

weeks to years. The literature on recurrent ITP (rITP) is limited.

OBJECTIVE: The aim of this study was to retrospectively review patients with rITP who were followed up during the period of 1975–2004.

METHODS: We reviewed the outcome of 790 children with rITP

RESULTS: Among 790 children with ITP, 47 (5.2%) presented with >1 episode of thrombocytopenia. The median age of the children at onset of the disease was 55.9 ± 35.3 months and at final remission was 94.4 ± 58.9 months. The majority of patients (76.6%) had 1 recurrence, whereas the rest of them had >1 recurrence (up to 4); the total number of recurrences was 63. The interval between 2 episodes was <6 months in 25% of the episodes, 6 to 12 months in 29%, 12 to 24 months in 24%, 24 to 36 months in 8%, and >3 years in 14%. Almost half the patients demonstrated bleeding manifestations at diagnosis, whereas only a minority (5) showed bleeding symptoms during the first recurrence. Hemorrhages occurred at times of severe thrombocytopenia and were, in general, mild; however, 1 patient suffered intracranial hemorrhage. Of the episodes, 28.6% necessitated hospitalization and 17.5% required therapeutic intervention with corticosteroids or/and intravenous immunoglobulin. The long-term outcome of all patients was excellent, and none of them needed splenectomy.

CONCLUSIONS: rITP occurs mostly in young children, has a good outcome after >1 to 5 episodes, and a median age that ranges from months to years. The course is more often benign; however, life-threatening hemorrhage may occur in a severely thrombocytopenic patient.

SEASONAL AND GENDER DIFFERENCES IN THE PREVALENCE OF INFANT ANEMIA

Submitted by Songul Yalcin

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INTRODUCTION: Anemia is the most prevalent nutritional deficiency in the world.

OBJECTIVE: To estimate the prevalence of anemia among infants receiving routine health care in the Hacettepe University Ihsan Doğramacı Children's Hospital Well Baby Clinic in Ankara, Turkey, we conducted a cross-sectional study by using data from 469 healthy infants who had data available on their hemoglobin values at 6 months of age for the last 3 years.

METHODS: Infants with acute or chronic illness or thalassemia and infants who had taken or were taking

iron supplementation at the time were not included in the study. Information regarding the children was obtained from hospital files. Infants with a hemoglobin level of <10.5 and <9.5 g/dL were considered to be mildly and moderately anemic, respectively, at 6 months of age.

RESULTS: The mean level of hemoglobin was 10.7 g/dL (SD: 0.90). The prevalence of anemia was 41.4%. Boys had significantly lower hemoglobin and hematocrit levels and mean corpuscular volume than girls. Infants born before 37 weeks' gestational age had moderate anemia more frequently. Infants born in spring or summer had anemia more frequently than those born in fall or winter (49.2% and 26.8%, respectively; $P < .001$). Birth weight and monthly weight gain from 6 to 9 months were positively correlated with hemoglobin value at 6 months ($r = 0.14$, $P = .003$ and $r = 0.10$, $P = .041$, respectively).

CONCLUSIONS: Anemic infants aged 6 months had an increased risk of developing growth failure from 6 to 9 months. In this study, the prevalence of anemia observed was of severe public health significance and justifies the need to emphasize, in prenatal and infant health programs, intervention measures that consider season of birth for anemia control.

SHOULD THE PELVIS BE INCLUDED IN ABDOMINAL COMPUTED TOMOGRAPHY SCANS OF CHILDREN WITH UPPER-ABDOMINAL PRIMARY MALIGNANT TUMORS?

Submitted by Maria Zarifi

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INTRODUCTION: There is increasing awareness of the potential risk associated with ionizing radiation in pediatric radiology. Children with abdominal cancer undergo multiple computed tomography (CT) scans both at diagnosis and for follow-up.

OBJECTIVE: We sought to estimate the potential contribution of pelvis CT findings in the management of children with upper-abdominal tumors in correlation with the effective radiation dose.

METHODS: Three hundred forty-two children (aged 1 day to 16 years) with histologically proven upper-abdominal primary malignant tumors (children with lymphoma were not included) were examined during the last 15 years in our department. Their upper- and lower-abdominal CT scans were reviewed retrospectively for clinically significant pelvic abnormalities.

The effective radiation dose for each abdominal area was calculated.

RESULTS: Nine children (2.63%) showed CT pelvic abnormalities that did not change clinical management, and 7 (2.04%) showed findings that affected tumor staging. Thirty-nine percent of the total effective radiation dose was from pelvic CT scans.

CONCLUSIONS: Our data indicate that clinically significant pelvic CT findings are rare in children with upper-abdominal primary malignant tumors. We suggest that the pelvis should not be routinely included in abdominal CT scans unless indicated by other clinical or laboratory findings, given the high level of effective radiation dose.

MONOCYTES EXPRESSING TISSUE FACTOR AS A DIAGNOSTIC MARKER FOR NEONATAL SEPSIS

Submitted by Ilham Youssry

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INTRODUCTION: For neonatal sepsis, several clinical and laboratory parameters have been proposed for its diagnosis but with variable sensitivity and specificity. The bacterial products in sepsis, including endotoxin, induce the production of proinflammatory cytokines that evoke the expression of tissue factor (TF) on monocytes and endothelial cells.

OBJECTIVE: Our goal was to estimate the percentage of monocytes that express TF (TF%) by flow cytometry in patients with neonatal sepsis and to delineate its significance in diagnosing neonatal sepsis.

METHODS: Twenty-seven neonates with neonatal sepsis and positive blood-culture results were recruited and evaluated clinically for their risk factors. Laboratory investigations including obtaining complete blood count and C-reactive protein level and estimation of the monocytes' TF expression by flow cytometry were performed. Twenty-four normal newborns were included as controls for the laboratory data.

RESULTS: The monocytes that expressed TF% of the studied patients was significantly higher than that of the controls ($P = .0001$). The level of TF% was significantly influenced positively by premature rupture of membranes, multiplicity, white blood cell (WBC) count, staff/segment ratio, and C-reactive protein level and negatively by gestational age, body weight, and platelet count. The sensitivity and overall accuracy of the TF% were higher than those of the staff/segment ratio and the WBC count for diagnosing neonatal sepsis. The areas under the receiver operating

characteristic curve of TF%, staff/segment ratio, and WBC count were 0.84, 0.79, and 0.60, respectively.

CONCLUSIONS: The monocytes expressing TF% is a promising diagnostic and prognostic marker of infection in neonatal sepsis with high sensitivity and overall accuracy. Adding the estimation of monocytes expressing TF% to the sepsis screen may improve the diagnosis of neonatal sepsis.

Immunology

RESPONSE OF THE IMMUNE SYSTEM TO SURGICAL STRESS IN CHILDREN WITH CONGENITAL HEART DISEASES AND CONCURRENT THYMOMEGALY

Submitted by Nilufar Akhmedova

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INTRODUCTION: According to the World Health Organization, children with congenital heart diseases (CHDs) account for 1% of all newborns. High lethality, short lifetime, and unfavorable prognosis emphasize the urgency of the problem. According to the existing data in the literature, children with CHD often present with enlargement of the thymus. Prevention of complications after surgery directly depends on the condition of the immune system, the main organ in which is the thymus.

OBJECTIVE: Our aim was to study immune system condition in children with CHD and concurrent thymomegaly before and after surgery.

METHODS: Twenty-eight children (aged 1 month to 3 years) with CHD were observed. The control group was composed of 20 healthy children of the same age. Immunologic studies were carried out on all the children before and after surgery.

RESULTS: Before surgery, the children with CHD and thymomegaly presented a decrease of CD3⁺ lymphocytes by 1.2 times and CD4⁺ lymphocytes and immunoregulatory index by 1.5 times compared with the control children, with humoral immunity parameters being within normal limits. There was a characteristic increase of natural killer cell activity (CD16⁺) by 1.2 times and an insignificant increase of relative and absolute content of CD20⁺ cells. After surgery for CHD, a decrease of CD3⁺ and CD4⁺ cells and a sharp decrease of immunoregulatory index and relative content of lymphocytes was found compared with both the data before surgery ($P < .05$) and control values ($P < .01$). In the majority of children with CHD, a significant increase of CD95⁺ ($P < .05$) and CD25⁺ ($P > .05$) cells was noted compared with those before

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