Hematology Block

Revision Questions for the Second week

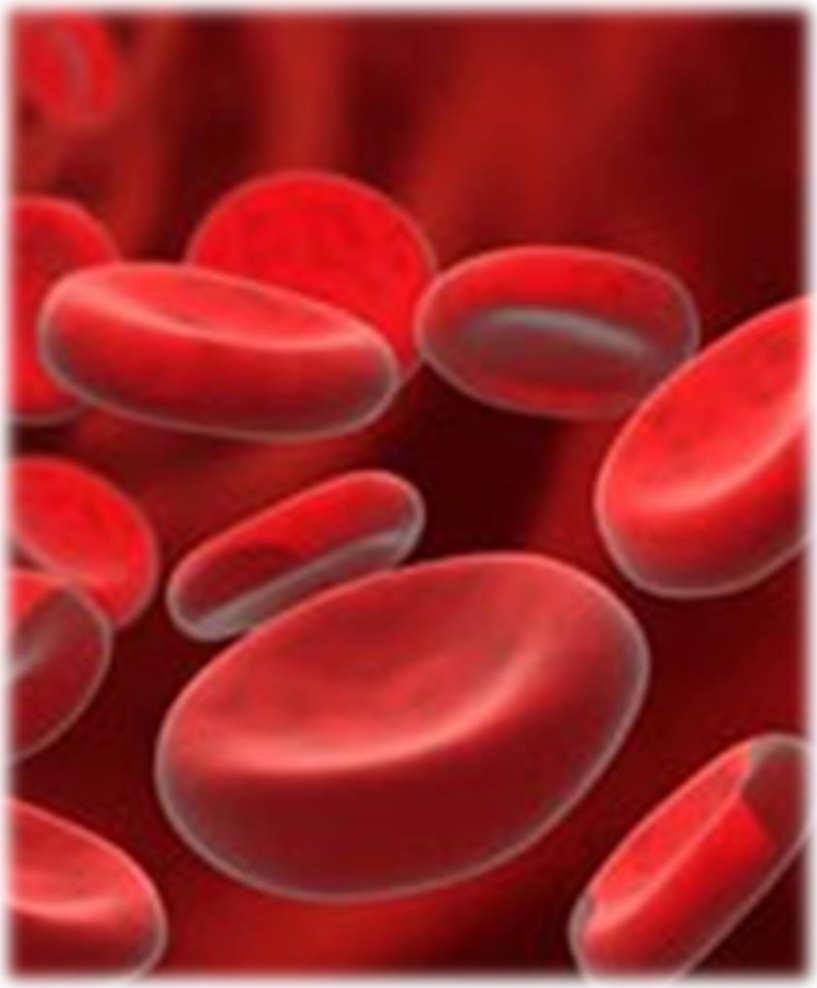

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Table of contents :

Physiology	(3)
Biochemistry	(5)
Pharmacology	(6)
Microbiology	(8)
Hematology	(10)

Physiology :

Platelets structure and functions

Q1:the life spam of platelet is:

A:7-10 hours
B: 7-10 weeks
C: 7-10 days
D: 7-10 months

A: c

Q2: Which of the following will result in bleeding:

A: splenectomy
B: hypersplenism

A: b

Q3: which of the following is released by the the dense granules and induce aggregation and stickiness :

A: fibrinogen
B: ADP
C: Serotonin
D: thromboxanesA2

A: B

Q4: the myosin and actin filaments are stimulated to contract in which stage of platelets activation:

A:adhesion
B: aggregations
C: reales
D: changing of platelets shape

A: b

Q5: The platelets will activated by:

A:adhesion
B: aggregations
C: reales
D: changing the shape of platelets

A: a

Q6: if the receptor of fibrinogen and vWF which is located on the platelets is absent this will result in which of these diseases:

A: Bernard-Soulier Syndrome
B: Glanzmann thrombosthenia
C: Grey Platelet Syndrome

A: B

Coagulation mechanisms

Q1:Which one of the following released from platelets that is entrapped in the clot:

A. Prothrombin (factor II)
B. Thrombin
C. Fibrin-stabilizing factor (XIII)
D. Fibrinogen (factor I)

A: C

Q2: Elderly patient came to the emergency department and he is in a high risk to develop myocardial infarction which if the following we should give him to prevent the MI:

A: Tissue Plasminogen Activator Inhibitor (TPAI)
B: Tissue plasminogen activators (t-PA)
C: Antiplasmin from the liver

A: B

Q3: the Fibrin-stabilizing factor (XIII) will affect the fibrin in which form:

A: active
B: inactive
C: all of the the answers are correct:

A:a

Q4: the blood clot is formed of all of the following except:

A: fibrin
B: plasmin
C: RBC
D: platelets

A: b

Q5: thrombin will activate all of the following except:

A: factor XIII
B : factor VIII
C: fibrin monomer
D: fibrinogen

A: c

Q6: the Fibrin fibers has an anticoagulant action in which way:

A: combines with Antithrombin III and quickly removes thrombin from blood
B: making a Glycocalyx layer
C: adsorbs ~ 90% of thrombin to removes it from circulating blood

A: c

Biochemistry :

Vit K

Which one of the following forms of Vit K , its source is intestinal bacteria ?

A. Phylloquinone
B. Menaquinone
C. Menadione
D. All

Ans: B

The vit k is a coenzyme for synthesis of which one of these clotting factors ?

A. VII
B. -IX
C. X
D. -all

Ans: D

What happens if prothrombin and clotting factors are not carboxylated ?

A. increase blood coagulation time upon injury
B. decrease blood coagulation time upon injury
C. decrease bleeding

Ans : A

What is a function of osteocalcin ?

A. bone formation and mineralization
B. lysis of fibrin
C. coagulation

Ans: A

Why the deficiency of vit K is most common in newborn ?

A. Newborns lack intestinal flora
B. Human milk cannot provide enough vitamin K
C. Because it is a Dangerous for him
D. a&b

Ans: D

Pharmacology :

Antiplatelet drugs

Q1)patient has nausea and vomiting as well as shortness of breath and chest discomfort he diagnosed as acute coronary syndrome which of the following can use as prevention of ischemic events ?

A. a)Cilostazole
B. b)Clopidogrel
C. c)Tirofiban
D. d)Ticlopidine

Answer:C

Note: Aspirin could be use because the symptoms of ACS as unstable angina pectoris

2)what is the mechanism of action of Abciximab ?

A. a)directed against glycoprotein IIb/ IIIa receptors
B. b)inhibit platelets binding to fibrinogen
C. c)fibrinogen like mimetic agents
D. d)Phosphodiestrase 3 (PDE) inhibitors

Answer: A

Note: b,c "Tirofiban ,Eptifibatide" , "D" Cilostazole

3) patient with ache, cramp, numbness or sense of fatigue which occurs during exercise, such as walking, and is relieved by a short period of rest which of the following drugs can be use prevent these symptoms ?

A. a)Cilostazole
B. b)Clopidogrel
C. c)Ticlopidine
D. d)a-b

Answer: A

Note: these symptoms refers to Intermittent claudication

ANTIMALARIAL DRUGS

1)53 years old women present with headache, fever, shivering, joint pain, vomiting, hemolytic anemia, jaundice, hemoglobin in the urine, and convulsions and she treated for 3 months by antimalarial drug which cause loss of central visual acuity "Retinopathy" , lichenoid skin eruption bleaching of hair which of the following drugs which cause these symptoms ?

A. a)CHLOROQUINE
B. b)Artemether
C. c)amodiaquine
D. d)sulfadoxine-pyrimethamine

Answer: A

2)patinas with chills, persistent high fever, headache, orthostatic hypotension, myalgia and red blood cell (RBC) sludging that leads to capillary blockage at several sites he diagnosed as sever cerebral malaria which of the following antimalarial drugs firs drug of choice to use ?

A. a)artemisinin
B. b) artesunate
C. c) artemether
D. d)a-c

Answer: B

3)64 male treated with antimalarial drug and he developed tinnitus, deafness, headaches thrombocytopenic purpura ,hypoprothrombinaemia and Blackwater fever which of the following drugs cause these symptoms ?

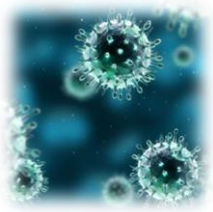
A. a)QUININE
B. b) Clindamycin
C. c) Artisunate

Answer: A

4) inhabiting of heme Polymerase by which of the following ?

A. a)CHLOROQUINE
B. b) ARTEMISININ
C. c)Sulfadoxine-pyrimethamine
D. d)Doxycycline

Answer: A



Microbiology

Malaria

patient was diagnosed with cerebral malaria, what is the most causative organism ?

A. Plasmodium ovale.
B. Plasmodium falciparum
C. Plasmodium vivax.
D. Plasmodium malariae

Answer: B

A patient comes to the hospital with a fever recurring every 72 hours (3 days). Which of the following is the most likely pathogen?:

A. Plasmodium ovale
B. Plasmodium malariae
C. Plasmodium falciparum
D. Plasmodium vivax

Answer: B

At which stage will the red blood cells get invaded

A. Sporozoite stage
B. Merozoite stage
C. Gametocyte stage

Answer: B

What is the gold standard for diagnosis of malaria ?

A. serology
B. light microscopic
C. rabid diagnostic test

Answer: B

Blood parasite

The patient present with chancre , anemia and meningoencephalitis , what is the most causative organism .?

A. brucei rhodesiense
B. -trypanosoma cruzi
C. loa loa
D. burgia malayi

Answer: A

what is the treatment for the patient who present withe chagoma , ocular lesion ?

A. pentamidine
B. suramin
C. eflornithine
D. benznidazole

Answer: D

What is the most organism that cause Heart damage ?

A. brucei rhodesiense
B. -trypanosoma cruzi
C. loa loa
D. burgia malayi

Answer: B

The Adults worms of Onchocerciasis (river blindness) live in:

A. Subcutaneous tissue
B. Subcutaneous nodule
C. Lymphatic vessel

Answer: A

Patient present with dermatitis , lymphadenopathy and blindness , what is the best dignostic tool ؟

A. skin snip
B. Blood film
C. Microscopic

Answer: A

What is the most parasite that cause Calabar swellings (allergic reactions) and conjunctivitis?

A. -brucei rhodesiense
B. -trypanosoma cruzi
C. loa loa
D. burgia malayi

Answer: A

Hematology :

Polycythemia

Q. A 60-year-old man presents with headaches and pruritis. Physical examination reveals splenomegaly but no lymphadenopathy.A CBC demonstrates elevated hemoglobin of 19.5 g/dL, WBC of 12,800/□L, and platelets of 550,000/mL. The bone marrow displays hypercellularity of all lineages and depletion of marrow iron stores. Which of the following is the most likely diagnosis?

(A) Acute myelogenous leukemia
(B) Essential thrombocythemia
(C) Idiopathic myelofi brosis
(D) Occult infection
(E) Polycythemia vera

The answer is E: Polycythemia vera (PV).
PV is a myeloproliferative disease that arises from a single clonal hematopoietic stem cell and results in uncontrolled production of RBCs. The increase in erythrocytes in PV is autonomous and is not regulated by erythropoietin. PV derives from the malignant transformation of a single, hematopoietic stem cell with primary commitment to the erythroid lineage. Proliferation of the neoplastic clone occurs predominantly in the bone marrow but may involve extramedullary sites including the spleen, lymph nodes, and liver (myeloid metaplasia). The bone marrow is hypercellular with hyperplasia of all elements. The spleen is moderately enlarged, and its cut surface is uniformly dark red, with expansion of the red pulp and obliteration of the white pulp. Acute myelogenous leukemia (choice A) and essential thrombocythemia (choice B) involve the myeloid and megakaryocytic lines, respectively. Idiopathic myelofi brosis (choice C) features marrow collagen deposition (fibrosis).

Q. The patient described in previous question is at increased risk of developing which of the following conditions?

(A) Cerebral aneurysm
(B) Cerebrovascular accident
(C) Cholelithiasis
(D) Osteogenic sarcoma

The answer is B: Cerebrovascular accident.
The patient has polycythemia vera (PV). Hyperviscosity associated with PV increases the risk for thrombotic stroke. The other choices are not associated with PV.
Diagnosis: Polycythemia vera

Q. A 46-year-old man presents with ataxia. MRI shows a cerebellar infarct. The platelet count is discovered to be 955,000/□L. The bone marrow biopsy reveals increased megakaryocytes with absent fibrosis (shown in the image). Cytogenetic studies are normal. Which of the following is the most likely diagnosis?

(A) Chronic myelogenous leukemia
(B) Essential thrombocythemia
(C) Myelofi brosis with myeloid metaplasia
(D) Polycythemia vera
(E) Thrombotic thrombocytopenic purpura

The answer is B: Essential thrombocythemia.

Chronic Leukemia

Q. A 60-year-old man complains of night sweats, weight loss, easy fatigability, and discomfort in the left upper abdominal quadrant. Physical examination reveals massive splenomegaly. Laboratory studies show leukocytosis (40,000/mL). A peripheral blood smear demonstrates mature and maturing granulocytes, myelocytes, basophils, and occasional myeloblasts. The bone marrow is hypercellular and dominated by WBC precursors. Megakaryocytes are numerous, and RBC precursors are less prominent. studies disclose a monoclonal population of abnormal cells with a t(9;22)(q34;q11) chromosomal translocation. What is the appropriate diagnosis?

(A) Acute lymphoblastic leukemia
(B) Acute myeloid leukemia
(C) Chronic lymphocytic leukemia
(D) Chronic myelogenous leukemia
(E) Myelodysplastic syndrome

The answer is D: Chronic myelogenous leukemia (CML).
Chronic myeloproliferative diseases are defined as clonal hematogenous stem cell disorders with increased proliferation of one or more myeloid lineages. In 95% of all CML cases, the Philadelphia chromosome can be demonstrated by conventional cytogenetics. The initial symptoms are nonspecific and include weakness, malaise, fever, and splenomegaly. Acute lymphoblastic leukemia (choice A) and acute myeloid leukemia (choice B) feature clonal expansion of lymphoblasts and myeloblasts, respectively. Although myelodysplastic syndrome (choice E) features hyperplastic bone marrow, the Philadelphia chromosome does not occur, and there is peripheral cytopenia in various cell lines.

Q. Which oncogene is located at the t(9;22) chromosomal breakpoint in the patient described in previous question?

(A) *abl*
(B) *erb*
(C) *myb*
(D) *myc*
(E) *neu*

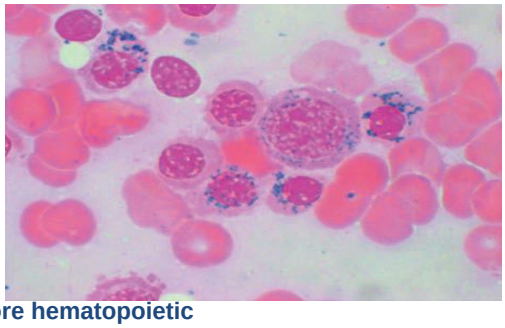
The answer is A: abl.
Presence of the Philadelphia chromosomeor molecular demonstration of the bcr/abl fusion gene is required to establish the diagnosis of chronic myelogenous leukemia (CML). The bcr/abl gene encodes a fusion protein, p210, which acts as a constitutively activated tyrosine kinase.
The other choices may be involved in malignant transformations but they are not related to CML.
Diagnosis: Chronic myelogenous leukemia

Q. A 48-year-old alcoholic man presents with a 6-day history of productive cough and fever. The temperature is 38.7°C, respirations are 32 per minute, and blood pressure is 125/85 mm Hg. The patient's cough worsens, and he begins expectorating large amounts of foul-smelling sputum. A chest X-ray shows a right upper and middle lobe infiltrate. A CBC demonstrates leukocytosis (WBC = 38,000/mL), with 80% slightly immature neutrophils and toxic granulation. Laboratory studies reveal elevated leukocyte alkaline phosphatase. Which of the following best describes this patient's hematologic condition?

(A) Acute myelogenous leukemia
(B) Chronic lymphocytic leukemia
(C) Chronic myelogenous leukemia
(D) Leukemoid reaction
(E) Richter syndrome

The answer is D: Leukemoid reaction.
Leukemoid reaction, Clues to the benign (or reactive) nature of a leukemoid reaction include the following: (1) the cells in theperipheral blood smear are more mature than myelocytes;
(2) leukocyte alkaline phosphatase activity is high in benign conditions and low in patients with CML; and (3) benign neutrophils often contain large blue cytoplasmic inclusions referred to as "Dohle bodies" or toxic granulation.
The other choices are incorrect because the neutrophils in these disorders do not display these morphologic features, and they are usually associated with other hematologic abnormalities.

Q. A 78-year-old man presents with increasing fatigue. A CBC shows pancytopenia, with moderate anemia (hemoglobin =10.5 g/dL) and normochromic, hypochromic RBCs. Mild neutropenia and thrombocytopenia are noted. A bone marrow evaluation reveals erythroid hyperplasia with increased iron. A Prussian blue stained bone marrow aspirate is shown in the image. Which of the following is the appropriate diagnosis?



(A) Hairy cell leukemia
(B) Multiple myeloma
(C) Myelodysplastic syndrome
(D) Polycythemia vera
(E) Promyelocytic leukemia

The answer is C: Myelodysplastic syndrome (MDS).
MDS exhibits dysplastic morphologic features in one or more hematopoietic lineages and is accompanied by ineffective hematopoiesis.
The disease is most common in the elderly and presents with anemia, neutropenia, and thrombocytopenia.
Dysplastic features may be present in one or more hematopoietic lineages. Ringed sideroblasts are common. In this case, a smear of a bone marrow aspirate stained with Prussian blue shows erythroid precursor cells containing iron-laden mitochondria that encircle the nuclei. Ringed sideroblasts are not a feature of the other choices.

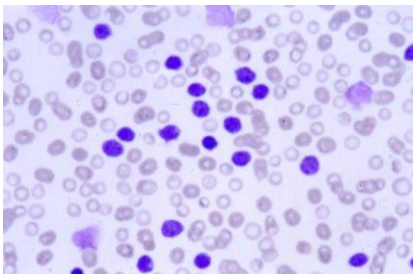
Lymphoploriferative disorder

Q. A 27-year-old man presents with an 8-week history of fevers, chills, pruritis, and night sweats. Two months ago, he experienced a fl u-like illness. A nagging cough with occasional hemoptysis persisted for several weeks following resolution of his other symptoms. Physical examination reveals moderately
enlarged, fi rm, nontender lymph nodes located in the right supraclavicular region. A lymph node biopsy shows a Reed-Sternberg cell. What is the appropriate diagnosis?

(A) Acute myelogenous leukemia
(B) Burkitt lymphoma
(C) Hodgkin lymphoma
(D) Infectious mononucleosis
(E) Lymphoblastic lymphoma

The answer is C: Hodgkin lymphoma (HL).
The lymph node biopsy shows a Reed-Sternberg cell. These large atypical mononuclear or multinucleated tumor cells in an infl amatory background are the diagnostic hallmark of HL. Reed-Sternberg cells do not occur in the other choices.

A 60-year-old man presents with a 3-week history of lymph node enlargement in his neck and axillae. A CBC reveals mild anemia, with a leukocytosis of 20,000/mL. The peripheral blood smear is shown in the image. More than 80% of WBCs are small lymphocytes, but there are also prominent "smudge cells." Examination of a bone marrow biopsy shows nodular and interstitial infiltrates of lymphocytes, which demonstrate clonal rearrangement of the IgG light-chain gene. Which of the following is the appropriate diagnosis?



(A) Acute lymphoblastic lymphoma
(B) Chronic lymphocytic leukemia
(C) Chronic myelogenous leukemia with lymphoid blast crisis
(D) Multiple myeloma
(E) Waldenström macroglobulinemia

The answer is B: Chronic lymphocytic leukemia (CLL).
CLL is characterized by clonal proliferation of small, matureappearing lymphocytes in the bone marrow, lymph nodes, and spleen, with an expression in the peripheral blood. In most instances, the leukemic cells belong to B-cell lineage and show clonal Ig gene rearrangements. Most patients are over 50 years of age. The symptoms tend to be nonspecifi c, but 80% of patients have lymph node enlargement, and 50% show splenomegaly. CLL usually has an indolent and protracted course. Acute lymphoblastic lymphoma (choice A) is principally a leukemia of childhood. Multiple myeloma (choice D) is a neoplasm of plasma cells. Waldenström macroglobulinemia (choice E) is a neoplasm of small lymphocytes and a variable number of IgM-secreting plasma cells of the same malignant clone.

Haemostasis

1) if we want to evaluate the intrinsic pathway, which screening test will be done?

A- bleeding time
B- aPTT
C- PT

B

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2) which one of the following is constituent of dense granules?

A- fibrin
B- calcium
C- phospholipids

B

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3) in heamophilia, bleeding time will .... ?

A- increase
B- decrease
C- normal

C

---

4) patient is suffering from mucosal bleeding and spontanues bruising, the most likely diagnosis?

A- Heamophilia type B
B- Marked thrombocytopenia
C- HUS

B

Q. A 4-year-old boy develops severe bleeding into the knee joint. Laboratory studies show that serum levels of factor IX are reduced, but levels of factor VIII are normal. What is the appropriate diagnosis?

(A) Hemophilia A
(B) Hemophilia B
(C) Henoch-Schönlein purpura
(D) Idiopathic thrombocytopenic purpura
(E) von Willebrand disease

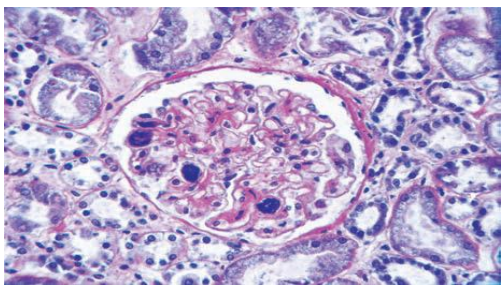
The answer is B: Hemophilia B.
Hemophilia B is an X-linked recessive disease caused by mutations in the gene encoding factor IX.. It is clinically indistinguishable from hemophilia A (factor VIII defi ciency) (choice A). In both forms of hemophilia, the partial thromboplastin time (PTT) is prolonged. Mixing of a patient's blood with that of a normal donor normalizes the PTT.

Q. A 14-year-old boy presents with acute onset of right flank pain, which developed after he helped his father paint the ceiling of his bedroom. Physical examination demonstrates an area of ecchymosis in the right flank that is tender to palpation. The patient has a lifelong history of easy bruising. His brother shows the same tendency. The serum level of clotting factor VIII is less than 2% of normal. Which of the following is the most likely underlying mechanism for bleeding tendency in this patient?

(A) Circulating antibodies directed against factor VIII
(B) Decreased hepatic synthesis of multiple coagulation factors
(C) Defi ciency of vitamin K
(D) Genetic defect involving the factor VIII gene
(E) Nonimmune peripheral consumption of coagulation Proteins

The answer is D: Genetic defect involving the factor VIII gene.
Hemophilia A is an X-linked recessive disorder of blood clotting that results in spontaneous bleeding, particularly into joints, muscles, and internal organs. Classic hemophilia results from mutations in the gene encoding factor VIII (hemophilia A). Hemophilia A is the most frequently encountered sex-linked inherited bleeding disorder. Choices C and E represent acquired disorders.
Diagnosis: Hemophilia A

A 46-year-old man is rushed to the hospital after suffering massive trauma in an automobile accident. Two days later the patient suffers a clonic-tonic seizure. Blood cultures are positive for Gram-negative bacteria, and the patient is started on intravenous antibiotics. Laboratory studies show prolonged prothrombin time (PT) and partial thromboplastin time (PTT), low levels of fibrinogen, a positive D-dimer test, and thrombocytopenia. The patient develops renal failure and expires. A section of the kidney at autopsy is stained with phosphotungstic acid hematoxylin (shown in the image). The dark purple objects within the glomeruli are best identified as which of the following?



(A) Arteriovenous malformations
(B) Fat emboli
(C) Fibrin thrombi
(D) Psammoma bodies
(E) Vascular calcifi cations

The answer is C: Fibrin thrombi.
Disseminated intravascular coagulation (DIC) refers to

widespread ischemic changes secondary to microvascular fibrin thrombi, which are accompanied by the consumption of platelets and coagulation factors and a hemorrhagic diathesis. DIC typically occurs as a complication of massive trauma, septicemia, and obstetric emergencies. It is also associated with metastatic cancer, hematopoietic malignancies, cardiovascular and liver diseases, and numerous other conditions. The other choices are not directly associated with DIC.
Diagnosis: Disseminated intravascular coagulation

Blood groups

1) which one is the safest to be transfused?

A- platelets
B- autologues blood
C- immunoglobulins

B

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2) the RBCs usually stored at which temp.

A- 4-6 C
B- room temp.
C- (-30) C

A

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3) Which one is the most common blood group in population?

A- AB
B- A
C- O

C

---

4) a-3-D-galactotransferase is seen in which blood group?

A- B
B- A
C- O

A

Megaloblastic anemia

Q. Folic acid supplement is used in which of the following cases:

A. Myelofibrosis
B. Total gastrectomy
C. Abnormal intestinal bacterial flora

A

Q. Folate is absorbed in:

A. Duodenum & juojenum
B. Terminal elium
C. Colon

A

Q. A patient with a history of chronic alcoholism presents with a macrocytic anemia and thrombocytopenia. Blood smear examination demonstrates numerous oval macrocytes and hypersegmented neutrophils (results shown in the image). A Schilling test(vitamin B12 absorption) is normal. Which of the following is the most likely diagnosis?

(A) Anemia of chronic disease
(B) Folic acid defi ciency
(C) G6PD defi ciency
(D) Iron defi ciency anemia
(E) Sickle cell anemia

The answer is B: Folic acid defi ciency.
Folic acid defi ciency commonly occurs in alcoholics who have poor nutrition. Macrocytosis, hypersegmented neutrophils, and a normal Schilling test (vitamin B12 absorption) point to folic acid deficiency. Folic acid and vitamin B12 are required for synthesis of DNA, and deficiency of either factor leads to megaloblastic transformation of hematopoietic cells. Macrocytosis and hypersegmented neutrophils are not features of the other choices.
Diagnosis: Megaloblastic anemia

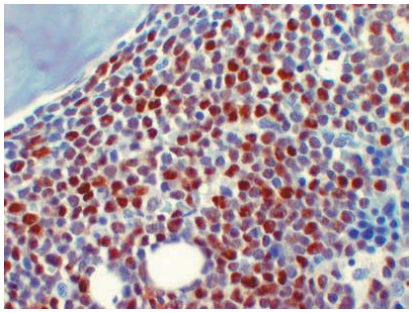
Q. A 43-year-old woman of Scandinavian descent complains of constant tiredness, light-headedness, and occasional palpitations and shortness of breath while ascending the stairs. Physical examination shows pallor of the oral mucosa and a raspberry-red tongue (glossitis). Neurologic examination reveals paresthesias, numbness, decreased vibrationsensation, and loss of deep tendon reflexes. The results of laboratory studies include hemoglobin of 7.2 g/dL, WBC of 4,500/mL, platelets of 140,000/mL, erythrocyte folate of 220 mg/mL, serum vitamin B12 of 40 pg/mL (normal >200 pg/mL), serum anti-intrinsic factor of 1:128, and serum anti–parietal cell antibody of 1:64. Examination of peripheral blood shows macrocytic anemia, with poikilocytosis of RBCs and hypersegmented neutrophils. Atrophic gastritis is diagnosed by gastric biopsy. Bone marrow examination in this patient will reveal which of the following pathologic findings?

(A) Absent stainable bone marrow iron
(B) Atypical megakaryocytes with fi brosis
(C) Hypercellularity with megaloblastic erythroid maturation
(D) Hypocellularity with absence of erythroid precursors
(E) Myeloid hyperplasia with increased basophils

The answer is C: Hypercellularity with megaloblastic erythroid maturation. Pernicious anemia is an autoimmune disorder in which patients develop antibodies directed against gastric parietal cells and intrinsic factor. Parietal cell antibodies lead to atrophic gastritis with achlorhydria. Defi ciency of vitamin B12 or folic acid results in megaloblastic anemia.The other choices are not seen in pernicious anemia.
Diagnosis: Megaloblastic anemia, pernicious anemia

Acute leukemia

Q**. A 6-year-old boy presents with fatigue, fever, and night sweats.Physical examination reveals marked pallor. Palpation of his sternum demonstrates diffuse tenderness. Laboratory studies disclose anemia, thrombocytopenia, and leukocytosis. The WBC differential count shows that 90% blasts. A bone marrow biopsy stained immunohistochemically for terminal deoxynucleotidyl transferase (TdT) is shown in the image (+ve) . Which of the following is the appropriate diagnosis?**



(A) Acute lymphoblastic leukemia
(B) Acute myelogenous leukemia
(D) Chronic lymphocytic leukemia
(E) Chronic myelogenous leukemia

The answer is A: Acute lymphoblastic leukemia (ALL).
Most precursor B-cell malignancies involve primarily bone marrow and peripheral blood and are termed B-cell acute lymphoblastic leukemias (B-ALL). Only 15% of childhood ALLs) are derived from T cells, and 75% of B-ALL cases occur in children under the age of 6 years. B-ALL features numerical aberrations and chromosomal translocations, including the Philadelphia chromosome. In childhood ALL, a bcr/abl fusion protein, P190, is produced. B-ALLs are positive for nuclear expression of TdT. The demonstration of TdT activity suggests that a leukemic blast is of lymphoid rather than myeloid lineage. The other choices are rarely, if ever, encountered in this age group.
Diagnosis: Acute lymphocytic leukemia

Q. A 60-year-old woman complains of weakness and hematuria. Physical examination shows marked pallor, hepatosplenomegaly, and numerous ecchymoses of the upper and lower extremities. A CBC reveals a normocytic normochromic anemia, thrombocytopenia, neutropenia, and a marked leukocytosis, which is composed mainly of myeloblasts. The major clinical problems associated with this patient's condition are most directly related to which of the following?
(A) Avascular necrosis of bone
(B) Disseminated intravascular coagulation
(C) Hypersplenism
(D) Microangiopathic hemolytic anemia
(E) Suppression of hematopoiesis
The answer is E: Suppression of hematopoiesis.
The presence of myeloblasts in the peripheral blood is indicative of acute myelogenous leukemia (AML). In AML, there is an accumulahemolytiction in the marrow of immature myeloid cells that lack the potential for further differentiation and maturation, which leads to suppression of normal hematopoiesis. As a consequence, the major clinical problems associated with AML are granulocytopenia, thrombocytopenia, and anemia. Promyelocytic
leukemia causes disseminated intravascular coagulation(choice B).
Diagnosis: Acute myelogenous leukemia

If you have any questions you want to add, please send it to : Revisiontest432@Gmail.com

Good luck

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