METHODOLOGICAL INSTRUCTIONS FOR INDEPENDENT WORK OF STUDENTS

Discipline: Blood and lymph in pathology
Discipline code:KLP 3303
Name and code of the OP: 6B10115 "Medicine"
Volume of study hours (credits): 150/5
Course and semester of study: 3/6
Volume of independent work: 3

Shymkent, 2024

The control and measuring instruments have been developed in accordance with the working curriculum of the discipline (syllabus) and discussed at the department meeting

Protocol No. 10 dated "31" 05 2024.

Head of the Department, md, Professor E.K. Bekmurzayeva. Бекм

Department "Propaedeutics of Internal Diseases"

Topic No. 1. Methods of laboratory and instrumental examination of patients with pathology of the hematopoietic system. Diagnostic value. Methods of clinical examination of patients with pathology of the organs of hematopoiesis. Scheme of hematopoiesis. Indicators of peripheral blood in the norm. The main methods of instrumental examination and identify a number of diagnostic signs that serve as criteria for the pathological process of the hematopoietic system
2. Objective: To familiarize students with the basic methods of laboratory and instrumental research and to identify a number of diagnostic signs that serve as criteria for the pathological process of the hematopoietic system.
3. Tasks: indicated at the end of the syllabus
4. Form of implementation/assessment: presentation,performance of practical skills
5. Criteria for the implementation of SRO (requirements for completing the task): indicated at the end.
6. Deadlines delivery: 2- day
7. Literature: the main one, the additional one is indicated on the last page of the syllabus
8. Control (questions, tests):
Questions:
1. For what purpose is sternal puncture performed?
2. Which method allows us to determine more accurate information about the composition of bone marrow?
3. What other additional instrumental diagnostic methods can be used for pathologies of the hematopoietic system?
Test questions:
1. Method of diagnosing coronary artery atherosclerosis:
a. angiography
b. echocardiography
c. stress - echocardiography
d. ECG
e. X-ray
2. The myelogram of a patient with B12-deficiency anemia is characterized by the following picture:
a. megaloblastic type of hematopoiesis
b. depleted bone marrow
c. unchanged bone marrow
d. hyperplasia of all hematopoietic germs
e. normoblastic type of hematopoiesis with irritation of the erythroid germ
3. Patient K., 26, complains of increasing weakness, fever up to 38°. Objectively: skin and visible mucous membranes are pale, petechiae and ecchymoses are noted. In the blood: erythrocytes - 1.8 million, Hb - 56 g / l, CI - 0.93, leukocytes - 2.6 thousand, platelets - 30 thousand. ESR - 50 mm / hour. In the sternal puncture - predominance of fatty bone marrow over active. Informative examination method:
a. coagulogram
b. trephine biopsy
c. sucrose test
d. determination of hemosiderin in urine
e. aggregate-hemagglutination test

4. What type of anemia is characterized by the following changes: erythrocytes - 1.8 million, Hb - 36 g/l, CI - 0.9; leukocytes - 1.6 thousand, platelets - 65.0 thousand.
a. aplastic
b. hemolytic
c. B12-deficient
d. iron deficiency
e. acute posthemorrhagic
5. Patient K., 26 years old, complains of increasing weakness, shortness of breath, palpitations, frequent nosebleeds, fever up to 380C. Has been ill for 2 months. Served in the missile forces. Objectively: skin and visible mucous membranes are pale, skin hemorrhages. In the blood: er-1.8 million, Hb-56 g/l, CP-0.93, leuk-2.1 thousand, pal-2, segm-68, eos-4, lymph-34, mon-2, ESR-45 mm/h. Which research method is informative for clarifying the diagnosis:
a. trepanobiopsy
b. sternal puncture
c. cytochemical reactions
d. transferrin study
e. coagulogram
6. Patient I., 68 years old, complains of weakness, sweating, shortness of breath when walking, bone pain. Objectively: the skin is pale with petechial-spotted rash. The pharynx is hyperemic, the tonsils are loose. Severe hepatosplenomegaly. In the blood: ERP-2.7 million, Hb-90 g / l, CI-1.0, leukocytes-122 thousand, blasts-19%, promyelocytes-7%, myelocytes-17%, metamyelocytes-10%, PAL-4%, segment-22%, EOZ-9%, basoph-7%, lymph-5%, thrombus-49 thousand. ESR - 39 mm / h. Informative examination method:
a. cytokaryological examination
b. trephine biopsy
c. puncture of the spleen
d. sternal puncture
e. cytochemical study
7. In the bone marrow with iron deficiency anemia the following is observed:
a. reduction in the number of sideroblasts
b. megaloblastosis
c. increase in erythroblasts and normocytes
d. hypoplasia
e. aplasia
8. A reliable research method that identifies the source of hidden bleeding in iron deficiency anemia:
a. endoscopic
b. gastric juice examination
c. radioisotope study
d. R-research
e. physical examination
9. The most important laboratory criterion of autoimmune hemolytic anemia:
a. positive Coombs reaction
b. normochromic anemia
c. hyperchromic anemia
d. hypochromic anemia
e. hyperbilirubinemia

10. Anemias with intracellular hemolysis include:
a. autoimmune hemolytic anemias
b. hemolysis due to transfusion of incompatible blood
c. paroxysmal nocturnal hemoglobinuria
d. hemolysis due to infections
e. hemolysis due to trauma

Topic №2: Laboratory and instrumental methods of research in the leading clinical syndromes of diseases of the organs of the hematopoietic system. Laboratory and instrumental methods of research in the leading clinical syndromes (anemic, hemorrhagic and thrombocytopenic) of diseases of the organs of the hematopoietic system.
2. Objective: To familiarize students with the causes, predisposing factors, and main symptoms of anemic, hemorrhagic, and thrombocytopenic syndromes. Clinical picture. Laboratory and instrumental diagnostics for anemic, hemorrhagic, and thrombocytopenic syndromes.
3. Tasks:indicated at the end
4. Form of implementation/assessment: presentation, implementation of practical skills
5. Performance criteria: indicated at the end.
6. Deadlines surrender: 7-day
7. Literature: indicated on the last page of the syllabus
8. Control (questions, tests):

Questions:
1. Principles of laboratory research methods in patients with anemic syndrome.
2. Principles of differential diagnosis in anemic syndromes
3. Preparation for laboratory methods of examination of patients with anemic syndromes.
4. Principles of laboratory research methods in patients with hemorrhagic syndrome.
5. Principles of laboratory research methods in patients with thrombocytopenic syndrome.
6. Principles of differential diagnosis in hemorrhagic syndromes
7. Principles of differential diagnosis in thrombocytopenic syndromes
8. Laboratory research methods in patients with hemorrhagic syndrome.
9. Laboratory research methods in patients with thrombocytopenic syndrome.

Test questions:
1. The normal number of leukocytes in men:
A. 3.2 – 11.3 x 109/l
B. 3.0 – 5.0 x 109/l
C. 3.0 – 10.0 x 109/l
D. 2.0 – 9.0 x 109/l
E. 1.0 – 8.0 x 109/l
2. The number of platelets is normal:
A. 180 – 320 x 109/l

B. 50.0 – 180.0 x 109/l
C. 250.0 – 400.0 x 109/l
D. 350.0 – 450.0 x 109/l
E. 150.0 – 200 x 109/l
3. Increase in platelet count:
A. thrombocytosis
B. thrombopathy
C. thrombocytopenia
D. thromboembolism
E. thrombocytopenic purpura
4. "Thrombocytopenia" is...
A. decrease in platelet count.
B. platelet hypofunction.
C. increase in platelet count.
D. platelet hyperfunction.
E. decrease in the number of platelets and red blood cells.
5. Increased white blood cell count:
A. leukocytosis
B. cytopenia, leukoplakia
C. leukopenia
D. cytopenia
E. pacytopenia
6. A bright red tongue is often observed in:
A.B-12 deficiency anemia
B.amyloidosis
C. thrombocytopenia
D. Gaucher disease
E.hemorrhagic vasculitis
7. Mandatory laboratory sign of B12 deficiency anemia:
A. hyperchromia of erythrocytes
B. microcytosis of erythrocytes
S. glucosuria
D. hyperuricemia
E.bilirubinemia
8. Characteristic complaints of patients with B 12 deficiency anemia:
A. burning tongue
B.thirst
S. pain behind the breastbone
D. myopia
E.itching of the skin
9. The term "lymphadenopathy" refers to:
A. enlarged lymph nodes
B. high lymphoblastosis in sternal puncture
C.leukemic infiltration of lymph nodes
D. lymphocytosis in peripheral blood
E.erythrocytosis in peripheral blood
10. The tumor substrate in chronic lymphocytic leukemia is:

A. lymphocytes
B.myelocytes
C.myeloblasts
D. lymphoblasts
E. plasma cells

Topic No. 3. Methods of examination of patients with pathology of the hematopoietic system. General examination: palpation and percussion of the spleen: methods and technique. Palpation of the lymph nodes.

2. Objective: To familiarize students with the methods and techniques of palpation and percussion of the spleen, palpation of the lymph nodes in the leading syndromes of the hematopoietic system. Clinical picture. Laboratory and instrumental diagnostics in the leading clinical syndromes of the hematopoietic system.
3. Tasks: indicated at the end
4. Form of implementation/assessment: presentation, implementation of practical skills
5. Performance criteria: indicated at the end.
6. Deadlines change:10-day
7. Literature:the main one, the additional one is indicated on the last page of the syllabus
8. Control(questions, tests):

Questions:
1. Principles of instrumental research methods for leading syndromes of diseases of the hematopoietic system.
2. What does an ultrasound examination of the general abdominal cavity reveal in hemorrhagic syndrome?
3. Diagnostic value of sternal puncture in leading syndromes
diseases of the hematopoietic system.
4. Principles of laboratory methods for examining patients with thrombocytopenic syndrome.
5. Principles of differential diagnosis in thrombocytopenic syndromes
6. Preparation for laboratory methods of examination of patients with thrombocytopenic syndromes.

Test questions:

1. Cherry-red color of the skin is characteristic of:
A. erythremia
B. posthemorrhagic anemia
C. B12 deficiency anemia
D. acute leukemia
E. myeloma disease
2. Pale skin with a yellowish tint is characteristic of:
A. hemolytic anemia
B. erythremia
C. symptomatic erythrocytosis
D. acute leukemia

E. hemophilia
3. Description of the patient's position according to Sali:
A. on the right side, bending the upper knee and bringing the head to the chest
B. on the left side, knees bent
C. knee-elbow position
D. sitting, leaning the body forward
E. on the back with half-bent limbs
4. Laboratory analysis is the least valuable in case of pathology of the hematopoietic organs:
A. Determination of cholesterol
B. platelet and reticulocyte count
C. General blood test
D. coagulation tests
E. Determination of serum iron
5. The normal number of leukocytes in men:
A. 3.2 – 11.3 x 109/l
B. 3.0 – 5.0 x 109/l
C. 3.0 – 10.0 x 109/l
D. 2.0 – 9.0 x 109/l
E. 1.0 – 8.0 x 109/l
6. The number of platelets is normal:
A. 180 – 320 x 109/l
B. 50.0 – 180.0 x 109/l
C. 250.0 – 400.0 x 109/l
D. 350.0 – 450.0 x 109/l
E. 150.0 – 200 x 109/l
7. Increase in platelet count:
A. thrombocytosis
B. thrombopathy
C. thrombocytopenia
D. thromboembolism
E. thrombocytopenic purpura
8. "Thrombocytopenia" is...
A. decrease in platelet count.
B. platelet hypofunction.
C. increase in platelet count.
D. platelet hyperfunction.
E. decrease in the number of platelets and red blood cells.
9. Increased white blood cell count:
A. leukocytosis
B. cytopenia, leukoplakia
C. leukopenia
D. cytopenia
E. pacytopenia
10. The role of vitamin B12 in hematopoiesis:
A. formation of DNA and RNA during maturation of myeloid cells
B. formation of DNA and RNA during maturation of lymphoid cells
C. heme formation

D. formation of globin
E. DNA formation during maturation of lymphoid cells