthma

Methods: Forty asthmatic children of both sex, attending asthma clinic were enrolled in the study. Detailed proforma containing clinical details, treatment details, asthma control as per GINA guidelines were collected. Treatment with Vitamin D was given for those found to be deficient / insufficient as oral Vitamin D 60,000 IU / week for 8 weeks. Follow up was done with a structured phone call interview at the first week of each month and visit every 2 months. Level of asthma control achieved after treatment was assessed and compared to the control pre- therapy. Repeat S. Vitamin D was done after 6 - 10 weeks of completing therapy in those with Vitamin D deficiency

Results: Vitamin D therapy significantly improved the level of control of asthma in patients 8 weeks of therapy ($p=0.000$).Prior vitamin D therapy there were no patients in controlled group, 34 patients(85%) were in partly controlled and 6 patients(15%) in uncontrolled group. After vitamin D therapy there were 23 patients (57.5%) in controlled group, 13 patients (32.5%) in partly controlled and 4 patients (10%) in uncontrolled group.

Conclusions: Level of control improved significantly with Vitamin D therapy in patients with persistant asthma with vitamin D insufficiency/deficiency

Pediatric Gastroenterology

Vitamin D Metabolism-related Gene Polymorphisms in Crohn's Disease

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Objective: To observe single nucleotide polymorphisms(SNPs) of vitamin D metabolism-related factors, vitamin D receptor (VDR) and vitamin D binding protein (DBP), in Crohn's disease (CD).

Methods: 121 patients with CD and 381 controls were enrolled. SNP (rs731236) in VDR gene and SNPs (rs4588, rs7401 and rs2282679) in DBP gene were typed in patients with CD and controls by gene sequencing.

Results: In our case-control cohort, no significant difference was observed on CD risk for any of the four SNPs (rs731236, rs4588, rs7401 and rs2282679) in vitamin D metabolism-related genes ($P>0.05$). For the three SNPs in DBP gene, gender stratification saw no significant difference in MAF in CD patients compared with healthy controls. However, a higher MAF was found for rs731236 in male CD patient than that in male controls ($P<0.05$). No association was investigated between CD susceptibility and the haplotypes of DBP gene ($P>0.05$).

Conclusion: Our study suggests that the four SNPs (rs731236, rs4588, rs7401 and rs2282679) in vitamin D metabolism-related genes may have no correlation with susceptibility of CD in Chinese Han population. SNP (rs731236) in VDR gene may play a role in the etiology of CD among affected males. However, our findings need to be confirmed in multi-center studies.

Key Word(s): 1. vitamin D receptor; 2. vitamin D binding protein ; 3. single nucleotide polymorphisms; 4. Crohn's disease;

RELATIONSHIP BETWEEN INTESTINAL PARASITES, *HELICOBACTER PYLORI* INFECTION AND ANEMIA IN CHILDREN

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Background and aims: To investigate an association between intestinal parasites and *Helicobacter pylori* (*H. pylori*) infection with anemia in children.

Methods: In a group of 1170 children, admitted in a pediatric gastroenterology regional center in Northeast Romania, diagnosed by endoscopy with gastritis, we investigate for *H. pylori* presence intestinal parasites, hemoglobin and iron status.

Results: We found 473 children with *H. pylori* infection. In children with gastritis with *H. pylori*, we studied the association between giardiasis and iron deficiency anemia, diagnosed simultaneously in 68 children (14.37%). The statistical analysis showed a significant association in patients diagnosed with iron deficiency anemia and giardiasis ($\chi^2 = 2.28$; $df = 1$; $p0.001$). This result shows that besides the frequent parasitosis in children, the chronic infection with *H. pylori* is an important risk factor in the development and persistent anemia.

Conclusions: In an anemia resistant to the specific treatment, *H. pylori* tests should be performed, and in case of an active infection efficient eradication treatment should be applied.

Keywords: anemia, *Helicobacter pylori*, intestinal parasites, children

SKIN-TO-SKIN CONTACT (KANGAROO CARE) AS ANALGESIA FOR ACUTE PROCEDURAL PAIN IN NEONATES: A SYSTEMATIC REVIEW

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Background: Repeated painful stimuli sensitize the neonate to heightened physiological and behavioral reactivity even to routine handling. Skin-to-skin contact or Kangaroo Care (KC) has been shown to decrease pain response.

Objective: To evaluate the efficacy of KC in reducing pain among neonates undergoing painful procedures.

Methods: Medline, Cochrane Library, EMBASE, HERDIN, reference lists, and abstract proceedings were searched for randomized controlled trials or randomized crossover trials comparing KC with standard neonatal care (SC) in reducing pain among neonates undergoing painful procedure assessed using standardized pain scales or physiologic parameters for pain. All potentially relevant studies were independently assessed by two reviewers and subsequently extracted data and evaluated methodological quality of the trials. Study results were then combined and analyzed using random effects model.

Results: Eleven trials were included in this review. Our analysis showed that among preterm neonates, KC lowered Premature Infant Pain Profile (PIPP) at 1 minute post-procedure by 1.86 (95% CI: -2.91, -0.80) ($p = 0.02$); and lowered the mean heart rate (HR) by 3.85 (95% CI: -6.98, -0.03) ($p = 0.05$). Among crossover trials, KC decreased mean HR by 3.50 (95% CI: -6.98, -0.030) ($p = 0.05$) ($I^2 = 0\%$). However, mean peripheral oxygen saturations were 2.57 (95%CI 1.75, 3.39) ($p < 0.00001$) higher in the SC compared to the KC group.

Conclusion: Although the pooled results showed statistically significant difference in PIPP and mean HR, the difference shown between two interventions might be considered by some as too small to be considered clinically significant. However, the reviewers still believe that any safe intervention that reduces neonatal pain, however modest, should be considered in clinical practice.

Pediatric Infectious Diseases and Vaccinology

Clinical diagnosis and treatment of 220 cases of infant measles

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Objective: To explore the clinical features and efficacy of prevention measures of measles in infants.

Methods: Clinical data of 220 infants with measles in our hospital were analyzed retrospectively.

Results: Infants within eight months are at high risk of measles, and the incidence was highest in spring compared with all other seasons. Those children often had long febrile days and severe fever, accompanied by febrile convulsion, liver damage, or deviant in cardiac muscle enzymes for some of them. But broad-spectrum antiviral drugs were often effective.

Conclusion: The incidence of measles has low aging tendency and has more complications in recent years. Early diagnosis and treatment is important for the prognosis.

Key Word(s): 1. infant; 2. measles; 3. clinical features; 4. prevention;

CURRENT SITUATION OF TREATMENT FOR ANAPHYLAXIS IN A JAPANESE PEDIATRIC EMERGENCY CENTER

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Objectives: Anaphylaxis is a systemic allergic reaction that sometimes requires prompt treatment with intramuscular adrenaline. The aim of this study was to investigate the current situation regarding anaphylaxis treatment in a representative pediatric primary emergency facility in Japan.

Methods: We retrospectively examined the medical records dating from April 2011 through March 2014 from Kobe Children's Primary Emergency Medical Center, where general pediatricians work on a part-time basis. Clinical characteristics and current treatments for patients with anaphylaxis who presented to the facility were investigated. Furthermore, we compared the clinical characteristics between anaphylaxis patients given intramuscular adrenaline and those not given it.

Results: During the study period, 217 patients were diagnosed with anaphylaxis. The median Sampson grade at the time of visit was 2, and 90 (41%) patients were grade 4 or higher. No patients received self-intramuscular injected adrenaline prior to arrival at our emergency medical center as none of the patients had been prescribed it. Further treatment during the visit was provided to 128 (59%) patients, with only 17 (8%) receiving intramuscular adrenaline. Patients given intramuscular adrenaline had significantly lower peripheral saturation of oxygen at the visit ($p=0.025$) and more frequent transfer to a referral hospital ($p<0.001$) than those not given intramuscular adrenaline.

Conclusions: Education for Japanese pediatric practitioners and patients is warranted, as no patients used self-intramuscular injected adrenaline as a prehospital treatment for anaphylaxis, and only severely affected patients who needed oxygen therapy or hospitalization received intramuscular adrenaline in a pediatric primary emergency setting.

FALSELY TSH AND FREE THYROID HORMONE MEASUREMENTS IN PEDIATRIC PATIENTS WITH METABOLIC DISEASE TREATED WITH HIGH DOSE OF BIOTIN

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Immunoassays are subjected to a number of interferences giving abnormal results which may lead to unnecessary investigations and treatment. We present clinical cases in which biotin treatment could be involved in abnormal results of thyroid function tests obtained by immunoassays based on biotinylated antibodies.

Three infants were admitted to intensive care unit (ICU) during 2015, in Edmond and Lilly Safra Children's Hospital, because of respiratory distress and neurologic deterioration. Laboratory tests at admission revealed severe lactic acidosis. Thorough investigation led to the diagnosis of mitochondrial disease. During their hospitalization, abnormal thyroid function tests (TFT), with near normal TSH and extremely highly elevated fT4 and fT3 were measured by Beckman Dxl analyzer. Those results were discrepant from their clinical presentations; as neither had goiter, signs of thyrotoxicosis or family history of thyroid disorders

The possibility of a assay interference was primarily suggested. In order to avoid unnecessary treatment and potentially further invasive investigations, TFT were done by different assays. A normal fT3 and only moderately elevated fT4 measured by Siemens Advia Centaur as well as normal levels of total T3 and total T4, measured by Advia Centaur and Auto-delfia, respectively, supported the probability of assay interference.

All medications given to the patients were revised. TFT assay formats review indicated potential interference in Beckman Dxl fT3 and fT4 assays due to the use of biotinylated antibodies. Accordantly, excess biotin in patients' serum competes with biotinylated analog for the binding sites on streptavidin resulting in low signal and apparently high concentration of the analyte.

High dose biotin ($\geq 10\text{mg/day}$) is used therapeutically in some metabolic disorders. Furthermore, recently, many patients *take biotin as a dietary supplement*. Therefore physicians need to be aware that biotin could cause assay interference when test results discrepant from the clinical picture, to avoid misdiagnoses and unnecessary treatments.

FEEDING LACTATING WOMEN AND COMPOSITION OF BREAST MILK OF INTEREST "MEDITERRANEAN" DIET

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Background: The Mediterranean diet (RM) was likened to olive oil consumption which contains no α -linolenic acid (ALA) precursor of DHA (docosahexaenoic acid) and only brings the precursor of the line n-6 acid linoleic (LA). The latest recommendations are designed to increase intakes of polyunsaturated fatty acids (PUFA) n-3, especially DHA, which with arachidonic acid (ARA) are essential to the neurosensory development of the newborn. Objective: To evaluate the effect of RM made of olive oil and 2/ week fatty fish (mackerel 170 gr) on composition of breast milk lipids, in 80 lactating women for 15 days and for 30 days in a subgroup of 22 Patients, Materials and Methods: Prospective, nutrition intervention, multicentric study. The human milk (HM) fatty acid (mature HM : 1-3 Months Nursing, taken in the morning between 8-10 hours) was determined by transesterification direct and analyzed by GC-FID and compared by ANOVA. Dietary surveyed were analyzed by the BILNUT software.

Results: From D15 RM, the rate of ALA is significantly decreased (0.96% to 0.75% of total fatty acids (FA)); the DHA significantly increased by 66% (from 0.29 to 0.44% FA), while ARA remains stable (0.36% FA). The surveys food show that feeding our population is normal-caloric, normal proteic intake, high fat and slightly hypo-carbohydrate. Similarly, there is an low intake of water, Calcium, Iron, Magnesium, Zinc and vitamin A, D, E, Folate, B5, B6. Conclusion: This study emphasizes the importance of consuming oily fish 2/week. This is not oil olive (which does not contain ALA, DHA precursor) that increases the DHA milk, but the consumption of 2 times week of mackerel (500 mg / day of DHA)

CLINICAL ANALYSIS OF 48 CASES OF MYCOPLASMA PNEUMONIA IN CHILDREN

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Background: *Mycoplasma pneumoniae* is a common cause of community-acquired pneumonia (CAP) with marked constitutional symptoms, upper and lower respiratory tract symptoms, and a protracted course with gradual resolution. It is also known as "walking pneumonia" because its patients can sometimes continue to walk about while suffering from its symptoms. The organism responsible for mycoplasma pneumonia, *M pneumoniae*, the smallest known free-living microorganism, is a pleomorphic organism that, unlike bacteria, lacks a cell wall, and unlike viruses, does not need a host cell for replication. The prolonged paroxysmal cough seen in this disease is thought to be due to the inhibition of ciliary movement. *M pneumoniae* has a remarkable gliding motility and specialized tip organelles that allows it to burrow between cilia within the respiratory epithelium, eventually causing sloughing of the respiratory epithelial cells.

Objective: To investigate the clinical features and treatment of mycoplasma pneumonia in children, to facilitate clinical diagnosis and improve treatment. Methods: A retrospective study was performed at our hospital, and the data for 48 treated cases of mycoplasma pneumonia from August 2014 to March 2015, was analyzed. Results: There were 36 males and 16 females patients, with male to female ratio of 2: 1. Less than 1 year age reported 7 cases, accounting for 14%; 1-3 years, 19 cases, accounting for 40%; 3-7 years 18 cases, accounting for 38%; and 7 to 10 years, 4 cases, accounting for 8%; The youngest patient was 2 months and 10 days old while the maximum age of patient reported was 9 years. Conclusion: Highest prevalence of Mycoplasma pneumonia was in 1 to 7 years' age group children. Clinical manifestations were fever, cough and wheezing. Use of azithromycin, erythromycin or combination therapy, all achieved good outcome.

Table 1: Efficiency of Mycoplasma pneumoniae treatment using combination therapy compared to single drug therapy

Groups	The number of cases	Effective	Not Effective	Total	Efficiency (%)
Erythromycin treatment group	16	16	0	16	100%
Azithromycin treatment group	13	12	1	13	92.30%
Combination therapy group	19	19	0	19	100%
total	48	47	1	48	97.90%

EFFECTS OF BEHAVIOUR CHANGE AND SOCIAL TRANSFERS IN PREGNANCY UPON BIRTH WEIGHT IN NEPAL: THE LOW BIRTH WEIGHT SOUTH ASIA TRIAL

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Background: Low birth weight (LBW, 2500 g) affects many newborns in South Asia and compromises child survival, infant growth, educational performance and economic prospects.

Objective: to assess the impact on birth weight of an enhanced nutrition behaviour change strategy (BCS) for pregnant women, with or without unconditional transfers of food or cash.

Methods and design: Design: cluster randomised controlled trial. Intervention: BCS comprising participatory learning and action women's groups about nutrition in pregnancy. Twenty clusters each received: BCS; BCS plus food; BCS plus cash; and standard care (control). Women received up to 7 monthly transfers per pregnancy in food and cash arms, from 8 weeks' gestation onwards: cash is US\$7.5 and food is 10 kg of a fortified sweetened wheat-soya blend per month. Participant: pregnant women and their infants.

Primary outcome: birth weight within 72 hours of birth

Results: 2095 birth weights covering 22% of the study population were available. We analysed birth weight adjusted for maternal age, parity, socioeconomic status, literacy and child age using random effects models that account for clustering, comparing each intervention arm with the control. Only BCS plus food resulted in a statistically significant increase in birth weight of 72.5g (95% CI 10.1-134.9g) relative to control. Other differences were not significant but there was a suggestion of a gradient of increasing birth weight from control, BCS only, BCS plus cash to BCS plus food.

HUMAN TRANSCRIPTOME ARRAY IDENTIFY NOVEL SUPPRESSED EXPRESSION MARKERS FOR KAWASAKI DISEASE

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Backgrounds: Kawasaki disease (KD) is an acute systemic vasculitis most involved small to medium size vessels. Cytokines expressions have been studied in KD and reveal many cytokines including inflammatory, innate immunity and adaptive immunity. There are few study to survey the inadequate expression of cytokines in acute stage of KD. This study was conducted to study those who are suppressed in KD.

Materials and methods: A total of 18 KD patients including before IVIG treatment (KD1) and at least 3 wks after IVIG tx (KD3) and 18 controls were enrolled for survey. GeneChip® Human Transcriptome Array 2.0 was used with 6 cases pooling methods.

Results: A total of 461 genes showed significant higher in KD1 than controls (p0.05).

And there are 99 genes showed significant decrease when compared with controls in KD patients before IVIG treatment. The most significant increase after IVIG treatment in KD patients were DDX24 (5.49E-05), BCL11B (8.37E-05), RCAN3 (9.73E-05). The five genes involved in Th17, negative regulation of innate immunity, p53 pathway, calcineurin-mediated pathway, and NFAT-dependent cytokine gene expression.

Conclusions: This is the first report to the inadequate or suppressed genes expression in acute stage of KD and identify novel markers or even treatment strategy for KD.

SENSORY, CHEMICAL AND BIOLOGICAL EVALUATION OF GLUTEN FREE PRODUCTS FOR CELIAC DISEASE CHILDREN

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Background: This study was conducted to identify the nutritional and health status for celiac disease children, and to prepare gluten free products from rice and chick-pea as alternative food.

Methods: Many products had been prepared and subjected to sensory evaluation .It showed that the three products (crepe, cookies and cake) had high score in sensory evaluation. The second phase in this study was to assess the biological effect of these products on rats.

Results: The results showed that 87.5% of the children were under weight and 79.16% were anemic. The most common symptoms found between celiac disease children were diarrhea, edema, nerve disorders and vomiting. Analysis for the three products showed that; the protein content of the products varied from 8.3% to 17.4%. Crepe had higher protein, fiber and ash contents whereas cookies had higher content of fat. The minerals contents Ca, Fe, Zn, K, Mg and Na of these products ranged from 0.546 - 0.619, .0197-0.431, 3.80-5.22, 30.06-54.6.3, 20.34-40.29 and 169.44 -221.96 mg/Kg respectively. Crepe was more acceptable (9.5) .For biological experiment of the three products, it was found that; crepe showed the highest net protein utilization (77.63%). Cookies group was the highest in all blood parameters except the lymphocyte. There was no significant differences in value of alanin amino transferase enzyme (ALT) between the three products and basal diet but basal diet was the best in the value of alkaline phosphatase enzyme (ALP) and uric acid value, whereas cookies was the best in createnine value.

CONSANGUINEOUS MARRIAGES AMONG ARABS IN ISRAEL

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Background: Approximately 1.1 billion people currently live in countries where consanguineous marriages are customary, and among them one in every three marriages is between cousins. Opinions diverge between those warning of the possible health risks to offspring and others who highlight the social benefits of consanguineous marriages.

Objectives: To describe the trend in the rate of consanguineous marriages among the Israeli Arab population and to identify factors associated with this custom shift in recent years.

Methods: The study was conducted between November 2009 and January 2010 in Family Health Centers.

A questionnaire was presented to parents during routine visits to the center with their children.

Results: Information on 6,437 couples was collected. The rate of consanguineous marriages decreased from 35.8% among those married before 2000, to 28.2% among those married in 2000-2004, and to 24.0% among those married in 2005-2009 (P for trend <0.001). First cousin marriages were the most common type of consanguineous marriages in all the time periods. Consanguineous marriages were associated with consanguinity between the couples' parents (both husband and wife), a high consanguinity rate in the place of residence and younger age at marriage (wife).

Conclusions: The rates of consanguineous marriages among Israeli Arabs are decreasing but still high. Because consanguineous marriages are widely acceptable, the role of public health professionals and primary care personnel is to provide comprehensive information about the potential genetic risks of consanguinity on offspring health and to increase the accessibility of premarital and preconception counseling services.

DISTINCT FEATURES OF CHILDREN WITH A RARE DISEASE IN PREVENTIVE CHILD HEALTH CARE

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Background: Dutch Preventive child health (PCH) care is regulated under a Public Health Law. The goals of the PCH program are to monitor growth and development, to detect health and social risk factors, to perform neonatal screening and to deliver the national vaccination programme. A national digital child record has been developed which is designed to document the national standard preventive child health scheme. The file contains information about health and other relevant issues about each child between 0-18 years.

Rare diseases often present in childhood with a specific history or with specific features.

Objective: To present identified features of 10 different rare disorders on the basis of data collected in preventive child health care.

Methods: The 10 different disorders were selected on the basis of their diversity of presentations in childhood and the support of an active patient organization.

The national standard preventive child data set was evaluated upon items that could reveal a sign of one of these rare diseases. The patient organizations and their supporting professionals were asked to contribute to the process based on their experience. Features were categorized. The diseases and their features were provided with international codes.

Results: The features and codes will be presented as well as how they are applicable internationally in electronic child health records.

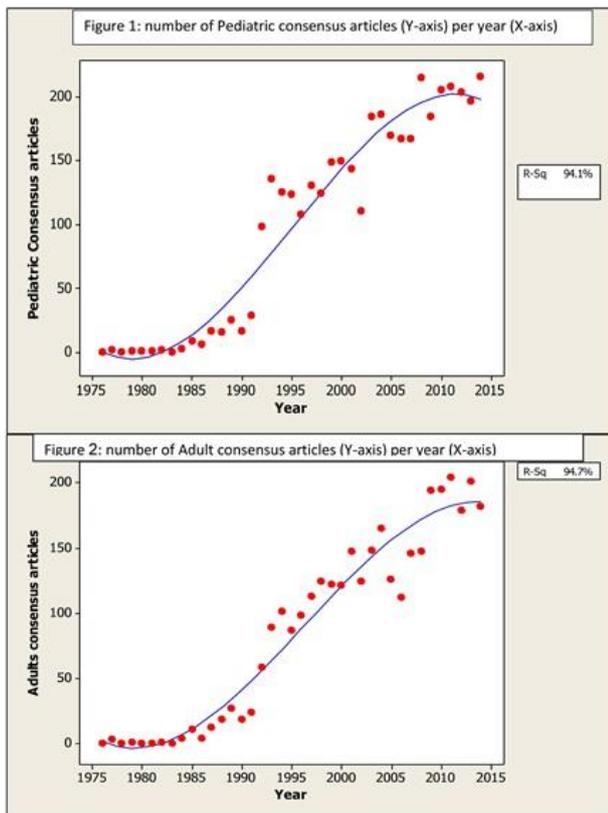
Conclusion: Our data illustrate that rare diseases present themselves with more or less specific features in preventive child health care. Our results can be implemented in global child health preventive programs.

TRENDS IN CONSENSUS ARTICLES IN THE PAST THREE DECADES

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Background: Consensus statements were recorded in the Medline since 1976

Objective: to compare the trends in the yearly number of consensus publications in the pediatric and the adult literature.

Methods: Medline search engine was used to determine the yearly number of published consensus statements from 1976 to 2014. We used the filters of "English" only, "Consensus Development conference" or "consensus development conference (NIH)", or "practice guidelines", and "age" (all ages, adults (19 years or more), child (birth to 18 years)).

Linear and polynomial regression was used to determine trends.

Results: All ages consensus statements increased in a cubic fashion ($r^2 = 97.9\%$, $P = 94.1\%$, $P = 94.7\%$, P

Conclusion: the yearly published consensus number has increased dramatically since the 1980's to nowadays, but in view of the cubic relationship, the rate of increase may have slowed down in the past few years. Most consensus statements are not age-tagged and may be more applicable to adults than to children