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

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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.