

Class 9 Notes

1. What is CBC?

- a. RBC – Increase (Polycythemia)
- b. WBC
- c. Platelets
- d. Hb
- e. Hct
- f. RBC indices

2. All of these are part of CBC except:

- a. Hb
- b. Hct
- c. RBC
- d. WBC
- e. Albumin (part of metabolic panel)

3. Patient presents with pallor, tiredness, and palpitation. Which of the following tests you would order first?

- a. CBC

4. Percentage of formed elements in blood is measured by which one of the following:

a. Hct

5. Patient presents with complaints of weakness, palpitations and on observation appears pale. CBC shows low RBC, Hg, Hct. What is the next best test to order in evaluation of this patient's anemia?

A. RBC indices (MCV)

6.MCV test shows size of

RBC

7. Based on MCV values anemias can be classified as:

a. Normocytic, Microcytic and Macrocytic

8. The patient with symptoms of anemia and low RBC count has normal MCV values. What are most likely causes of this presentation?

a. Acute bleeding, hemolysis, bone marrow failure

9. What blood test would allow to differentiate between anemia caused by acute bleeding vs acute hemolysis?

Haptoglobin

10. What does it mean normocytic anemia?

a. Normal MCV = normal size RBC

11. What test measures amount of hemoglobin in a single RBC

a. MCHC

12. Patient has Macrocytic Hyperchromic anemia. What are the most likely indices showing this change?

a. High MCV and high MCH

13. Which one of these anemias would be present in the patient with elevated MCV

a. Macrocytic, B12 and/or Folic acid

14. Which one of the following is macrocytic anemia?

a. B12 def and folic acid deficiency

15. Which one of these anemias would be present in the patient with low MCV?

a. Microcytic

16. Which one of the following is microcytic anemia?

a. Iron deficiency

b. Thalassemia

c. Anemia of chronic disease

d. Lead poisoning

e. All of the above

17. A pregnant woman presents with hypertension. Patient is prescribed methyldopa. Which of the following can develop in this patient?

- a. Heart block
- b. Rebound tachycardia
- c. Hemolytic anemia
- d. Peripheral edema
- e. Bradycardia

18. Patient with anemia that is due to bone marrow failure would have what MCV value

- a. Normal

19. What is the meaning of RDW?

Red blood cell distribution width

20. What is the accepted variation in the size of the RBC which is measured by RDW?

a. 11.5-16.5%

21. Patient presents with complaints of weakness, palpitations and observation appears pale. CBC shows low RBC, Hg, Hct, MCV low. What is the next test you would like to see?

a. Iron and Ferritin

22. Patient presents with high iron and ferritin.
What are possible causes?

a. Hemochromatosis, supplementation, blood transfusion

23. Patient presents with leukocytosis. What is the possible cause?

a. Infections

b. Cancer

c. Inflammation

d. Trauma

e. Hemorrhage

f. Dehydration

g. All the above

24. Which of the following can cause leukopenia?

- a. Sever overwhelming infection
- b. Bone marrow failure or infiltration
- c. Hypersplenism
- d. Dietary deficiency
- e. All the above

25. What is the white blood cell differential?

- a. Neutrophils
- b. Basophils
- c. Eosinophils
- d. Monocytes
- e. Lymphocytes
- f. All the above

26. Patient presents with frequent nose bleeds. What do you expect to see decreased in patient blood?

Platelets

27. How is platelet function screened?

a. Bleeding time

28. Patient presents with epistaxis. Blood work shows, prolonged BT but normal platelet count, what is the next best test to order in this patient?

a. Platelet aggregation test

29. Extrinsic pathway of coagulation is measured by which lab test?

a. PT (prothrombin time)

30. Intrinsic pathway of coagulation is measured by?

a. PTT (**aPTT**)

31. Which of the following test can be used to monitor the adequacy of Coumadin therapy?

a. PT, INR

32. What test would show to you how well fibrinogen is working?

a. TT (Thrombin time)

33. If PTT or PT are abnormal what is the next test you would want to order?

a. Clotting factor assay (coagulation factor concentration)

34. Which of the following would cause decrease in plasminogen

a. DIC, liver disease, hyperthyroidism

35. Which of the following would cause increase in blood plasminogen levels?

b. anabolic steroids, hypothyroidism, contraception

36. Which of the following is the most sensitive marker for liver cell damage?

a. ALT

37. Which of the LDH fractions is most representative of liver cell damage?

a. LDH 5

38. Which LDH fraction is most representative of myocardial cell damage?

LDH1, LDH2

39. Which LDH fraction is the most representative of pancreatitis?

LDH4

40. Which LDH fraction would be most associated with RBC damage?

LDH 1

41. Comprehensive metabolic panel

- a. Minerals (Na, K, Ca, Cl)
- b. Albumin
- c. Globulin
- d. ALT
- e. AST
- f. Glucose
- g. BUN
- h. Creatinine
- i. Bicarbonate
- j. Cholesterol
- k. Bilirubin

42. In the patient with nephrotic syndrome which one of the following will be reduced in patients' blood?

- a. Albumin

43. Patient presents with slight fever, fatigue, slight jaundice. The patient's blood show markedly elevated ALT and AST. What is the most likely diagnosis in this patient?

a. Acute Viral hepatitis

44. Same patient patients AST to ALT ration is larger than 2. What is the most likely cause?

a. Alcoholic liver disease

45. What are test that will determine which hepatitis patient has?

a. Serology tests

46. Patient presents with positive IgM anti-HAV. What is the condition?

Hepatitis A

47. Patient presents with following findings
HBsAg +, Anti-HBs –, IgM anti-HBc +, IgG anti-HBc –, HBeAg –, Anti-HBe –, HBV-DNA +. What is the most likely cause?

Acute hepatitis B

48. The patient presents with following findings: HBsAg –, **Anti-HBs +**, IgM anti-HBc –, **IgG anti-HBc +**, HBeAg –, Anti-HBe –, HBV-DNA –

Prior Hepatitis B infection

49. The patient presents with the following findings: **HBsAg +**, Anti-HBs –, IgM anti-HBc –, **IgG anti-HBc +**, HBeAg –, Anti-Hbe +, HBV-DNA +
What is the most likely cause?

Chronic Hepatitis B infection

50. Total cholesterol optimal value is:

- a. Less than 200 mg/dL
- b. 200-239 mg/dL: borderline
- c. 240-279 mg/dL: high
- d. >280 mg/dL: very high

51. Optimal value of LDL is

- a. <100 mg/dL
- b. 100-129 mg/dL near optimal
- c. 130-159 mg/dL borderline
- d. 160-189 mg/dL high
- e. >190 mg/dL very high

52. Increased risk of CAD in male 40 and older and female 50 and older is associated with which HDL value

a. <35 mg/dL

53. What are the optimal TG levels?

a. Less than 150 mg/dL

b. Borderline high: 150 to 199 mg/dL

c. High: 200 to 499 mg/dL

d. Very high: Above 500 mg/dL

54. What is the function of the VLDL and what is the test meaning?

carries TG and shows ability to store fat

55. Which apolipoprotein is present on LDL molecule?

Apo B-100 (VLDL, LDL)

Apo A-I, Apo A-II (HDL)

56. Which apolipoprotein is associated with Alzheimer's disease?

ApoD, ApoE

57. What is the optimal Cholesterol to LDL ration?

3.5:1

58. What is the best myocardial cell damage biomarker?

Cardiac troponin, cT

59. The patient's blood shows low HCO_3^- . What is the condition?

a. Metabolic acidosis

60. Patient has increase pCO_2 . Patient has what condition?

a. Respiratory acidosis

61. Very anxious patient with history of panic disorder presents to your office with very rapid breathing. Which one of these you would expect to be decreased in the patient's blood?

a. Respiratory alkalosis

62. A patient with seizures could undergo testing with which one of these tests?

EEG