

770 RISK FACTORS ASSOCIATED WITH ANEMIA AND NUTRITIONAL STATUS IN INFANTS

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Background Growth assessment is an integral part of infants health. An understanding of anemia risk factors is essential to identify the groups that are more vulnerable.

The Aim of the study was to identify the risk factors for malnutrition in the vulnerable age group of 6 to 12 months and to evaluate possible related risk factors with anemia.

Methods The cross-sectional study which evaluated 206 infants aged between 6–12 months who attended the Pediatric Clinic during the years 2010–2011 for inadequate growth. Mothers were interviewed to collect informations regarding socioeconomic status and nutrition practices. Nutritional status was evaluated by anthropometric measurements using growth charts. Anemia was diagnosed if hemoglobin was ≤ 11 g/dL.

Results Mild and moderate anemia was characterised by hemoglobin levels below 11.0 and 9.5 g/dL. Rates for mild and moderate anemia were 38.6% and 11.9%. The highest anemia prevalence was found at 6 to 8 months of age. The risk factors for anemia were: urban residence ($p=0.004$), fever in the past 5–7 days ($p<0.001$) and age at 6–8 months ($p=0.024$), socioeconomic level and nutrition practices. Infants who were exclusively breastfed for 6 months showed lower prevalence of anemia compared to their mixed feeding. According to weight and length for-age, 49% of the infants were at 25th, 32% at 10th, 9.2% at 5th and there was a significant correlation between the duration of breastfeeding and nutritional status.

Conclusions Strategies to control infant anemia should include health promotion and nutritional education for families from all socioeconomic levels.

771 HIGH INCIDENCE OF IRON DEFICIENCY IN YOUNG CHILDREN WITH CYSTIC FIBROSIS

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Background Iron deficiency (ID) is common in patients with cystic fibrosis (CF). In adult CF patients ID is related to lung disease severity and thought to be caused by chronic inflammation. Increased iron levels in sputum are associated with *P. aeruginosa* infections.

Aim To establish the prevalence of ID and iron deficiency anemia (IDA) in children with CF and associations of ID with dietary iron intake, lung disease severity and *Pseudomonas aeruginosa* infection.

Methods Clinical charts of 54 children with CF aged 0 to 16 were reviewed. Follow-up varied from 1 to 14 years with 346 annual observations in total. Laboratory data (hemoglobin (Hb), serum ferritin (SF)) and results of pulmonary function tests, sputum cultures and 3-day food records were collected.

Results 46 children (85.2%) were iron deficient ($SF<30\mu\text{g/l}$) in at least one year and ID was present in 329 of 346 observations (95.1%). IDA ($SF<30\mu\text{g/l}$ and $\text{Hb}>2\text{SD}$ below the mean of similarly aged children) was present in 8 observations (2.4%) in 6 patients (11.1%). Children with ID were younger (6.4 year versus 10.6 year, $p=0.00$) and had less pulmonary exacerbations ($p=0.01$). ID was not associated with FEV1, *Pseudomonas aeruginosa* infection or dietary iron intake.

Conclusion ID is common in young children with CF and associated with less pulmonary exacerbations. We suggest that ID in these children is caused by rapid growth and accelerated erythropoies instead of disease severity or insufficient dietary iron intake.

772 SERUM HEPcidIN IN CHILDREN WITH BETA-THALASSEMIA

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Background Hepcidin, first described about 10 years ago, is a key iron - regulatory hormone. However, hepcidin measurement in a variety of human disease states are still lacking.

Aim To study serum level of hepcidin hormone in children with beta-thalassemia major (TM) and intermedia (TI).

Subjects and Methods The work was conducted on 50 children divided into 3 groups: 15 children with beta-thalassemia major, 10 children with beta-thalassemia intermedia, and 25 healthy children as a control group.

Thalassemic children included in the study were subjected to: Detailed history taking, clinical examination and measurement of serum hepcidin hormone level by (ELISA).

Results The mean serum hepcidin level was significantly higher in children with TM than in patients with TI and the controls. The ratio of serum hepcidin to serum ferritin in TI was significantly lower than those with TM. In addition, there was a significant positive relation between serum hepcidin and serum ferritin and also with serum iron.

Conclusions Hepcidin measurement may be useful as part of the diagnostic and prognostic evaluation of thalassemia as it may allow a more accurate assessment of the degree of iron overload and the maldistribution of iron.

In the future, it may be possible to use exogenous hepcidin to restore normal iron homeostasis in patients with thalassemia especially thalassemia intermedia.

773 PLATELETS ANTIBODIES AND SERUM LEPTIN IN CHILDHOOD IMMUNOTHROMBOCYTOPENIC PURPURA

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Background and Aim Platelets antigens, Anti-platelets antibodies, serum leptin measurement may be important in defining the pathogenesis of thrombocytopenic states.

Methods In this study we measured the platelets CD41, CD61, CD62P, Platelets IgG, IgM by flowcytometry and serum leptin by ELISA of 20 children diagnosed as ITP and 20 normal children as control.

Results We observed That there were no significant difference in white blood cells count, hemoglobin concentration between ITP patients and controls. Platelets count was significantly decreased, and mean platelet volume (MPV) was significantly increased in patients than controls $P=0.000$. The percentage of CD41expressing platelets was significantly lower in ITP children compared to controls ($P=0.001$) but the percentage of CD61expressing platelets was not significantly different between ITP patients and controls. Platelet activation marker CD62P was significantly expressed in patients than controls (0.000). Furthermore, the amount of CD62P per cell, represented by the MFI was significantly higher in patients than controls (0.000). The percentage of platelets associated IgM and IgG were was significantly increased in patients than controls ($P=0.000$). Also the MFI of IgM and IgG were significantly higher in patients than controls. Finally the concentration of serum leptin was increased in patients than controls ($P=0.000$) (table 2). There was a negative correlation between The platelets count and Platelets IgG ($P=0.000$ and $r=-0.88$).

Conclusion We concluded that The demonstration of antiplatelet antibodies (PAIgG, PAIgM) and decreased detection of platelet

surface antigens (CD41, CD61) in children with immune thrombocytopenic purpura (ITP) have a diagnostic and pathogenesis role.

774 ZINC DEFICIENCY IN LYMPHOMA AND LEUKEMIA

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Background With regard to antioxidant role of zinc in body, zinc deficiency may be considered as one of the carcinogenic agents. Thus the determination of zinc deficiency percent in patients who are suffered from different types of cancers is useful to determine the dose of zinc supplementation which is used to such patients. In this study we evaluated the percent of zinc deficiency in different types of leukemic and lymphoma patients in comparison with normal subjects.

Methods Case population was considered of 50 patients who suffered from different types of leukemia (ALL, AML) and lymphoma. Our control was considered of 50 normal subjects with the same range of age (10–30 year). Atomic Absorption was used in order to determine zinc concentration.

Results Zinc deficiency percent was 73.3% in ALL and 54.5% in AML leukemic patients. 42.9% of lymphoma patients were zinc deficient. However zinc deficiency was seen in 16.7% of normal subjects too. It was not significant relation between the age and zinc concentration in both lymphoma and leukemic patients ($p=0.39$ and $p=0.34$). In patients and normal groups mean zinc concentration in men was not statistically different from women ($p=0.99$, $p=0.41$).

Conclusion Results obtained in this study indicate that zinc deficiency is a serious difficult in our country. Because of 16.7% zinc deficiency in normal subjects, zinc supplementation is recommended for all normal and abnormal subjects. However the dose of zinc supplementation must be determined carefully in regard to some factors such as age, sex and different abnormalities.

775 MYOCARDIAL PERFORMANCE INDEX (TEI INDEX) IN PRETERM NEONATES WITHOUT BPD

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Background To define age-related changes in left (LV) and right (RV) ventricular function by using myocardial performance index (Tei Index) in preterm neonates.

Materials and Methods 18 newborn infants were selected from preterm neonates with the gestational age of 24–32 weeks, mean birth weight 917.5 g (min. 520, max. 1920 g). The Tei Index is a Doppler-derived myocardial performance tool which can be used to evaluate the systolic and diastolic function. The first measurement was taken as soon as possible after birth, the second one was taken on day 3 of life, the third one at the 40 th wk post-conceptional age (pca).

Results The higher Tei index was obtained in the RV (mean value - 0.39; SD +/-0.15) then the LV (mean value - 0.36; SD +/-0.10) in the first day of life. In the LV the Tei index was constant during the neonatal period and at 40 wks pca (from mean value 0.36-day 1, 0.35 day 3 and at 40 wks pca.), and we observed the conversion in the RV between the first and the third day of life and at 40 wks pca (mean value 0.39- day 1 to 0.30 -day 3 and to 0.28 at 40 wks pca).

Conclusion The higher mean value of the Tei index in the RV might be reflecting the “persistent” fetal status of this ventricle in the first day of life. Although constant value of the Tei index in the

LV reflect the degree of neonatal myocardial immaturity. Grant-MNiSW No. 407414336.

776 CHANGING OF JONS CRITERIA WITH LESS OR MORE CRITERIA?

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The more patient come in emergency department with tachcardia and one major criteria with others nonspecific laboratory data has rheumatic fever and some with 2 major criteria can not explain totally RF so its looks like the jons criteria found some variatin and nowadays cannot explain RF totally and may be some variation an mutation in streptococcus kinds that explains it

777 A COMPARISON OF DIFFERENT METHODS OF TEMPERATURE MEASUREMENT BY MOTHERS AND PHYSICIANS IN HEALTHY NEWBORNS

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Background and aim: The aim of this study was to compare the accuracy of digital axillary thermometer (DAT), rectal glass mercury thermometer (RGMT) and infrared forehead skin thermometer (IFST) measurements made by mothers and physicians in healthy newborns.

Methods The body temperature measurements of 120 healthy newborns were made on their 2nd day of life using DAT, RGMT and IFST, first by mothers followed by a designated physician. Correlation analysis was performed for the measurements obtained by mothers and the physician. The presence of a former child or children at home, the educational level of the mother and maternal age were also recorded.

Results No correlation was observed between the measurements made by mothers and the physician using RGMT ($R^2=0.096$). The temperatures measured by mothers and the physician showed a significant correlation when a DAT and IFST were used ($R^2=0.923$, $p<0.001$; $R^2=0.916$, $p<0.001$, respectively).

Conclusions Difficulty of use and interpretation make RGMTs less practical than DATs and IFST for use by mothers. Measurements with an IFST are obtained from a newborn's forehead in a shorter length of time compared to DATs, which makes it a more practical option.

778 HEMODYNAMIC SUPPLY OF THE AFFECTED OF NEPHROBLASTOMA KIDNEY

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Purpose To study of the hemodynamic supply for the affected of nephroblastoma kidney and compare it with the contralateral kidney.

Patients and methods: We analyzed the data obtained by Doppler studies of blood flow in the main renal arteries in 23 children aged 2.5(1.3–3.0) years of both sexes with a solid tumor of mostly in the upper pole one of his kidneys. Volume of the tumor in each case was less than 600 cm³. All of them had a diagnosis of monolateral nephroblastoma.