

Pathology p.p

Done by:

Islam Al-qaisi

Zina shehadeh

Boshra Al-Rbaihat

Patient with Hemoglobin 19g/dl (very high) and she has Jak2 mutated gene and Low erythropoietin, on bone marrow biopsy we found that Blast count almost 40% of the cells, your diagnosea?

A- she has Bcl2 translocation

B- she has a rare complication of myeloproliferative syndrome

C- Bone marrow would show fibrosis

D- phlebotomy would alleviate the disease

Answer: B

About thalassemia which of this is not true ?

A- HbA2 increase in B thalassemia

B- HbF increase in B thalassemia

C- Hb barts increase in a thalassemia

D- in a thalassemia major 3 or 4 copies are mutated but in B thalassemia major 2 copies are mutated

Answer: D

Absolute polycythemia can be caused by:

A- diarrhea

B-Diuretic drugs

C-Vomitting

D- Carcinoma in renal cells

Answer : D

Which of the following is an adaptive mechanism in IDA?

A- Increased erythropoietin

B- Diminished hepcidin

C- decreased erythropoietin

Answer: B

not a definite effect of vitamin b12 deficiency?

A. pernicious anemia

B. megaloblastic anemia

C. sterility

D. neuropathy

E. macrocytic hypochromic

Answer: E

which of the following blood disorders doesn't cause pancytopenia?

- A. Cooleys
- B. complicated sickle cell
- C. megaloblastic
- D. myelodysplastic
- E. PNH

Answer: A

. Hb Barts is caused by:

Answer: deletion of 3 genes

What happens in IDA?

Answer: Platelets ↑ + TIBC ↑

Very easy description of iron deficiency anemia, what is your next step?

- A. Iron studies
- B. hepcidin level
- C. Electrophoresis
- D. bone marrow biopsy

answer : A

Reticulocyte count is used to differentiate between?

- A. Microcytic and macrocytic
- B. Hemolysis anemia and normocytic anemia
- C. Anemia of hemorrhage and anemia of bone marrow failure
- D. Iron deficiency anemia and thalassemia

answer: C

Chronic disease anemia caused by high:

A. Hepcidin

B. Iron

Answer : A

Which of the following causes pancytopenia

- A. Immune hemolytic anemia
- B. Thalassemia
- C. Iron deficiency anemia
- D. Hereditary spherocytosis
- E. B12 deficiency

Answer : E

- Which one of the following is NOT a cause of vitamin B12 deficiency?
-
- A. Jejunal resection.
- B. Gastrectomy.
- C. Malabsorption.
- D. Veganism.
- E. Lack of gastric intrinsic factor

answer: A

Which of the following is NOT an expected finding in a patient with iron deficiency anemia?

- A. Koilonychia (spoon nails)
- B. Angular stomatitis
- C. Hypochromic microcytic red blood cells
- D. Pallor
- E. Symmetric paraesthesia in lower limbs

Answer : E

Recent research showed that patients with marked obesity have increased level of IL-6 in blood that is mainly secreted from adipose tissue which results in anemia. Which of the following is an expected finding?

- A. Absent haptoglobin level
- B. High erythropoietin level
- C. High reticulocyte count
- D. Low total iron binding capacity
- E. Presence of gall bladder stones

Answer : D

Chronic alcoholism is a risk factor for:

- A. Megaloblastic anemia
- B. Iron deficiency anemia
- C. Aplastic anemia
- D. Immune hemolytic anemia
- E. Myelodysplastic syndrome

answer: A

A patient with anemia may have all these general symptoms, except:

A. Increased red cell 2,3 BPG

B. Headache

c. Fatigued.

D. Dizziness

E. Bradycardia

Answer:E

Which of the following best describes a person with acute GIT hemorrhage?

A. Fluid is shifted from intravascular space to interstitial fluid

B. iron deficiency might occur, causing complications

C. Erythropoietin is immediately secreted after hemorrhage has occurred

D. Erythrocytes may appear as hypochromic microcytic

Answer: B

Growth retardation can be observed in:

- A. Chronic hemolytic anemia
- B. Anemia of acute blood loss
- C. Iron deficiency anemia
- D. Thalassemia major

Answer: D

A patient showed up to the hospital with hair loss, spooned fingernails, and tendency to eat dirt. Which of the following do you expect to see when examining a histological section of the patient's blood?

A. Microcytic hypochromic erythrocytes with reticulocytosis and thrombocytopenia

B. Ovalocytes with central pallor and low reticulocyte count

C. Lightly stained erythrocytes that have central & peripheral acidophilia with an area of pallor in between

D. Hypochromic microcytic anemia with anisopoikilocytosis that is densely stained with Perl's Prussian blue stain.

Answer:C

The best test to use for differential diagnosis between iron deficiency anemia and anemia of chronic inflammation is:

- A. Serum iron level
- B. Mean cell volume
- C. Bone marrow iron stores
- D. Reticulocyte count

Answer:C

Pernicious anemia is described as:

- a. Macrocytic anemia
- b. Autoimmune gastritis
- c. Intrinsic factor deficiency
- d. Vitamin B12 deficiency
- e. All the answers are correct

Answer:E

Which of the following is wrong about hepcidin?

- A. It is increased in iron overload
- B. It is decreased in inflammation
- C. it decreases iron absorption

Answer : B

. You participated in a research to make a test that detects free hemoglobin in urine. Your supervisor explained the importance of this test as to differentiate hemolytic anemia from bleeding in urine that commonly occurs in patients with genitourinary diseases (intact RBCs). The best candidates for your test would be patients with:

- A. G6PD deficiency
- B. Hemophilia A, severe form
- C. Hereditary spherocytosis
- D. Immune hemolytic anemia
- E. Thalassemia

Answer: A

All of the following are classifications of dietary deficiencies causing nutritional anemia except:

- A. Vitamin B12 (cyanocobalamin).
- B. Folic acid.
- C. Vitamin D.
- D. Iron.

Answer: C

Which of the following is NOT an expected finding in a patient with iron deficiency anemia?

- a. Koilonychia (spoon nails)
- b. Angular stomatitis
- c. Hypochromic microcytic red blood cells
- d. Pallor
- e. Symmetric paraesthesia in lower limbs

Answer: E

Which of the following is a relative cause of polycythemia?

- a. Cyanotic heart disease
- b. Surreptitious polycythemia
- c. Polycythemia vera
- d. Renal cell carcinoma
- e. Severe diarrhea

ANS: E

A 16-year-old male is under evaluation for repeated episodes of pain in the back and lower limbs.

Examination reveals pallor and jaundice. Sickle cell disease is suspected. Which of the followings is NOT expected to be useful for diagnosing and evaluating this patient?

- a. Hemoglobin electrophoresis
- b. Bone marrow examination
- c. Examining legs for ulcers
- d. Blood film
- e. Examining eyes for retinopathy

Answer: B

Chronic alcoholism is a risk factor for:

- a. Megaloblastic anemia
- b. Iron deficiency anemia
- c. Aplastic anemia
- d. Immune hemolytic anemia
- e. Myelodysplastic syndrome

Answer: A

1-Surreptitious polycythemia

- no splenomegaly

2-Lowest haptoglobin levels are seen in

a. IHM

b. PNH

answer: b

A 22-year-old male with back pain and superior mesenteric artery thrombus, on the Blood film, he has normal platelet count and function, also coagulation factors test Shows normal function, what is your diagnose?

- A. Hemophilia A
- B. Acute promyelocytic leukemia
- C. Thrombocytopenia
- D. Paroxysmal nocturnal hemoglobinuria

Answer: d

Anemia with erythrocytosis

a. Chronic blood loss

b. Thalassemia

answer: b

Lowest haptoglobin levels are seen in:

• **PNH**

easy description of HEREDITARY SPHEROCYTOSIS, choose the main characteristic of this disease

A) Auto splenectomy

B) X linked disease

C) low haptoglobin

Answer : C

which of the following causes pancytopenia

A) Immune hemolytic anemia

B) Thalassemia

C) Iron deficiency anemia

D) Hereditary spherocytosis

E) B12 deficiency

Answer : E

a 9 years old child with shortness of breath and muscle weakness, his father told you that he had infection last week, his mother told you that his brothers had the same symptoms and his sisters were normal, choose the right diagnose or statement

- A. he has gall bladder stones
- B. he has erythroid hyperplasia in bone marrow
- C. low reticulocyte count
- D. coombs test is required

answer: B (G6PD deficiency)

Which of the following is not a feature of anemia of acute blood loss?

- A- Symptoms of hypotension
- b. Increased erythropoiesis
- c. Reticulocytosis
- d. Normochromic normocytic RBCs
- e. Hyperkalemia

Answer : e

Which of the following is a feature of the type of anemia that presents with torn out RBCs?

a. Thrombocytopenia

b. Pancytopenia

c. Reticulocytosis

D. Thrombocytosis

Answer : A

Which of the following diseases is characterized by the lowest haptoglobin levels?

- a. Iron deficiency anemia
- b. Thrombotic microangiogenesis
- c. Paroxysmal nocturnal hemoglobinuria
- d. Disseminated intravenous coagulation
- e. Myelodysplastic syndrome

Answer : c

A patient with high HbA₂ and HbF levels is a/an

A- α -thalassemia carrier.

B- β -thalassemia Carrier

C- HbH disease affected

Answer : B

A patient with a strict vegetarian diet is at risk for :

A- Thrombocytosis

B- Pancytopenia

C- Reticulocytosis

D- Severe coagulation

Answer : B

Extramedullary hematopoiesis is most significantly seen in:

A- Cooley's anemia

B- megaloblastic anemia

C- Paroxysmal nocturnal hemoglobinuria

D- Immune hemolytic anemia

Answer : A