

1. A 30-year-old woman complains of abdominal discomfort on the left, pain in the joints, fever, and periodic hemorrhages. Objectively, hepatolienal syndrome is observed. Complete blood count revealed the following: leukocytes -  $200 \times 10^9/L$ , numerous granulocytes at various degrees of maturity, myeloblasts -  $< 5\%$  in the bone marrow, the Rh-chromosome is positive. What is the most likely diagnosis in this case?

A. Leukemoid reaction

B. Acute leukemia

C. Malignant tumor

D. Myelofibrosis

**E. Chronic myeloid leukemia**

2. A 50-year-old patient complains of headache, itchy skin, and pain in the toes and muscles, especially during walking. Objectively, the skin of the face has a red-cyanotic tint. Lymph nodes are not palpable. Pulse - 76/min. Blood pressure - 180/100 mm Hg. The lungs have no abnormalities. The borders of the heart are displaced to the left by 2 cm. The liver is +2 cm. The spleen is near the edge of the costal arch, dense and painless. Complete blood count: erythrocytes -  $6.3 \times 10^{12}/L$ , hemoglobin - 201 g/L, color index - 0.8, leukocytes -  $10.5 \times 10^9/L$ , eosinophils - 4%, band neutrophils - 7%, segmented neutrophils - 62%, lymphocytes - 22%, monocytes - 5%, platelets -  $500 \times 10^9/L$ , ESR - 1 mm/hour, hematocrit - 55%. What is the most likely diagnosis in this case?

A. Obliterating endarteritis

**B. Polycythemia vera**

C. Cushing disease

D. Essential hypertension

E. Secondary erythrocytosis

3. A 14-year-old girl developed morning fever, cheilitis, stomatitis, photosensitivity, leukocytosis of  $24 \times 10^9/L$ , and thrombocytopenia. Laboratory studies detect antinuclear antibodies in a high titer. Make the provisional diagnosis.

A. Sepsis

B. Systemic scleroderma

C. Juvenile idiopathic arthritis

D. Dermatomyositis

## **E. Systemic lupus erythematosus**

4. An 18-year-old young man was brought into to the hematology department with complaints of headache, general weakness, loss of appetite, fever of  $39^{\circ}\text{C}$ , and a swelling on his neck. Objectively,  $t\ 38^{\circ}\text{C}$ , the skin and mucosa are markedly pale, the cervical lymph nodes on both sides are up to 1 cm in size and painless. The liver is +1 cm and painless, the spleen is +0.5 cm. In the blood: Hb - 98 g/L, erythrocytes -  $2.9 \times 10^{12}/\text{L}$ , leukocytes -  $32 \times 10^9/\text{L}$ , blast neutrophils - 0%, segmented neutrophils - 28%, monocytes - 2%, lymphocytes - 39%, blasts - 31%, reticulocytes - 31%, platelets -  $120 \times 10^9/\text{L}$ , ESR - 36 mm/hour. Specify the form of the patient's leukemia:

- A. Chronic lymphocytic leukemia
- B. Acute myeloblastic leukemia
- C. Undifferentiated leukemia
- D. Chronic myelogenous leukemia
- E. Acute lymphoblastic leukemia**

5. Throughout the last year a 27-year-old man notes fatigue, excessive sweating, and heaviness in his left subcostal region, especially after eating. Objectively, his spleen and liver are enlarged. In clinical blood test: erythrocytes -  $3.2 \times 10^{12}/\text{L}$ , Hb - 100 g/L, color index - 0.87, leukocytes -  $100 \times 10^9/\text{L}$ , basophils - 7%, eosinophils - 5%, monocytes - 15%, juvenile - 16%, band neutrophils - 10%, segmented neutrophils - 45%, lymphocytes - 2%, monocytes - 0%, reticulocytes - 0.3%, platelets -  $400 \times 10^9/\text{L}$ , ESR - 25 mm/hour. Make the diagnosis:

- A. Chronic myelogenous leukemia**
- B. Erythremia (polycythemia vera)
- C. Acute leukemia
- D. Hepatic cirrhosis
- E. Chronic lymphocytic leukemia

6. A 70-year-old patient complains of general weakness, loss of appetite, pain in the tongue, and paresthesia. According to the patient's medical history, the disease onset was 6 months ago. Objectively, the skin and mucosa are pale and moderately icteric, the tongue is bright red and smooth, hepatomegaly and distal hyperesthesia are observed. Auscultation detects a systolic murmur in all auscultation points. Pulse - 110/min., blood pressure - 90/60 mm Hg. Blood test results: erythrocytes -  $1.2 \times 10^{12}/\text{L}$ , hemoglobin - 56

g/L, color index - 1.4, leukocytes -  $2.8 \times 10^9/L$ , platelets -  $120 \times 10^9/L$ , ESR - 26 mm/hour, reticulocytes - 0.1%, macrocytosis, total bilirubin - 34 mmol/L, indirect bilirubin - 29 mmol/L. What is the most likely diagnosis in this case?

**A. Vitamin B<sub>12</sub> deficiency anemia**

B. Iron deficiency anemia

C. Acute lymphoblastic leukemia

D. Infectious mononucleosis

E. Viral

hepatitis A

7. A 42-year-old man complains of weakness, palpitations, nosebleeds, and skin hemorrhages. His condition progressively deteriorates throughout the last month. Objectively, his condition is severe, he has petechial and spotted hemorrhages on the skin of his limbs and torso, lymph nodes and spleen are not palpable, the pulse is 116/min., the liver is +2 cm. Complete blood count reveals pancytopenia. What disease can be primarily suspected in this case?

A. Hemorrhagic vasculitis

**B. Hypoplastic anemia**

C. Werlhof disease

D. Acute agranulocytosis

E. Acute leukemia

8. A 12-year-old girl complains of weakness, dizziness, headache, and a fever of  $38^{\circ}C$ . Objectively, her body temperature is  $37.8^{\circ}C$ , her mucosa and skin are pale, her pharynx is without changes. Palpation detects submandibular and cervical lymph nodes that are enlarged to 2 cm, dense and painless. No pathological changes of internal organs were detected. Complete blood count: erythrocytes -  $2.8 \times 10^{12}/L$ , hemoglobin - 85 g/L, color index - 0.9, leukocytes -  $10 \times 10^9/L$ , eosinophils - 0%, band neutrophils - 1%, segmented neutrophils - 8%, lymphocytes - 47%, reticulocytes - 0.5%, platelets -  $60 \times 10^9/L$ , blast cells - 44%. What is the most likely diagnosis in this case?

**A. Acute leukemia**

B. Chronic lymphocytic leukemia

C. Acute erythromyelosis

D. Infectious mononucleosis

E. Lymphogranulomatosis

9. A 63-year-old man complains of unmotivated weakness and pressing and bursting sensation in the left subcostal area. According to him, these signs have been present for a year already. Previously he was healthy. He took part in containment measures during the accident at the Chornobyl Nuclear Power Plant. Objectively: the skin is pale, peripheral lymph nodes are not enlarged, the liver is +3 cm, the spleen is +10 cm. Complete blood count: erythrocytes -  $3.1 \times 10^{12}/L$ , Hb- 100 g/L, leukocytes -  $46 \times 10^9/L$ , blasts - 2%, promyelocytes - 10%, myelocytes - 18%, band neutrophils - 27%, segmented neutrophils - 10%, lymphocytes - 12%, eosinophils - 6%, basocytes - 3%, monocytes - 2%, erythrocyte sedimentation rate - 20 mm/hour. What is the most likely diagnosis?

**A. Chronic myeloleukemia**

B. Acute leukemia

C. Hemolytic anemia

D. Chronic lymphatic leukemia

E. Hepatic cirrhosis

10. A 58-year-old man complains of weakness and tumor-like formations that appeared on the anterior surface of his neck and in the inguinal region. Palpation detects soft painless mobile cervical and inguinal lymph nodes up to 2 cm in diameter. The liver protrudes by 2 cm from the edge of the costal margin, the lower splenic pole is at the umbilical level. In blood: erythrocytes -  $3.5 \times 10^{12}/L$ , Hb- 88 g/L, leukocytes -  $86 \times 10^9/L$ , band neutrophils - 1%, segmented neutrophils - 10%, lymphocytes - 85%, eosinophils - 2%, basocytes - 0%, monocytes - 2%, erythrocyte sedimentation rate - 15 mm/hour, Gumprecht shadows. What is the most likely diagnosis?

A. Acute leukemia

**B. Chronic lymphatic leukemia**

C. Lymphogranulomatosis

D. Lymphocytic leukemoid reaction

E. Chronic myeloleukemia

11. A 63-year-old man came to a doctor with complaints of marked general weakness, poor appetite, weight loss, joint pain, and heaviness in the right subcostal area. Complete

blood count shows the following: erythrocytes -  $3.4 \times 10^{12}/L$ , Hb - 102 g/L, color index - 0.9, platelets -  $640 \times 10^9/L$ , leukocytes -  $138 \times 10^9/L$ , blasts - 1 %, promyelocytes - 2 %, myelocytes - 13 %, juvenile - 12 %, band neutrophils - 16 %, segmented neutrophils - 31 %, basophils - 3 %, eosinophils - 8 %, lymphocytes - 9 %, monocytes - 5 %, ESR - 30 mm/hour. What is the provisional diagnosis?

A. Erythremia (polycythemia vera)

**B. Chronic myeloid leukemia**

C. Leukemoid reaction

D. Chronic lymphocytic leukemia

E. Acute leukemia