HEMATOLOGY, TRANSFUSION AND CELL THERAPY

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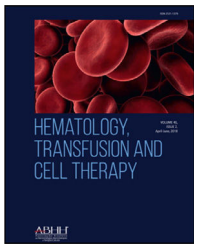

ORAL PRESENTATIONS

ADULT HEMATOLOGY ABSTRACT CATEGORIES

CHRONIC LEUKEMIAS

OP 01

THE IMPACT OF TYROSINE KINASE INHIBITORS ON FATHERHOOD IN PATIENTS WITH CHRONIC MYELOID LEUKEMIA, A SINGLE INSTITUTION EXPERIENCE

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Hamad Medical Corporation

Objective: Following the launch of the TKI's (tyrosine kinase inhibitors) for the treatment of CML, establishing its significant control over the disease, other dimensions have emerged in regard to the safety of treatment, particularly the effect on Male fertility and fatherhood. This study was conducted to review the real-life data on the effect of TKI on the fertility of male patients in the National Center of cancer care and research (NCCCR) in Qatar. **Case report:** Inclusion Criteria: Male patient diagnosed with CML, in Chronic or accelerated phase; 18 years of age or older and actively receiving tyrosine kinase inhibitors including (Imatinib, dasatinib,nilotinib) with the following: -Patients with no known issues with regards to fertility, (fertility is intact) Patients who developed fertility issues after the diagnosis of CML and starting TKI's. has been evaluated by an andrologist, and his evaluation concluded its TKI related. **Methodology:** A single-center study conducted a mixed-design study by phone interviews with CML male patients in the Chronic or accelerated phase, being followed up in NCCCR (national center for cancer care and research), evaluating the effect of Imatinib, Dasatinib, nilotinib, on their fertility whether they are taking it as first, a second, or third line of treatment. **Results:** 150 patients were interviewed to be included in the study, 22 patients had concerns related to medications safety and possible transmission of the disease, 33 patients had their families completed by the time of diagnosis. 26 patients have met the inclusion criteria, offspring's total number was 43, 97.6% were full-term, had a normal delivery, and normal average weight at delivery. No stillbirths, fetal demise, or congenital anomaly were reported. All offspring had normal development and growth. **Conclusion:** Around 98% of male CML patients taking imatinib, Dasatinib, Nilotinib had their offspring born normally with no delivery complications noted, all had no congenital anomaly had normal growth and development, and no CML-related cancers were diagnosed. Further studies with a larger sample size are required to shed light on the TKI outcome on fatherhood in CML patients.

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LYMPHOMA

OP 02

PROGNOSIS FACTORS IN AGGRESSIVE NON-HODGKIN LYMPHOMAS WITH PRIMARY INVOLVEMENT OF THE SPLEEN

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Objective: The increased morbidity and DALY rates in the working-age population, commonly late diagnosis and unfavorable socio-economic impact of non-Hodgkin lymphomas (NHL) can be considered as key issues of hemato-oncology. Clinico-hematological patterns of primary NHL of the spleen indicate the need of searching the prognosis factors in order to optimize treatment tactics. The objective of the study was distinguishing of clinical and hematological prognosis factors in aggressive NHL of the spleen. **Methodology:** This analytical, cohort study enrolled 45 patients with primary high-grade (HG) NHL of the spleen, who were treated at the

2531-1379/

Institute of Oncology from Moldova. The diagnosis was proved by cytological, histopathological and immunohistochemical examinations. The types of NHL were assessed according to the Revised 2017 WHO Classification of Tumors of Hematopoietic and Lymphoid Tissues. The patients age ranged between 15-82 years (median - 51.9 years). Stage IV NHL was revealed in 38 (84.6%) cases. **Results:** In stage IV NHL with primary involvement of the spleen, the 5-year overall survival (OS) of patients under the age of 50 was 38.5%, above 50 years - 19.8%. The bone marrow (BM) involvement reduced the 5-year OS (24.1%). The average life-span was 23.5 months in cases without leukemic conversion (LC) and 7.4 months in those with LC. When treated with splenectomy and chemotherapy, the 5-year OS attained 47.2%. The 5-year OS accounted 14.0% in stage IV patients treated only with combined therapy. **Conclusion:** The post-splenectomy correction of cytopenias persuaded an increase of the OS (54.5%) in cases with refractory cytopenic syndrome. The stage IV, BM dissemination, leukemic conversion, patients age ≥ 50 years, the unfeasibility of performing splenectomy and the resistance of cytopenias to splenectomy may be suggested as the unfavorable prognostic factors in aggressive NHL with primary involvement of the spleen, which should be taken into account in order to optimize treatment options.

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OP 03

CLINICAL CHARACTERISTICS, AND SURVIVAL RATE OF ELDERLY PATIENTS WITH NON-HODGKIN'S LYMPHOMAS WITH PRIMARY INVOLVEMENT OF PERIPHERAL LYMPH NODES

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Objective: Non-Hodgkin's lymphomas (NHL) are malignant tumors that develop from lymphoid tissue. They are one of the most common malignancies and they represent one of the most complicated problems of oncohematology. The age group that is mostly affected by NHL in the Republic of Moldova is the patients over 60 years, and the disorder in most cases starts in lymph nodes. This study aims to determine the particularities of elderly patients with NHL with primary involvement of peripheral lymph nodes(l/n). **Methodology:** A retrospective study of a group of 78 NHL patients with primary lymph node involvement was performed. The average age of study participants ranged from 60 to 84 years. **Results:** NHL more often developed primarily in the peripheral l/n (84.7%), less frequently in the mediastinal l/n (6.4%) and abdominal l/n (8.9%). Aggressive NHL predominated (59.0%), but indolent NHL also developed quite frequently (41.0%), which were more frequent in cases of primary affection to the cervical l/n (47.4%), inguinal l/n(41.7%), and abdominal l/n(42.9%). The 5-year survival of NHL patients with primary lymph node involvement aged over 60 years was low and amounted to 31.2%; **Conclusion:** NHL occurred more often in the peripheral lymph nodes (84.7%), less frequently in the mediastinum (6.4%), and abdominal lymph nodes (8.9%). The frequency of aggressive NHL was 59.0%. Indolent NHL was diagnosed in 41% of cases. The 5-year survival rate in the study group constitutes 31,2%, lower compared with younger patients treated in the same center.

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OP 04

UPSHOTS IN ANGIOIMMUNOBLASTIC T-CELL LYMPHOMA: ANALYSIS OF T-CELL BRAZIL PROJECT

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Objective: T-cell Brazil Project was designed as an ambispective data collection from January 2015 to December 2022 of previously untreated patients diagnosed with Peripheral T-cell lymphoma (PTCL) or NK/T-cell lymphoma according to the revised WHO 2017 classification in Brazil. The primary and secondary end points were 2-year overall survival (OS) and progression-free survival (PFS). Clinical, treatment and survival data were also correlated. **Methodology:** Twenty centers got approved for the study from the local and national institutional review board and registered their cases only online. OS was calculated from diagnosis date until last seen or death date, whereas PFS until first event, progression / relapse, date of death or last seen. Kaplan-Meier method was applied and a Log-rank test to compare their curves. P-value less than 5% was considered. From a total of 416 patients with PTCL, 46 (11%) were diagnosed as AITL. **Results:** The median age was 65 years (31-82), with 63% males, 94% had advanced-stage disease. All patients received 61% CHOEP, 28% CHOP and 11% CT without anthracycline. 20% of pts were consolidated with autologous transplant (HSCT). There were 19 (41%) deaths, 10 by lymphoma, 8 infections, 1 new neoplasia. With 8-mo median f/u (1-36), OS at 24-mo was 27% and 2-year PFS was 21%. As consolidation, OS was 71% HSCT group vs. 16% no HSCT (P= 0.06) and PFS was 71% vs. 8%, respectively (P= 0.01). **Conclusion:** These analyses are preliminaries but show a poor outcome of AITL in our population. Most patients were treated with anthracycline-containing combination chemotherapy and just 20% received autologous HSCT. A dismal survival was shown for those who did not receive HSCT.

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MYELOMA

OP 05

IMPACT OF BONE MARROW FIBROSIS IN MYELOMA PATIENTS UNDERGONE AUTOLOGOUS STEM CELL TRANSPLANTATION

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Objective: Autologous hematopoetic stem cell transplantation (aHSCT) after high dose chemotherapy is a standard treatment for multiple myeloma (MM) patients. The successful aHSCT depends on collection of sufficient numbers of hematopoietic progenitor stem cells and sustained engraftment following infusion. The aim of the present study is to determine the the impact of bone marrow fibrosis (BMF) on the clinical outcomes of MM patients who underwent aHSCT. **Methodology:** Retrospectively, bone marrow trephine biopsy analyzed in 73 MM patients who were treated with hematopoietic stem cell transplantation (aHSCT) following bortezomib based induction regimen. The BM biopsy samples of all patients were re-evaluated by a single pathologists The patients divided into 4 groups according to fibrosis degree and the correlations in initial characteristic features, therapeutic response, survival, mobilization and engraftment outcomes were reviewed between the groups. **Results:** Comparative analyses revealed that the median apheresis number was found statistically different according to groups (p=0.04). No significance was detected between the fibrozis grade and the number of peripheral blood CD34+ cell collection results and recovery time of neutrophils and platelets. Overall survival and progression free survival were found similar in groups, however relapse of disease was statistically different in patients with fibrosis (p=0.01). **Conclusion:** After induction treatment, a regression was observed in fibrosis grade of patients who had fibrosis at the time of diagnosis. Therefore we suggest to evaluate fibrosis status in all MM patients during each histopathological examination. Difficulties may be experienced during stem cell collection in transplant eligible MM patients with fibrosis at diagnosis. Therefore, we recommend that clinicians should be more careful in these patients during the induction treatment and stem cell mobilization.

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OP 06

INVESTIGATION OF THE QUALIFICATION OF RADIOLOGICAL TECHNIQUES TO DETECT OSTEOLYTIC LESIONS, FRACTURES, AND OSTEOPOROSIS IN MULTIPLE MYELOMA PATIENTS

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Objective: Multiple myeloma(MM) is a malignancy of clonal plasma cells. Osteolytic lesions represent a criterion for symptomatic myeloma and are associated with bone loss, pathological fractures, and osteoporosis. Skeletal surveys with other sophisticated techniques and dual-energy x-ray absorptiometry (DEXA) are used to screen lytic lesions, and bone mineral loss, respectively. Here, we aimed to investigate the detection rate of osteolytic lesions and bone mineral loss by several imaging techniques in MM. **Methodology:** Three-hundred and ten symptomatic MM patients were screened retrospectively. The results of radiological techniques were recorded. The detection rate of osteolytic lesions, fractures, and plasmacytomas by imaging techniques, as well as bone mineral loss with DEXA was recorded. Also, associations with gender, MM type, lytic lesions, and osteoporosis were investigated. **Results:** Skeletal survey

and PET-CT detected lytic lesions in 71.3% and 81.2% of patients, respectively. PET-CT had a sensitivity of 96.1% and specificity of 90.6% to detect lytic lesions. MRI was only used for patients with suspicious fractures and detected them for all patients who underwent MRI. The osteoporosis rate was 83% for 113 patients who underwent DEXA. Any association between lytic lesions and gender or MM type was not detected. **Conclusion:** Our study demonstrated that osteolytic lesions are not correlated with gender or MM type. PET-CT is a sensitive and specific method for detecting osteolytic lesions. Although DEXA is sensitive, its specificity is limited to detect osteoporosis in patients with lytic lesions.

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OP 07

ISATUXIMAB PLUS CARFILZOMIB AND DEXAMETHASONE IN PATIENTS WITH RELAPSED MULTIPLE MYELOMA AND SOFT-TISSUE PLASMACYTOMAS: IKEMA SUBGROUP ANALYSIS

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Objective: Phase 3 IKEMA study (NCT03275285) showed significant improvement in PFS with Isatuximab (Isa) + carfilzomib (K) and dexamethasone (d) vs Kd in patients (pts) with relapsed multiple myeloma (MM) (HR: 0.531; 99% CI: 0.32–0.89; P=0.0007), leading to approval of Isa-Kd in US for adults with MM with 1–3 prior lines and in EU for those with ≥1 prior therapy. This post-hoc analysis evaluated efficacy and safety of Isa-Kd vs Kd in relapsed MM pts with pre-existing soft-tissue plasmacytomas (STP). **Methodology:** Pts (N=302) were randomized (3:2) to Isa-Kd (n=179; 12 had STP) or Kd (n=123; 7 had STP). Doses: Isa: 10 mg/kg IV QW for 4 weeks, then Q2W; K 20 mg/m^2 days 1–2, then 56 mg/m^2 twice-weekly 3 of 4 weeks; d: 20 mg twice-weekly. Independent review committee assessed response based on central radiology review and central lab M-protein using International Myeloma Working Group criteria. Median (range) duration of exposure in STP pts (Isa-Kd vs Kd) was 41.9 (2–87) vs 29.9 (4–83) weeks. **Results:** In STP sub-group, PFS (95% CI) improved in Isa-Kd vs Kd: HR 0.574 (0.125–2.640); median PFS was Isa-Kd: 18.76 months (4.435–not calculable [NC]) vs Kd: NC (0.986–NC). Response rates improved in Isa-Kd vs Kd: overall (50.0% vs 28.6%), ≥VGPR (33.3% vs 14.3%), CR (25.0% vs 0%, all with MRD negativity). TEAE rates (n [%]; Isa-Kd vs Kd) were: Grade ≥3: 12 (100%) vs 4 (57.1%); Grade 5: 2 (16.7%) vs 1 (14.3%); serious: 9 (75.0%) vs 4 (57.1%); discontinuation: 0 (0%) vs 1 (14.3%). **Conclusion:** Baseline characteristics in STP subgroup were similar to overall ITT population, except ISS stages II, III, and renal function impairment, which were more prevalent in STP subgroup vs ITT. Isa-Kd vs Kd improved PFS and depth of response in pts with relapsed MM and STP, with manageable safety profile, consistent with the benefit observed in IKEMA overall population. Isa-Kd is a new treatment option for pts with relapsed MM and STP.

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PLATELET DISEASES

OP 08

OUTCOME OF SPLENECTOMY IN THE TREATMENT OF ITP – ONE CENTER EXPERIENCE

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Objective: Immune thrombocytopenia (ITP) is a disease with variable clinical presentation, requiring different treatment lines. Splenectomy is used as a second- or third-line therapy for ITP. The aim of our study was to evaluate the outcome of splenectomy in the treatment of ITP in our center. **Methodology:** The study included 245 patients aged 18 years and older, diagnosed with ITP, treated at the Department of Haematology of the Jagiellonian University Hospital in Krakow from January 2006 to January 2021. Outcomes of splenectomy were analyzed. **Results:** 14.3%of all ITP patients underwent splenectomy, including 51.5% of those who needed second-line treatment. As much as 60% of them underwent surgery immediately after first-line treatment, while the rest was fist subjected to second-line pharmacological treatment. The mean time from ITP diagnosis to splenectomy was 31.9 months. The mean value of PLT count at the day of splenectomy was 57.4 × 109/L. The initial response rate was 74.3% and post-splenectomy relapses occurred in 22.9%

of cases. **Conclusion:** In our center splenectomy was performed in more than half of the patients within the second-line treatment and resulted in permanent remission of the disease in 50% of cases. It is still a considerable method of ITP treatment, however its frequency decreases over time due to introduction and wider availability of thrombopoietin receptor agonists.

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OTHER DISEASES

OP 09

DIRECT ORAL ANTICOAGULANTS IN SICKLE CELL DISEASE, WHERE WE STAND AND WHERE WE ARE HEADING: A SYSTEMATIC REVIEW

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Objective: The evidence guiding VTE management in SCD, specifically in terms of anticoagulant choice, is scarce. Therefore, we conducted a systematic review that evaluates the effectiveness and safety of direct oral anticoagulants (DOACs) in SCD with VTE. **Methodology:** We performed a systematic review following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. We searched the English literature (PubMed, SCOPUS, and Google Scholar) for randomized controlled trials, observational studies, reviews, case series, and case reports for patients with SCD treated with DOAC for thromboembolic disease. **Results:** The current data demonstrated that the use of DOACs for VTE in SCD has similar effectiveness in the prevention of VTE recurrence in comparison to other anticoagulants, including VKAs and injectable anticoagulants with a better safety profile. However, given the absence of clinical practice guidelines for the treatment of VTE among patients with SCD, the clinical practice guidelines recommendations for VTE treatment can be applied to patients with SCD. **Conclusion:** In view of the current evidence and based on the results observed; using DOACs was associated with lesser bleeding incidence and fewer complications comparing to VKAs. We think it is rational to use DOACs for VTE treatment among patients with SCD rather than use VKAs.

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OP 10

ANTI-GLYCAN ANTIBODIES IN THE DIAGNOSIS OF GASTRIC CANCER

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Objective: Gastric cancer (GC) is traditionally considered a difficult disease to diagnose and treat. The search for new markers for GC is an extremely urgent purpose. Previously has been shown, that serum anti-glycan antibodies (AGAT) are very large reservoir of markers which can be reliably detected using an instrument called glycoarray (PGA). A ";signature"; approach, i.e. searching of combinations of diagnostically significant markers – AGAT detected by PGA, is used in this study. **Methodology:** The cohort of the serum of apparently healthy donors from the National Medical Research Center of Oncology (NMRC) (n = 55, 69%/31% - m/f) and previously untreated patients with an established diagnosis of GC I-IV stages from the NMRC (n = 146, 52%/48% - m/f) were collected. To study serum AGATs glycoarray containing 300 different glycans was used. To search for a diagnostic signature, the mathematical apparatus ";Immunoruler"; [Int. J. Bioinformatics Res. Appl., 7, 402-426 (2011)] was applied. **Results:** Using glycoarray IgG and IgM profiles of donors and GC patients were obtained and data quality control has been performed. The mathematical apparatus Immunoruler was applied to the resulting database and a signature was obtained. It includes antibodies to 11 glycans: 7 IgM (directed to KDNb6'LN-C3, b3'SLN, LN-C8, Aa4A, TF, 3'SiaLeC and Tn3Su) and 4 IgG (GN6Su, TF, para-Fs and bGU). The quality of the developed diagnostic approach was assessed: the AUC value was 0.87, and the accuracy was 0.81. **Conclusion:** Thus, the use of glycoarray technology in combination with a mathematical signature search apparatus has made it possible to find a reliable combination of molecular markers for the diagnosis of gastric cancer. Since the tumor can dramatically change as it progresses, the AGAT profile can also change. This opens up the possibility for a differentiated diagnosis of GC depending on the stage of the disease and, first of all, to develop early diagnosis of this disease.

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OP 11

THE IMPACT OF HEMATOLOGICAL PARAMETERS ON SURVIVAL FOR PATIENTS WITH COVID-19

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Objective: Coronavirus disease 2019 is an infectious disease caused by the novel severe acute respiratory syndrome

coronavirus 2 (SARS-CoV-2). Clinical and laboratory predictors may identification of patients at risk of mortality and guide treatment .To analyze laboratory abnormalities in patients with COVID-19 and define which parameters affect mortality and hospitalization **Methodology:** This retrospective study was conducted on 101 patients diagnosed with COVID-19. Demographic characteristics, laboratory parameters including complete blood count (CBC) parameters, biochemical tests, coagulation parameters, duration of hospitalization and final status (discharge or death) were recorded **Results:** Comparisons were made of survivors and non-survivors at the end of follow up period. Multivariate analysis showed mean platelet volume (MPV), platelet distribution width (PDW) and lactate dehydrogenase (LDH) to be significant predictors of mortality. The cut-off value of the hospitalization period was found to be 10 days, so patients were divided into two groups. In the multivariate models, no significant independent parameter was observed for the prediction of hospitalization duration. **Conclusion:** The results of the current study demonstrated that MPV, PDW and LDH were significant independent variables for the prediction of mortality. As SARS-CoV and SARS-CoV-2 are known to use the same receptor, there may be a similar structure and receptor for mutant variants and the first variant, so these predictive parameters can be considered to be as effective in mutant variants.

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OP 12

AN UNUSUAL SURVIVING HISTORY: MULTISYSTEM INVOLVEMENT UNTIL ADULT LIFE WITH NIEMANN PICK TYPE B

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Objective: Niemann-Pick disease (NPD) occurs with the storage of lipids including sphingomyelin and cholesterol due to acid sphyngomyelinase deficiency. Based on genetic cause and clinical picture NPD are divided in four main types. The type B is called as non-neuronopathic variant in which many patients may survive several decades. Infiltration by lipid-laden foam cells of tissues contribute to life-threatening complications. We here present a case who has been diagnosed as having NPD in the adulthood. **Case report:** A 46-year-old male patient with peripheral edema and dyspnea and abdominal distention was investigated. He has a medical history of aortic and tricuspid valve regurgitation with severe pulmonary hypertansion, decreased ejection fraction as 35% and acsending aort aneurism on 30 years old. He experienced three years later ascending aortic replacement and aortic valve replacement. He developed dyspnea, bleeding gums, and alveolar hemorrhage was diagnosed on 40s. **Methodology:** Pancytopenia associated massive splenomegaly and hepatomegaly contibute reassessment of the disease. Bone marrow revealed moderate hypercellularity T lymphocytosis, focal mild dysplasic changes, and mild reticulin fiber increase. No cytogenetic abnormality and PNH clone was detected. He had developed congestive heart failure and massive proteinuria. Also he had medically controlled hyperlipidemia and interstitial lung disease. **Results:** A storage disease investigation was started. Plasma Chitotriosidase was found to be increased and leukocyte sphingomyelinase activity was decreased. A genetic screening for NPD revealed homozygote (SMPD1 p.V36A (c.107T> C) (rs1050228) and heterozygote G508R (c.1522G> A) (rs1050239).NPD type was diagnosed with probable kidney involevement and cardiac cirrhosis. Supportive treatment was decided. He succumbed in a short time on sepsis atack unfortunetaly. **Conclusion:** NPD type B is a rare storage disease. It is a multisystemic disease characterized by its clinical variability and could be overlooked until adulthood life with various differential diagnosis option. It should be considered.

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OP 13

LEWIS C IN BREAST CANCER PROGRESSION

Нина Гадецкая

ФГБУЗ МСЧ 174 ФМБА

Case report: Lewis C in breast cancer progressionN.A.Gadetskaya1, N.N.Tupitsyn2, N.V.Bovin3, Udalova Ya.A.11At the moment of receiving these data - FSBU “Blokhin national cancer research center” of the Russian Ministry of Health, Moscow, Russia2FSBU “Blokhin national cancer research center” of the Russian Ministry of Health, Moscow, Russia3Yu.A. Ovchinnicov and M.M.Shemiakin Institute of Bio-organic chemistry of Russian Academy of Sciences, Moscow, RussiaExact evidences on the role of natural IgM antibodies in antitumor immune surveillance were proved by German team of scientists (Vollmers H.P. et al.) Binding of those antibodies to tumor cells leads in many cases to malignant cell death via lipoapoptosis. In 1994, P.D. Rye & R.A. Walker produced monoclonal IgM antibody LU-BCRU-G7 against breast cancer-associated glycoprotein. In early breast cancer, expression of this marker was seen in a group of patients with poor prognosis. Antibody recognized disaccharide Galβ1- 3GlcNAc or LewisC (LeC), blood group H1-antigen precursor. We have studied glycan expression on tumor cells and antiglycan antibodies in more than 240 breast cancer patients. Immunohistochemical study in 89 cases of early breast cancer (pT1- 2 N0 M0) revealed antigen expression in 57% of cases. Expression of LeC was significantly more frequent in tumors of larger sizes (> 3 cm): 85,0% vs 48,5% (p=0,004). Expression of LeC was much more frequent in breast cancers in which lung metastases were noticed in patient’s follow up (more than 1 year) after operation (p=0,047). In LeC positive cases shorter ($p < 0,1$) DFS (disease-free survival) was noted, differences in DFS being near significant ($p = 0,05$) in malignancy grade 3 and in moderate or prominent lymphoid infiltration (p=0,02), as well as long (> 4 years) patient’s follow up. That data confirmed the note of Rye and Walker on poor prognosis of early LeC-positive breast cancer. In 67% of breast cancer patients small

proportion of peripheral blood B-lymphocytes (up to 0,9% of B-cells) specifically bound LeC, i.e. expressed B-cell receptor for LeC. Up to 50% of these B-cells expressed CD5, so belonged to B1-natural immunity branch. Serum levels of antibodies to LeC were significantly higher in healthy woman then in breast cancer patients. Opposite relations between anti- LeC and serum levels of CA 15.3 were noticed. Membrane expression of LeC on breast cancer cells was confirmed by flow cytometry. In 36% cases patient's tumor cells were LeC -positive with low concentrations or absence of anti- LeC in sera. The last group of patients seem to be perspective in study of anti- LeC adoptive therapy approach. In conclusion. Lewis C blood group antigen expression takes place in 57% of early breast cancer, associated with poorer prognosis. Levels of anti- LeC in breast cancer patients are lower than in healthy woman, in 36% of LeC-positive cases being almost no detectable. Taking in mind important role of natural IgM antiglycan's in cancer surveillance, it seems perspective to study in this well characterized group of breast cancer patients some anti-LeC adoptive therapy to see if compensation of anti- LeC immune deficiency can be beneficial for patients.

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OP 14

B1-CELLS OF INNATE IMMUNITY IN THE BONE MARROW IN BREAST CANCER PATIENTS: IDENTIFICATION AND THEIR RELATIONSHIP WITH CLINICAL AND MORPHOLOGICAL PARAMETERS

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Objective: In recent years more attention has been paid to the study of the innate immune system, which includes B1-lymphocytes. They produce pentameric M antibodies, which play an important role in the induction of apoptosis in tumor cells. The study of lymphocyte populations can help to reveal the phenomenon of persistence of disseminated tumor cells in the bone marrow (BM) of breast cancer (BC) patients. **Methodology:** This study included BM punctuates from 64 BC patients and 10 women with benign processes. The study was carried out by two methods: morphological and immunological. Calculation of the myelogram under light microscopy was performed by two expert morphologists. Multiparameter flow cytometry (FACSCanto II cytometer) has been used to assess the populations of BM lymphocytes. Antibodies CD20, CD5, CD19, CD38, CD22, CD45 were used. **Results:** The content of B1 (CD5+) cells is higher in luminal B-Her2 "+" BC, than with B-Her2 "-": 10.2% (n=10) versus 4.0% (n=20), p=0.032. The highest levels of B1-cells were observed in stage IIA (12.4±10.7%), also with 2 affected lymph nodes and their maximum size: 16.0±10.2% (n=5) and 5.8±1.6% (n=29), p=0.07. The content of B1-cells correlated with eosinophilic myelocytes (R=0.365; p=0.011; n=48), plasma cells (R=0.409; p=0.004; n=48) in BC. **Conclusion:** The determination of the level of B1-lymphocytes in the BM can serve as an additional marker of the molecular subtype of BC. It is described that an increase in the content of plasma cells takes place with DTC in the bone marrow. Based on this it can be assumed an increase in the level of B1-lymphocytes is associated with a high probability of metastases in the BM.

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PEDIATRIC HEMATOLOGY ABSTRACT CATEGORIES

COAGULATION AND FIBRINOLYSIS DISORDERS

OP 15

COMPARISON OF INDIVIDUAL PHARMACOKINETIC DOSING TOOLS IN PATIENTS WITH HEMOPHILIA A

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Objective: Prophylaxis treatment is recommended for the prevention of bleeding and complications in patients with hemophilia A. Personalized treatment methods are an up-to-date approach. Hemophilia treatment is suitable for optimization with pharmacokinetic (PK) methods. It has been shown that prophylaxis regulated with PK data reduces the frequency of bleeding and the cost of treatment. To determine the best prophylaxis regimen, PK dose tools using the Bayesian method have been developed. **Methodology:** Blood samples were obtained from 42 patients with severe hemophilia A (median age 13.4 years) with factor VIII (FVIII) inhibitor <0.6 BU/ml and no additional disease that would affect the FVIII level before the FVIII infusion, 4, 24 and 48 hours after the infusion. FVIII levels from blood samples were measured by PTT-based one-stage assay method. PK parameters obtained using WAPPS and myPKFIT programs, which are two web-accessed PK dosing tools using the Bayesian algorithm, were compared. **Results:** There was no significant difference between the daily dose of FVIII given in prophylaxis and the dose amount recommended by the myPKFIT program for the 1% trough, but a difference was found with the WAPPS program. While there was no significant difference between the half-lives (t1/2) and the time to 5% of plasma FVIII between the two PK tools, there were significant differences in the recommended dose amounts, clearance (CL), times up to 1% and 2% of plasma FVIII. **Conclusion:** As a result of cross-pair comparison between the treatment doses received by the patients and the doses recommended by the PK dosing tools, significant differences were found as well as similarities.

Besides similar results, significant differences were also found among the PK parameters. Previous studies didn't compare CLs between myPKFIT and WAPPS, this is the first in our study. While no difference was found between t1/2's, the difference between recommended doses may be due to CL difference.

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PLATELET DISORDERS / THROMBOSIS AND ANTITHROMBOTIC THERAPY

OP 16

IMMUNE THROMBOCYTOPENIA PURPURA FLARE POST SARS-COV-2 VACCINATION

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Case report: The main strategy to control the SARS-CoV-2 pandemic is through global vaccination. One of the rare side effects of vaccination is Immune Thrombocytopenic Purpura (ITP). We present a 31 years old lady with a history of ITP, came on her 8th week of pregnancy with fever and dry cough after receiving the first dose of Pfizer vaccine. The ITP flare worsened after the second dose of the vaccine. Patients with ITP should have their second dose of vaccine delayed if they had flare particularly if pregnant.

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OP 17

THE OUTCOME OF IMMUNE THROMBOCYTOPENIC PURPURA IN CHILDHOOD AND THE RISK FACTORS FOR CHRONICITY

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Objective: Immune thrombocytopenic purpura (ITP) is the most common cause of pediatric thrombocytopenia. It is usually a self-limiting disease; however, 20-30% of cases become chronic. In this study, we aimed to investigate pediatric ITP cases' outcomes and whether there are any factors affecting chronicity. **Methodology:** We analyzed retrospectively our 184 newly diagnosed pediatric ITP cases. Thrombocytopenia was defined as chronic ITP if it persists after 12 months. We evaluated the role of clinical and laboratory findings of patients and treatment modalities in the chronicity of ITP. **Results:** The mean age of patients was 5.4 ± 4.75 years at diagnosis. As first-line treatment, 87 (47.3%) of patients were given Intravenous Immune Globulin, 65 (35.3%) of patients were given methylprednisolone, and 32 (17.4%) of patients were followed without any medication. Chronic ITP developed in 39 patients (21.1%). Chronic ITP development rate was 20.19% in boys and 22.5% in girls (p=0.7). While the chronicity rate was 7.02% in children younger than two years old and 17.81% in children between 2 and 6 years, it was 42.59% in children older than six years old (p<0.0001). Mean hemoglobin and absolute lymphocyte count were significantly lower in chronic ITP patients in the 2-6 years age group. (p=0.014 and p=0.048, respectively). The first-line treatment choice had no important effect on chronicity (p=0.61). **Conclusion:** Our results suggest that the most critical factor in developing chronic ITP was the age at diagnosis. Low lymphocyte counts at diagnosis may be associated with a high chronicity ratio.

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RED BLOOD CELL DISORDERS

OP 18

CLINICAL AND LABORATORY EVALUATION OF OUR PATIENTS WITH HEREDITARY SPHEROCYTOSIS

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Objective: Hereditary spherocytosis (HS) is a non-immune hemolytic anemia occurring with anemia, jaundice, splenomegaly symptoms in which the cell membrane of the erythrocytes is transformed into the shape of spherocytes due to congenital membrane protein defects. In this study, the demographic characteristics, clinical and laboratory findings, as well as complications during the follow up of our patients with HS are presented. **Methodology:** All patients who were diagnosed with hereditary spherocytosis and followed in our pediatric hematology clinic between 2000 and 2021 years were included in the study. Gender, age consanguinity of the parents, family history of HS and splenectomy, the neonatal phototherapy history were retrospectively recorded from patients' files. The complaints, physical examination findings, and laboratory findings at the first admission were evaluated. Duration of follow-up, transfusion frequency,splenectomy requirement, and response to splenectomy were also recorded. **Results:** Sixty-seven patients (41 male, 27 female) were religible for the study. The median age of diagnosis was 3 years (range 18 day-15 years). Consanguineous marriage rate was 29.9% whereas 62.7% of the patients had a family history of HS. Neonatal hyperbilirubinemia was present in 67.1% of the patients. The median follow-up period was 8.5 years.The complaints at admission were jaundice (64.2 %), fatigue (26.9 %) and fainting (7.5 %). Physical examination revealed hepatomegaly and splenomegaly in 65.6% and 77.6% of the patients, respectively. Hemoglobin mean values at the time of the admission was 8.3± 2.1 g/dl, ranging between 5.1-15.3 g/dl. The mean MCV value was 83.1±9.7fl, mean value of MCH was 28.8±2.9 pg, mean MCHC value was 34.9±1.6 g/l, mean indirect bilirubin was 3.5 ± 4 mg/dl. There were various degrees of spherocytosis observed in peripheral smear examinations in all patients. Incubated osmotic fragility test confirmed the diagnosis in all cases.

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

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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

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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

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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

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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

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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,

4.9% used herbal medicine. 17.1% of the patients consumed two meals/day a day, 70.7% three meals/day, 7.3% meals/day, 4.9% 4≤ meals/day; 34.1% were fed mostly with carbohydrates, 7.3% mostly with protein, 17.1% with mostly fat-containing food, 4.9% with mostly processed food and 36.6% were fed with a balanced diet. In their daily diets, 51.2% of the patients consumed processed food, and 48.8% did not consume any processed food. Of the patients, 80.5% were not involved in any kind of sports activity. 14.6% of patients stated that they spend > 5 hours/day, 12.2% 3-5 hours/day, 70.7% 1-3 hours/day, and 2.4% < one hour/day in front of a screen. In 73.2% of patients' vitamin D level was <12 ng/mL and in 26.8% between 12 and 20, ng/mL. In 19.5% vitamin B12 level was < 200 pg/mL. Selenium deficiency was detected in 12.2%, zinc deficiency in 29.3%, vitamin C deficiency in 12.2%. **Conclusion:** Nutritional disturbances are not uncommon in survivors of pediatric acute lymphoblastic leukemia. It is important to closely monitor and raise awareness of these children in terms of unbalanced nutrition, inactivity, and the development of a tendency to gain weight.

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OP 24

ACUTE MEGACARYOBLASTIC LEUKEMIA IN CHILDREN: DIAGNOSTICS AND MRD MONITORING

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Objective: Acute megakaryoblastic leukemia (AMKL) is a rare subtype of acute myeloid leukemia (AML) associated with poor prognosis for all patients except children with t(1;22) or Down syndrome. The frequency of complete remission in case of AMKL is comparable to the frequency of it in other variants of AML but the median survival is much lower. This determines the necessity of more thorough evaluation of treatment effect using flow cytometry accessment of minimal residual disease (MRD). **Methodology:** The clinical and immunological profile of 8 girls and 9 boys with de novo AMKL between the ages of 3 months–11 years old was analyzed. The primary leucocytosis median was 10,25; only one patient had hyperleukocytosis (53*x*109/l) at presentation. The measurement of MRD was performed in 6 patients using multiparameter flow cytometry. The measurement of MRD performed after induction therapy on the basis of megakaryocytic markers, weak CD45 expression using the initial iimmunophenotype patterns. **Results:** Adequate measurement of the level of MRD had required extensive diagnostic immunophenotyping in order to determine the aberration of megakaryoblasts. CD9(83,3%), CD33(75%), CD34(60%), CD13(50%) apart from megakaryocyte markers (100%) were most common for blast cells in case of AMKL. The expression of CD7 antigen was as frequent as of CD117-40%. The MRD level ranged from completely negative (0%; 0.006%) to evident (1.05%). **Conclusion:** The detection of residual tumor megakaryoblasts in AML M7 using flow cytometry is a promising method for assessing the effect of therapy. Adequate measurement of MRD requires detailed immunophenotyping in the diagnosis to determine the aberrations of megacaryoblasts immunophenotype.

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OP 25

JUVENILE MYELOMONOCYTIC LEUKEMIA SINGLE CENTER EXPERIENCE

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Objective: In the 5-year follow-up of patients diagnosed with Juvenile Myelomonocytic Leukemia (JMML) in a single center; reveal treatment and survival analyzes **Methodology:** In this study, clinical and laboratory data of 12 JMML patients followed in Ankara Pediatric Hematology Hospital and Ankara City Hospital Pediatric Hematology Clinics between 2015-2020 were analyzed retrospectively. **Results:** The median age at diagnosis was 1.7 years (0.23-5.7). Monosomy 7, 4 PTPN11, 2 NRAS, 4 KRAS, 1 CBL mutations were detected in 2 of the patients. Hematopoietic stem cell transplantation was performed in 8 of the patients. Before transplantation, 7 patients had received a median of 4 cycles of azacitidine treatment. The mean time from diagnosis to transplantation was 15 months (1-29 months). The 5-year overall survival at median 15-month follow-up was 50%. **Conclusion:** With hypomethylating agents and HSCT, survival in JMML improves compared to historical control groups. However, further multicenter prospective studies are needed to prevent long-term mortality and morbidity.

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OP 26

MYSTERY OF iAMP

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Objective: Intrachromosomal amplification of chromosome 21 (iAMP21) is defined as the presence of three or more RUNX1 signals on a single chromosome, or a total of five or more RUNX1 signals per cell. It occurs in 2% of pediatric B-cell

acute lymphoblastic leukemia (ALL), but is associated with older age, low white blood cell count, and high risk of relapse. In our study, it was aimed to review our patients with ALL in terms of possible iAMP21 at the time of diagnosis and to evaluate the clinical features. **Methodology:** The results of the patients who were diagnosed with B-cell ALL between 2012 and 2019 and whose treatment was completed, and whose signal increase in the RUNX1 region in the t(12;21) FISH analysis were detected, were reviewed together with the medical genetics section in terms of possible i amp. Those with 5 or more signal increases on a single gene in RUNX1 were considered as i amp. **Results:** In the t(12;21) FISH analysis, signal increases were observed in the RUNX 1 region in 15 (8.3%) of 180 B-cell ALL patients included in the study. Although these signal increases varied between 3-4 in 14 patients, 4-7 signal increases were detected in only 1 patient and were considered as iamp. The patient with iamp was a 6-year-old patient with a white blood cell count of 7600/mm3 at presentation and followed in the intermediate risk group. . Bone marrow relapse developed in 2 years. **Conclusion:** The presence of iAMP21 is associated with a delay in treatment response and increased recurrence in the late period. Patients should be carefully evaluated for iAMP21.

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MYELODYSPLASTIC SYNDROMES

OP 27

DIAGNOSTIC APPLICATION AND CLINICAL SIGNIFICANCE OF FCM WELLS SCORING SYSTEM IN MYELODYSPLASTIC SYNDROMES

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Objective: Myelodysplastic syndromes (MDS) are group of clonal diseases of the hematopoietic system characterized by ineffective hematopoiesis, dysmyelopoiesis, a high frequency karyotype abnormalities and the risk of transformation into acute leukemias. Cytopenic and dysplastic changes are not pathognomonic for MDS, and there are many diseases that can imitate MDS. According to various sources, clonal karyotypic abnormalities are present only in 20-60% of MDS. The diagnosis of MDS is not difficult if blasts or sideroblasts are present in the bone marrow, or there are chromosomal aberrations as evidence of clonal hematopoiesis. The diagnostic problem arises in cases of MDS without sideroblasts, with normal karyotype and/or bone marrow hypoplasia. Since 2012, the ELNet Working Group has proposed and subsequently supplemented guidelines for Flow Cytometry as a complementary diagnostic tool. The aim of the study was to compare the results of the FCM Wells score MDS with the results of the İPSS-R score MDS **Methodology:** The study included 30 patients initially diagnosed with MDS . The classification was carried out according to the WHO Classification of MDS 2016: MDS SLD-6 (20%), MDS-MLD-5 (16.7%), MDS RS-MLD-2 (6.7%), MDS-EB1-9 (30%), MDS EB2-8(27%). According to the IPPS-R, patients were scored based on blasts, cytogenetic examination, hemoglobin/platelet/absolute neutrophil count and scored as very-low, low, intermediate, high, very-high. **Results:** Using the Wells evaluation criteria, which takes into account cytometric analysis of the cells of the main myelopoiesis lines, changes were found in the compartment of granulocytes in 93%, monocytes in 40% and erythrocytes in 73% of cases. High scores on the Wells scale (> 4) were obtained in 89% of (8/9) MDS-EB1, 100%(8/8) MDS-EB2, 80% (4/5) MDS MLD patients, 17% (1/6) MDS −SLD, 50%(1/2) MDS RS-MLD. According to IPPS-R, MDS patients received a score <1.5 very low risk group include 50%(3/6) MDS −SLD, 20%(1/5) MDS-MLD, score > 1.5-3 - Low risk group include MDS −SLD 50%(3/ 6), MDS-MLD-80% (4/5), MDS RS-MLD 50% (1/2), MDS-EB1-78%(7/ 9), score > 3- 4.5-intermediate risk qroup got MDS-EB1 22%(2/ 9), MDS EB2-25% (2/8), MDS RS-MLD- 50%(1/2), Score > 4.5 respectively high risk group got patients MDS −SLD- 17%(1/6), MDS EB2-50%(4/8), Score > 6 very high risk group got MDS EB2- 25%(2/8). The Pearson's correlation coefficient (PCC) showed high correlation between İPSS-R and FCM Wells score was 0.83, p<0.002. **Conclusion:** In our study, the FCM score had a positive correlation with the IPSS-R prediction. Expanded analysis of the main compartments of the bone marrow (early precursors of myelopoiesis, the population of granulocytes and monocytes, erythrocytes) using the Wells scale as an additional tool improves the diagnosis and distinguish low-grade MDS from non-clonal cytopenias.

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HEMOGLOBINOPATHIES (SICKLE CELL DISEASE, THALASSEMIA ETC. . .)

OP 28

THE FREQUENCY OF HLA-A, B AND DRB1 ALLELES IN PATIENTS WITH BETA THALASSEMIA

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Objective: HLA class I and II alleles are shown to be associated with certain diseases. A restricted numbers of alleles were found to be related to alloimmunisation in thalassemia population. The role of human leucocyte antigens in thalassemia is trend topic. In this study, the aim was to evaluate the differences in HLA frequencies of beta thalassemia patients comparing with healthy controls. **Methodology:** The data were collected of 100 patients who were diagnosed with beta thalassemia and 100 healthy controls were included in the study. The low resolution HLA-A, -B, -DRB1, tissue group data were performed Istanbul University, Faculty of Medicine, Medical Biology Department HLA typing laboratory. All data were

analyzed retrospectively and their HLA allele frequencies were analyzed by SPSS (v22) program. **Results:** We found an increased frequency of HLA-B*14 (8% versus 2%) and HLA-B*52 (17% versus 2%) compared to the control group (p=0.05, OR=4.26; p<0.01, OR=10.03). On the other hand, HLA-B*13 frequency was decreased in thalassemia patients (5% versus 13%, p=0.04, OR=0.35). Other HLA-A, -B and -DRB1 allele frequency was similar with healthy controls. **Conclusion:** Our results showed that HLA-B*14 and -B*52 allele were associated with beta thalassemia in Turkish population. Several studies found that HLA-DRB1*15 and DRB1*11 were associated with alloimmunisation in thalassemia. Other some studies showed DRB1*07 and chronic infection relation in patients with thalassemia. We found HLA-B certain alleles difference in thalassemia patients which may yield a challenge in finding the matched donor in our population.

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OP 29

AVASCULAR NECROSIS OF HIP JOINT IN ADOLESCENT AND YOUNG ADULT SICKLE CELL PATIENTS WITH CLINICAL AND RADIOLOGICAL ASPECTS

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Objective: Sickle cell anemia is inherited as autosomal fashion and seen mostly as a result of consanguineous marriages in endemic regions. In the clinical perspective the concept of anemia is dominated by symptoms and complications other than anemia. Here, hip joint avascular necrosis, which is one of the most important chronic complications seen in sickle cell patients in terms of morbidity, will be discussed with radiological and demographic clinical associations. **Case report:** Forty-three sickle cell anemia patients were included in our study, including the young adult age group of 12 years and after, which is the age of onset of adolescence. In this patient group, different degrees of avascular necrosis of the femoral head were detected in 22 patients, and they were classified by different grading methods and compared with the main demographic data. **Methodology:** 22 patients had either unilateral or bilateral avascular necrosis and 21 of 43 patients did not have avascular necrosis. While 17 patients had avascular necrosis on the left, 15 patients had avascular necrosis on the right. Avascular Necrosis of the bilateral hip joint was detected in 10 patients. In the evaluation performed in the patient group, bone infarction in the femur was evaluated in the presence or absence of avascular necrosis and bone infarction was found. The number of bone infarcts accompanying patients with avascular necrosis was 18. Approximately 90 percent of them were receiving hydroxyurea treatment and they were not under chronic transfusion therapy. **Results:** The incidence of bone infarction was significantly higher in patients with positive HIP AVN (p <0.001; p <0.05). It was found that patients with positive bone infarction had lower MCV values (p = 0.036, p <0.05). No statistically significant difference was found between the hip avn (+) patient group and the hip avn (-) patient group in terms of mean age, Hb mean, bk mean, plt mean, Hb S mean, Hb F mean and blood transfusion. The same values ((mean age, presence of bone infarction, hydria doses (1,2 and 3 separately for users), hb mean, bk mean, plt mean, mcv mean, hbs mean, hbf mean and blood draw)) R Ficat and Arlet stages (stage 0,1,2,3,4), R Steinberg stages (stage 0, 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C), R Mitchell stages (A, B, C , D, C + D) and L Ficat and Arlet stages (stage 0,1,2,3,4), L Steinberg stages (stage 0, 1A, 1B, 1C, 2A, 2B, 2C, 3A, 3B, 3C), L Mitchell stages (A, B, C, D, C + D). **Conclusion:** During the evaluation, attention should be paid to the points that may be avascular necrosis especially in patients presenting with hip pain, it is also very important not to ignore necroses in surrounding bone tissues even if detect avascular necrosis at the femoral head or not present. In our study, we found that there was a statistically positive relationship between the presence of infarction in the surrounding bone tissues and AVN. Infarcts in the surrounding bone tissues can be both stimulating for AVN at the time of examination and also for future AVN.

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TRANSFUSION MEDICINE / APHERESIS / CELL PROCESSING

OP 30

EVALUATION OF THE RELATIONSHIP OF ABO BLOOD GROUPS WITH MIS-C

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Ahmet Vedat KAVURT, Elif ÇELİKEL,
Emel UYAR, Emine AZAK, Oktay PERK,
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Objective: In the second half of April 2020, a new syndrome associated with SARS-CoV-2 infection,"multisystem inflammatory syndrome in children" (MIS-C), was defined by the World Health Organization.However, the risk factors that predispose some children to develop this inflammatory response are poorly understood .Determining the clinical risk factors of MIS-C is important in preventing undesirable complications such as death in children. **Methodology:** In this study, we aimed to investigate the effect of ABO blood groups, hematological parameters (white blood cell, absolute neutrophil, absolute lymphocyte, platelet count, prothrombin time, activated partial thromboplastin time), cardiac parameters (troponin, brain natriuretic factor, electrocardiography) of patients diagnosed with MIS-C in Ankara City Hospital during the pandemic shortening fraction, ejection fraction), infectious parameters (c-reactive protein, interleukin-6, sedimentation) were analyzed retrospectively. **Results:** Of our 89 cases, 49 (55.1%) were group A, 3 (3.4%) were group AB (3.4%), and 11 (12.4%) were group B. 60 of our patients presented with cardiac involvement, 14 with acute abdomen, 1 with seizure, and 1 with acute kidney injury. In clinically severe cases, MPV

was higher and platelet count was lower. O blood group were diagnosed with MISC at a later age. Patients with A blood group have a statistically significantly less serious course compared to other blood groups. **Conclusion:** In our study, we found that individuals with A blood group had MISC more frequently than other blood groups, and MISC was less severe in these patients compared to other blood groups.

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OP 31

EVALUATION OF APPROPRIATE USE OF PEDIATRIC FRESH FROZEN PLASMA IN A TERTIARY CARE HOSPITAL

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Objective: Fresh frozen plasma (FFP) is the primary source of coagulation factors. Indications of FFP use are very limited such as disseminated intravascular coagulation, massive bleeding, thrombotic thrombocytopenic purpura, biopsy for chronic liver disease, and reversing warfarin anticoagulation with severe bleeding. In clinical practice, FFPs are reported to be used inappropriately either in respect of the particular indication or excessive in adult studies. Therefore, we aimed in this study to evaluate indications of pediatric FFP usage in our tertiary care hospital **Methodology:** Patients aged 0-18 years, who were hospitalized in Ankara City Hospital Children's Hospital between September and December 2020, were analyzed retrospectively. Demographic information, diagnosis, FFP transfusion indication, pre-transfusion coagulation results, surgical procedure and bleeding status, and the amount of FFP administered were recorded. Statistical analysis was done with SPSS 18.0 program. **Results:** 1110 units of FFP were transfused to 324 patients (57% males) in 987 transfusion episodes. The mean age of the patients was 5.4±5.7 years68% of the transfusion episodes had a pre-transfusion coagulation testing. 249 (25%) of the transfusion episodes were given before or after minor or major surgery, and 226 (23%) were for plasmapheresis. The most FFP usage was in pediatric and cardiovascular surgery intensive care and hematology/oncology clinics. 69% of the FFP transfusions were appropriate. **Conclusion:** Misuse of FFP exposes patients to unpredictable adverse effects such as allergic reactions, infectious complications, hemolysis, fluid overload, and transfusion-induced acute lung injury (TRALI). In this study, the use of FFP in children was evaluated for the first time in our country, and it was found that the 31% of the FFP transfusions was inappropriate. Regular audit and education programs for the efficient use of FFP by hospital transfusion committees can improve transfusion practices.

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STEM CELL TRANSPLANTATION

OP 32

COMPARABLE OUTCOMES OF ALLOGENEIC PERIPHERAL BLOOD VERSUS BONE MARROW HEMATOPOIETIC STEM CELL TRANSPLANTATION IN CHILDREN

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İKBAL OK BOZKAYA, MELTEM ÖZGÜNER,
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Objective: Hematopoietic stem cell transplantation (HSCT) is used in many malignant and non-malignant diseases in pediatric patients. Peripheral blood (PB), bone marrow (BM) or cord blood can be used as a graft source. In this study, it was aimed to compare the transplantation results of patients who used bone marrow as a graft source and those who used peripheral blood in pediatric patients who underwent allogeneic HSCT. **Methodology:** We retrospectively analyzed the transplant results of 349 pediatric patients who received a transplant between April 2010 and August 2021 considering their stem cell source as a comparative variable. Engraftment days, development of acute graft versus host disease (aGVHD) or chronic graft versus host disease (cGVHD), development of relapse and overall survival of patients were evaluated. The source of stem cells was BM in 240 and PB in 109 patients. **Results:** The mean age of patients was 96.8±60 and 94.5±63 months in BM and PB group, respectively. The mean myeloid and platelet engraftment time was statistically significantly earlier in PB group ($p<0.001$). Acute GVHD was statistically significantly higher in PB group ($p<0.001$). The relapse rate was statistically significantly higher in the PB group (p:0.02). The mean follow-up period was 49.2±41.6 months. The 5-year overall survival rate was 83.4% in the BM group and 68.5% in the PB group (p:0.003). **Conclusion:** In our study, in accordance with the literature, it was observed that myeloid and platelet engraftment was earlier if the source is PB in HSCT in pediatric patients, but acute GVHD was more frequent. In the survival analysis, the 5-year survival of the bone marrow transplant group was found to be higher. Peripheral blood could be an alternative stem cell source in patients but it would be more appropriate to decide the stem cell source according to the primary diagnosis of the patients.

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CONSULTATION HEMATOLOGY

OP 33

A RARE CAUSE OF SIDEROBLASTIC ANEMIA: TRNT1 MUTATION

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Case report: tRNA nucleotidyltransferase 1(TRNT1) gene encodes a polymerase involved in the maturation of cytosolic and

mitochondrial transfer RNAs. Autosomal recessive loss of function mutations of TRNT1 leads sideroblastic anemia, immunodeficiency, fevers and developmental delay at varying degrees. Here we present a 10-year-old girl with periodic fever, retinitis pigmentosa, B cell deficiency, seizures and transfusion free sideroblastic anemia due to compound heterozygote TRNT1 mutation.

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PEDIATRIC ONCOLOGY ABSTRACT CATEGORIES

LYMPHOMAS

OP 34

BURKITT LYMPHOMA PRESENTING WITH EYE AND KIDNEY INVOLVEMENT: CASE REPORT

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Case report: Burkitt lymphoma (BL) is an aggressive form of B-cell non-Hodgkin lymphoma. It may present with a variety of symptoms leading to possible misdiagnosis and delay in treatment. BL is fatal if left untreated, and early diagnosis and treatment can improve prognosis. In this case report, a 3.5-year-old male patient with no known disease had left eyelid swelling and hematuria, and orbital magnetic resonance imaging performed after his admission showed contrast enhancement in the bulbus oculi, and increased uptake in both kidneys (suvmax:9.5) in positron emission tomography. The patient's bone marrow aspiration was normal. There was no involvement in the evaluation of the central nervous system. As a result of kidney biopsy, he was diagnosed with high-grade B-cell lymphoproliferative disease (Ki-67 95-100%, diffuse positivity with CD79a and EBV). Burkitt lymphoma. The treatment of the patient was started in the NHL-BFM 2012 R4 arm. At the end of the treatment, the ocular findings regressed. Burkitt lymphoma may present with different clinical presentations. If appropriate and rapid imaging techniques are used, positive results on survival can be obtained. Our patient is being followed up alive and well.

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BRAIN TUMOURS

OP 35

NECESSITY FOR A CUSTOMIZED NGS PANEL FOR ACCURATE DIAGNOSIS AND TARGETED THERAPIES IN PEDIATRIC GLIAL TUMORS

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Objective: Pediatric glial tumors comprise wide range pathologies which may mimic histomorphological features of each other's but generally have very diverse disease course. WHO Classification of Tumors of Central Nervous System (2016 and 2021) points to the necessity of investigating several molecular alterations for integrated pathological diagnosis of childhood CNS tumors. This makes customized next-generation sequencing (NGS) a powerful tool for the diagnosis of childhood CNS tumors. **Methodology:** Acıbadem Molecular Pathology Brain Tumor NGS Panel was designed according to targeted deep RNA and DNA sequencing. RNA and DNA were isolated from paraffin blocks containing more than 50% tumor in 45 cases with childhood CNS tumors. Miniseq Sequencıng System, Illumına and Archer Analysıs Ver 6.0.3.2 platforms were used. Fusions (translocations), mutations, and DNA copy number changes in 81 genes were screened for the most common molecular alterations in CNS tumors. **Results:** Fourty-five childhood CNS tumors were evaluated with NGS results. Among these there were 19 pilocytic astrocytomas, 1 case of high grade astrocytoma with piloid features, 4 diffuse leptomeningeal glioneuronal tumors, 1 pleomorphic xanthoastrocytoma, 4 pediatric diffuse glial tumors, 1 infantile hemispheric astrocytoma, 1 astroblastoma, 12 diffuse midline glioma. Sixteen of these tumors were able to be diagnosed based on these molecular findings. Thirty-four cases received targeted therapies. **Conclusion:** The customized NGS panel, as a single molecular workflow is very helpful and supportive in diagnosis for CNS childhood tumors. Since the number of driver mutations are few in childhood tumors, detection of the driver molecular alteration is guiding the medical treatment startegy in terms of targeted regimens.

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OP 36

CONSTITUTIONAL MISSMATCH DEFECT REPAIR DISORDER (CMMRD) IN PEDIATRIC HIGH GRADE GLIOMA

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Objective: Pediatric high grade gliomas(HGG) have dismal prognosis with median survival of 9-15 months after standard radiochemptherapy. Recent molecular investigations revealed a mismatch repair defect called Constitutional Mismatch Repair Deficiency (CMMRD), which induce pediatric HGG. In CMMRD, there are mutations at least one of the mismatch repair(MMR) genes in both tumoral and non-tumoral DNA. Patients generally have cafe au lait spots resembling the ones in NF-1. **Methodology:** Forty-four pediatric high-grade glioma cases operated in our clinic between 2015-2021 were included in the study. PMS2, MLH1, MSH6, MSH2 immunohistochemical antibodies were applied to the sections prepared from paraffin blocks with tumors of these 44 cases. Next generation Sequencing (NGS) Custom Panel for Brain Tumors was performed with DNA and RNA obtained from neoplastic tissue of 2 cases and germline NGS analysis was performed with DNA obtained from peripheral blood in 1 case. **Results:** MMR protein expression loss was detected in 11 (25%) cases. In 5 (45%) of these 11 cases, MMR protein loss was detected in both neoplastic and non-neoplastic tissue, and these cases were considered as CMMRD. NGS performed in 2 of these 5 cases revealed a hypermutant profile. At least one MMR protein loss was found only in the neoplastic tissue in 6 (55%) of 11 cases, and PMS2 deficiency was the most common. In 1 of these 6 cases, MSH6 deficiency was shown as germline by NGS. **Conclusion:** CMMRD and MMRD, are disorders with close relationship with pediatric high grade gliomas. Since CMMRD cases also may have cafe au lait spots, they should not be misdiagnosed as NF 1. Temozolomide induce more aggressive tumors in CMMRD ve MMRD, therefore its use is not suggested in those cases. Preliminary literature data advocate use of immunotherapy instead. All pediatric HGG cases should be evaluated for CMMRD and MMRD with molecular investigations to understand their biology.

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OP 37

IS METHYLATION STATUS SUBGROUPING REALLY A STRONG PROGNOSTIC FACTOR IN PEDIATRIC POSTERIOR FOSSA EPENDYMOMA?

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Objective: The effective treatment of posterior fossa ependymomas is surgery followed by radio-chemotherapy. Our aim is to evaluate the effects of sex, age, methylation subgrouping, extent of resection, radiation treatment (RT), MIB-1 index, grade, ATRX and H3K27M mutations on prognosis in pediatric patients with posterior fossa ependymoma (PFE). **Methodology:** This is a retrospective study. Forty-two children with PFE who had surgery in our institution between 1996 and 2018 were included. Formalin-fixed paraffin-embedded tumor samples were evaluated for H3K27me3 immunostaining, MIB-1 index, WHO grades, ATRX and H3K27M mutations.Samples with global H3K27me3 reduction were grouped as posterior fossa ependymoma group A (PFA), whereas tumor samples with H3K27me3 nuclear immunopositivity were grouped as posterior fossa ependymoma group B (PFB). **Results:** Mean age of patients was 4.4 years (range 0.71-14.51). Thirty-one patients (73.8%) were PFA, whereas 11 patients (26.2%) were PFB. WHO grades of PFAs were statistically higher in comparison to WHO grades of PFBs. There are no significant differences between PFAs and PFBs in terms of resection rates, disease recurrence and survival parameters.Patients with total surgical excisions had significantly better PFS and OS rates. **Conclusion:** Extent of surgical excision is the most important prognostic indicator in PFEs. Prognostic effect of methylation subgrouping may be minimized with more aggressive surgical strategy in PFAs.

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NEUROBLASTOMA

OP 38

NEUROBLASTOMA IN A CASE OF CONGENITAL ADRENAL HYPERPLASIA

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SBÜ Ankara Şehir Hastanesi, Çocuk Hastanesi

Case report: The majority of neuroblastomas are sporadic and not correlated with any specific constitutional germline chromosomal abnormality, inherited predisposition, or associated congenital anomalies. We report here a 1.5-year-old girl with a diagnosis of 21 hydroxylase deficiency and neuroblastoma. Neuroblastoma in a known case of congenital adrenal hyperplasia has rarely been reported. Based on our literature review, this is the fifth case report of congenital adrenal hyperplasia and neuroblastoma.

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BONE TUMOURS

OP 39

CAN SERUM KL-6 LEVEL BE USED AS A MARKER IN LUNG METASTASIS OF BONE SARCOMAS?

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Objective: Osteosarcoma and Ewing sarcoma are the most common bone sarcomas of the childhood. Kerbs von de Lungren 6 (KL-6) is a glycoprotein that is expressed on type 2 pneumocytes and bronchial epithelium. Serum KL-6 level can increase in many interstitial pulmonary diseas and lung cancers. Aim of the study is to evaluate the predictive value of serum KL-6 level on malign potential of pulmonary nodules in pediatric patients with bone sarcoma with pulmonary metastasis or with vague pulmonary nodules. **Methodology:** Blood samples were taken from patients with diagnosis of Ewing sarcoma or osteosarcoma at the time of diagnosis or first relapses. Control group was selected from 42 voluntary children without any chronic or acute diseases associated with lung. Serum of the blood samples were separated and frozen at -70 C° and KL-6 level was measured via ELISA method. Thorax computed tomography (CT) images of the patients were analyzed to interpret about pulmonary metastasis. **Results:** Total 47 patients were included in the study, 19 of the patients were with Ewing sarcoma and 28 with osteosarcoma.Thorax CT revealed pulmonary metastasis in 9 of the patients at first evaluation. KL-6 level of the these patients with pulmonary metastasis was greater than without metastasis (p;0.05) and control group (p;0.019). Patients with pulmonary nodule at any time had significantly higher serum KL-6 level at first evaluation than without metastasis (p; 0.04) and control group (p;0.017). **Conclusion:** In our study we found serum KL-6 level higher in patients with pulmonary nodules that relevant with pulmonary sarcoma metastasis than patients without metastasis and healthy control group. Our study also revealed that patients that had pulmonary metastasis during their follow-up also had higher KL-6 level at diagnosis. These results should be proven with more number of patients. Measuring KL-6 level may be used as a marker for early diagnosis of pulmonary sarcoma metastasis.

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RARE TUMOURS AND HISTIOCYTOSIS

OP 40

PROLONGED COVID-19 POSITIVITY AND CHEMOTHERAPY IN A PATIENT WITH NASOPHARENGEAL CARCINOMA

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Case report: Nasopharyngeal carcinoma is a rare tumor that accounts for 1-3% of all childhood malignancies. A 16-year-old patient with refractory nasopharyngeal carcinoma, whose treatment has to be interrupted due to COVID-19 positivity.After 6 weeks because of disease progression, we started his chemotherapy altough he is still COVID-19 positive. We didn't see any complication. Prolonged COVID-19 positivity is thought to be associated with the infection of immortal malignant cells located in the nasopharynx

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OP 41

EVALUATION OF CLINICAL AND LABORATORY CHARACTERISTICS OF CHILDREN WITH RHABDOID TUMOR: A MULTICENTER STUDY

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Objective: Rhabdoid tumors, which are rare in childhood, are aggressive cancers. It can be particularly seen in 3 different anatomical regions, mostly in the central nervous system, kidneys, and soft tissue in early childhood. In this study, it was aimed to evaluate the clinical, radiological and pathological features of pediatric patients with rhabdoid tumors who were followed up and treated in 3 different pediatric oncology reference centers. **Methodology:** Erciyes University Faculty of Medicine, Kahramanmaraş Sütçü İmam University Faculty of Medicine, Health Practice and Research Hospital and Adana City Training and Research Hospital, 17 patients diagnosed with rhabdoid tumor between 2002-2021 were retrospectively analyzed. **Results:** Of the patients, 6 (35%) were female and 11 (65%) were male. Chemotherapy (Doxorubicin, Ifosfamide, Carboplatinum, Etoposide, Vincristine, Actinomycin-D, Cyclophosphamide) was administered to the patients at different times. Radiotherapy was applied to 8 (47%) of the patients. The tumor was in the brain in 8 (47%) of the patients, in the kidney in 4 (23%), in the skin in 4 (23%), and the liver in 1 (6%). **Conclusion:** In this study, the incidence of rhabdoid tumors was higher in males. This may be due to the small number of cases. The 2 years overall survival rates were 50% in brain tumors, 6% in kidney tumors, and 12% in others, according to tumor localization. The localization and stage of the tumor were determinants of the survival of the patients. More clinical studies are needed to improve survival and identify more effective treatment strategies in these tumors.

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PEDIATRIC LEUKEMIAS

OP 42

ACUTE ABDOMEN AND ITS OUTCOMES IN CHILDREN WITH ACUTE LEUKEMIA

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Objective: Acute abdominal conditions such as tiflitis, acute appendicitis and intussusception can be found in the follow-up of children with leukemia. Its considered if one or more of the symptoms of abdominal pain, vomiting, fever, distention in the abdominal examination, sensitivity, tenderness and defenses are available together and the diagnosis is supported by radiological imaging methods. In these patients, making a surgical decision is not as easy as those with a strong immune system due to the increased risk of complications and death. Antimicrobial therapy, blood indrigents and electrolyte support are vital. In this study, we examined our patients with leukemia diagnosed with acute surgical abdomen in terms of clinical findings, prognosis and treatments, and we aimed to show that the results were satisfactory with good management in these patients. **Methodology:** Totally 9 patients who underwent surgery due to acute abdomen when all were ın follow up in our hospital's Pediatric Hematology-Oncology Clinic between July 2016 and December 2020 were examined retrospectively. The patients were under treatment according to the Berlin-Frankfurt-Munich protocol risk groups. The diagnosis of acute abdomen was made with clinical, laboratory and radiological findings. Abdominal direct X-ray graphy view of 2 years old unpefore tiflitis patient displayed in Figure1. The criterion for appendicitis was accepted as measuring the diameter of the appendix > 6mm in thickness, 3 mm thickness of cecum or terminal ileum for ultrasonography (USG) or Computed Tomography (CT). Abdominal computed tomography of 11 years old unpefore tiflitis patient displayed in Figure 2. Demographic information, diagnosis, clinical and laboratory findings, radiological examinations, treatments and results of the patients were recorded. (Table 1) **Results:** Seventh of the patients were diagnosed as ALL, two were AML, two were operated due to perforated tiflitis, five were acute appendicitis, one was operated due to intussusception, and five were girls and four were males. All patients received broad-spectrum antibiotic therapy and four received additional antifungal therapy. Liquid electrolyte disturbance was observed and recovered in two patients. While blood product transfusions were applied to all patients, one patient was given additional granulocytes and pentaglobulin. A second operation was required due to the delayed wound healing in one patient. Apart from this, no complications were seen. Chemotherapy regimens were continued. (Table 2) **Conclusion:** Acute appendicitis has been reported with a frequency of 0.5-4.4%, tiflit 2.6-10% in different studies in pediatric patients with hematologic cancer. The diagnosis of acute abdomen should be rapidly considered and supported by imaging methods. Although the complications and mortality rates of surgery in these patients are higher than the immune system intact patients, early diagnosis, broad-spectrum antibiotics, antifungal use, appropriate liquid electrolyte and blood product support can be performed successfully.

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