During follow-up, 24 patients (35.8%) never needed a transfusion; 10 (14.9%) patients had an increased need for transfusion in infection periods; eight patients (12%) were regularly transfused, other 25 patients were transfused one or two times, not regularly. 29 (43.2%) had a splenectomy, 41% of the patients who had a splenectomy had a simultaneous cholecystectomy because of the bile sludge and gallstones identified in the ultrasound. Laboratory findings of the patients were also evaluated before splenectomy and two months after splenectomy. Hemoglobin and platelet levels increased significantly ($p<0.01$), and indirect bilirubin levels significantly decreased ($p<0.01$), but no significant difference was found in MCHC levels ($p=0.648$) Splenectomy halted transfusion dependency in 96% of patients. **Conclusion:** HS is a relatively benign form of hemolytic anemia during childhood. Despite high frequency of consangineuous marriage, familial history of HS, and neonatal hyperbilirubinemia in our cohort, most of the patients were diagnosed relatively late, around three years. This finding indicate to underrecognition of HS in primary care. One-thirds of the patients have mild disease and they can be managed conservatively. Splenectomy, in selected cases, may provide clear increase in hemoglobin levels, and decrease in transfusion need.

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OP 19

ASSESSMENT OF THE NUTRITIONAL STATUS, BONE MINERALIZATION AND ANTHROPOMETRICS OF CHILDREN WITH THALASSEMIA MAJOR

Serap Cevher Bulğurcu, Aylin Canbolat Ayhan, Hamdi Emeksiz, Fahri Ovalı

İstanbul Medeniyet University, Department Of Pediatrics

Objective: Children with thalassemia major are prone to growth failure and micronutrient deficiency. In this study, we aimed to evaluate nutritional status, anthropometrics, bone mineralization defects in regularly transfused patients. **Methodology:** We analyzed the data obtained by evaluating laboratory tests, anthropometric measures, and bone mineral density. **Results:** Twenty-nine patients (62% male, 38% female) with mean age 12.26±4.74 years, mean pre-transfusion hemoglobin 8.64± 1.01 g/dl, mean serum ferritin 1158.6±556.8 ng/ml were included. Vitamin D (72.4%), selenium (72.4%), folate (37.9%) deficiencies were the most frequent ones. In 17.2% hypocalcemia, 3.5% hypomagnesemia, in 10.3 % decreased ceruloplasmin were observed. Folate was higher between 2≤ and<6 years (p:0.028). Ceruloplasmin was higher between 6≤ and<10 years (p:0.018). Selenium was significantly higher in patients with ferritin ≥1500 (p=0.008). No significant ferritin-related differences were found in other micronutrients (p>0.05)For body mass index (BMI) 31% were under the 5th percentile, none was over the 95th percentile. For height, 24.5%, for weight 20.7% were under the 3rd, none was over 97th percentile. BMI of patients 10≤age≤18 years old was significantly higher (p=0.001). Anthropometric percentiles did not differ significantly in terms of mean serum ferritin and micronutrient levels. Hypoparathyroidism was observed in 13.8%, hypothyroidism in 3.5% of the patients. Low bone density was detected in 14.8% (2 osteopenic, 2 osteoporotic) patients. Bone mineral density did not differ significantly in terms of ferritin and micronutrient levels. **Conclusions:** Nutritional support and prevention of deficiencies are important to minimize the burden of complications, to increase the life expectancy and quality in TM patients.

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OP 20

ANEMIA AND DIETARY BEHAVIORS AMONG YOUNG ADULTS IN RIYADH, SAUDI ARABIA

Samha Alayoubi, Ghada ELGohary, Fakhr Alayoubi

King Khaled University Hospitals

Objective: The study sought to assess the prevalence and the risk factors associated with anemia among male and female young adults in (Riyadh city, Saudi Arabia): Our study population showed a higher percentage of men as compared to women participants. About half of our study sample had a lightly active lifestyle, and more than one-third of the study participants were overweight (34.7%). The average age of the respondents was 22.08 ± 1.98 years. **Methodology:** A cross-sectional study was conducted at King Saud University and Alfaisal University in September 2016 among young adults aged 18 to 28 years old. Data were collected using an interview questionnaire. Additionally, the respondents were evaluated clinically and via laboratory testing for anemia.The only factor significantly associated with anemia was gender, in that female gender showed a positive association with anemia. **Results:** The most specific risk for anemia among Saudi individuals of college and young professional ages (18–28 years old) was the female gender. The dietary lifestyle, heavy menstruation, pregnancy, and NSAID use were important risk factors; however, they were not statistically significant. **Conclusion:** Public awareness about anemia is important including regarding improving dietary behaviors and taking iron supplementation for prevention in high-risk people. Additionally, NSAIDs should be used with caution.

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IMMUNODEFICIENCIES / NEUTROPHIL DISEASES

OP 21

THE EVALUATION OF CONGENITAL NEUTROPENIA PATIENTS

Nihal Karadaş [1], Yeşer Yılmaz [2], Defne Karalar [3], Deniz Yılmaz Karapınar [1]

[1] *Ege University School of Medicine*
[2] *Katip Çelebi University School of Medicine*
[3] *Teviitöl Turkish Education Foundation Inanc Turkes Collage*

Objective: Congenital neutropenia is a rare disorder. The survival and quality of lives of these patients were improved with avoidance of infections, GCSF usage and appropriate usage of antibiotics in infections. In this study, the precautions for infections and the treatment compliance, the level of knowledge about the disease and the reasons that may affect the different behavior and compliance in our patients and caregivers were planned to be determined. **Case report:** Questionnaires prepared in order to determine how the social, cultural and economic conditions of the families of children with Congenital Neutropenia could affect their behavior and knowledge levels were filled in one-on-one video interviews with the caregivers. **Methodology:** Behaviors and attitudes of families were questioned, their level of knowledge about the disease was evaluated with a system defined over 40 points, and they were evaluated as very good (40-35), good (34-30), moderate (29-25), bad (25-20) and very bad (<19). The economic status of the families was classified by income perception. The relationship between the sociocultural economic status of the families and their knowledge and attitudes about the disease were evaluated. **Results:** 31 patients and 25 families were enrolled in the study. Genetic tests were performed to all patients and 70.1% homozygote HAX1 and 16.1% ELANE mutation was found. GCSF treatment was started to 96.8%. Consanguineous marriage was defined in 77.3% of families. When families were classified according to their level of knowledge about congenital neutropenia, 8% (n= 2) very good, 40% (n=10) good; 36% (n=9) moderate, 8% bad (n=2) and 8% very bad (n=2) knowledge were determined. **Conclusion:** Congenital neutropenia is a rare disorder. HAX 1 mutation is the most common mutation in our country. The more knowledge of patients and caregivers about the disease and general approach cause improvement in the quality of life and survival of these patients. It is necessary to prepare tests that will enable to assess the disease knowledge level and quality of life scales developed for these patients.

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OP 22

MANAGEMENT AND OUTCOMES OF NEUTROPENIA IN PREVIOUSLY HEALTHY CHILDREN

Hatice Mine Cakmak [1], Omer Kartal [2]

[1] *Eskisehir City Hospital*
[2] *Gulhane Research And Training Hospital*

Objective: Immun-component children with moderate neutropenia do not have an increased risk for severe bacterial infections. However, there is limited data for the management of benign neutropenia in children. Therefore, we aimed to determine the most common etiology and outcomes in children with neutropenia. In addition, we compare the laboratory findings of different severity levels (neutrophil levels $<0.2 \times 10^3$/mL, 0.2×10^3-0.5×10^3/mL, 0.5×10^3- 1×10^3/mL, 1×10^3- 1.5×10^3/mL). **Methodology:** This retrospective study included children with neutropenia (neutrophil $< 1.5 \times 10^3$/mL) diagnosed between December 2019-November 2020 in a tertiary hospital. The patients aged between one month-eighteen year had no history of chronic disease, immunosuppressive therapy, malignancy, or drug administration. Ministry of Health's ethics committee approved the study. We evaluated the etiologies and compared age, sex, time of follow-up, duration of neutropenia, thrombocyte, monocyte and immunglobulin levels of neutrophil levels ($<0.2 \times 10^3$/mL, 0.2×10^3-0.5×10^3/mL, 0.5×10^3- 1×10^3/mL, 1×10^3- 1.5×10^3/mL). **Results:** The most common etiology was acute neutropenia (81.5%) and infections (66%). Five (2.5%) had coronavirus disease. Chronic and autoimmune neutropenia are the most common in chronic neutropenia. Lower neutrophils are associated with prolonged neutropenia (p=0.003), higher monocyte (0.03), higher IgM levels (0.038), younger ages (p<0.001), higher IgG (p=0.002) levels. Sex, time of follow-up, thrombocyte levels, total IgE levels are similar in children with different neutrophil counts. **Conclusion:** Our study demonstrates the etiology in children with neutropenia. The most common etiology is acute neutropenia with infections. In SARS-CoV2 diseases, neutropenia is less common than other hematologic findings. However, we detected in two point five percent of all. Unknown etiologies are also seen in the acute setting. Immun neutropenia and chronic idiopathic neutropenia are the leading causes of chronic cases. IgM levels were higher than the standard ranges in the agranulocytosis group, with a mean age of 1,05 ± 0,80. Therefore, children with ages of one-two should be carefully checked and followed for immunodeficiencies.

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LEUKEMIA

OP 23

POST-TREATMENT NUTRITIONAL STATUS OF CHILDREN WITH ACUTE LYMPHOBLASTIC LEUKEMIA

Akbar Akbarov, Aylin Canbolat Ayhan, Hamdi Emeksiz, Fahri Ovalı

İstanbul Medeniyet University, Department Of Pediatrics

Objective: In this study, we aimed to investigate the nutritional status after treatment in pediatric patients who have completed treatment with the diagnosis of acute lymphoblastic leukemia. **Methodology:** We analyzed the data obtained by evaluating patients' answers to the questionnaire consisting of questions containing a Likert scale, laboratory tests, and anthropometric measures. **Results:** Forty-one patients (22 male, 19 female) aged between four and 19 years with a mean age of 11.98 ±3.74 years were included. Mean body mass index (BMI) was 66.31±33.06 percentile, mean bone age was12.16± 3.99 years. In 40 patients under the age of 19 years, one patient (2.5%) was underweight, 23 patients (57.5%) were normal, six patients (15%) were overweight, six patients were (15%) obese, four patients (10%) were extremely obese. There was no statistically significant difference between the genders in terms of BMI (p:0.828). Of the 41 patients, 73.2% stated that their eating habits changed negatively after the treatment was completed, 2.4% used nutritional supplements,