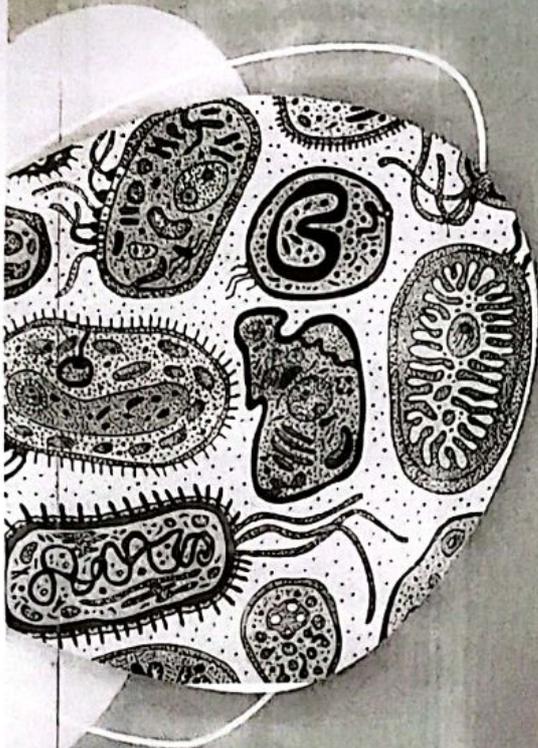


5
L.E



MCCQ

Biochemistry

Lecture (2)

Level(1) Sem(2)

Dr.M.M



<p>1) Life span of RBCS is:</p> <ul style="list-style-type: none"> a) 120 days b) 90 days c) 140 days d) 150 days 	<p>A</p>
<p>2) The polypeptides in the globin part of normal adult HB consists of:</p> <ul style="list-style-type: none"> a) 2 alpha and 2 delta chains b) 2 alpha and 2 gamma chains c) 2 beta and 2 gamma chains d) 2 alpha and 2 beta chains e) 4 beta chains 	<p>D</p>
<p>3) Sickle cell anemia may be caused by:</p> <ul style="list-style-type: none"> a) Deficiency in the amount or in the structure of spectrin b) Mutation 6th Codon of B globin gene where glutamic acid is replaced by valine c) Mutations In genes encoding red cell membrane proteins d) Absence of one or more of genes responsible for synthesis of or B globin chains e) None of the above 	<p>B</p>
<p>4) Bilirubin Is formed in:</p> <ul style="list-style-type: none"> a) Brain b) Kidney c) Bones d) Spleen & bone marrow e) Intestine 	<p>D</p>

<p>6) Patients with sickle cell anemia due to:</p> <ul style="list-style-type: none"> a) decrease of spectrin protein b) decrease of GPI_v Anchored protein c) absence of alpha and beta globulin d) GAG is replaced by GTG 	D
<p>7) Related to Carboxy-Hb Combination with CO:</p> <ul style="list-style-type: none"> a) Affinity of Hb to CO is 210 times more than O₂ b) Lethal action is due to inhibition of cytochrome oxidase of electron transport chain and thus stops cellular respiration c) Poisoning by CO is a common danger of modern life d) Carbon monoxide is particularly dangerous as It is colourless and odourless e) All of the Above 	E
<p>8) Hb-F:</p> <ul style="list-style-type: none"> a) disappears after one year b) disappears after 2 year c) disappears after 5 year d) disappears after 6 year e) disappears after 10 year 	A
<p>9) Direct bilirubin is:</p> <ul style="list-style-type: none"> a) free bilirubin b) Albumin bound bilirubin c) conjugated bilirubin d) Biliverdin 	C
<p>10) Direct bilirubin is:</p> <ul style="list-style-type: none"> a) Free bilirubin b) Albumin bound bilirubin c) Conjugated bilirubin d) Biliverdin 	C

<p>11) Which of the following is responsible for the color of urine?</p> <ul style="list-style-type: none">a) Urobilinogenb) Urobilinc) Stercobilinogend) Stercobilin	<p>B</p>
<p>12) Which of following is responsible for the color of the stool:</p> <ul style="list-style-type: none">a) Urobilinogenb) Urobilinc) stercobilinogend) stercobilin	<p>D</p>
<p>13) Urobilinogen is formed in:</p> <ul style="list-style-type: none">a) Liver.b) Kidney.c) Large intestined) Urinary tract	<p>C</p>
<p>14) Which of the following is a hemoprotein?</p> <ul style="list-style-type: none">a) Albuminb) Tyrosinasec) Lipoproteinsd) Glycoproteinse) Hemoglobin	<p>E</p>
<p>16) Bilirubin is transported in blood to the liver by:</p> <ul style="list-style-type: none">a) α Globulinb) Albuminc) Fibrinogend) β globulin	<p>B</p>

<p>17) Haemoglobin is:</p> <ul style="list-style-type: none"> a) Conjugated protein b) Simple protein c) Derivatives protein d) All of the Above 	A
<p>18) Haem:</p> <ul style="list-style-type: none"> a) It is a Fe-porphyrin compound b) the protein part of Hb c) is composed of four polypeptide chains d) None of the above 	A
<p>19) Hb-A1: ($\alpha_2 \beta_2$):</p> <ul style="list-style-type: none"> a) Normal adult Hb consists of one α and two β chains . b) Normal adult Hb consists of two α and two β chains . c) Normal adult Hb consists of two α and one β chains . d) Normal adult Hb consists of two α only e) Normal adult Hb consists of two β chains only 	B
<p>21) Hb-A1C (Glycosylated Hb):</p> <ul style="list-style-type: none"> a) Normally, it is present in conc.of 1-5% of total Hb. b) Normally, it is present in conc.of 3 -9% of total Hb. c) Normally, it is present in conc.of 3-5.7% of total Hb. d) Normally, it is present in conc.of 8 - 11 % of total Hb. e) Normally, it is present in conc.of 9 - 16 % of total Hb. 	C
<p>22) In Hb-A1C (Glycosylated Hb) patients with D.M:</p> <ul style="list-style-type: none"> a) it may be increased to > 15% of total Hb b) Normally, it is present in conc.of 8 - 11 % of total Hb c) Normally, it is present in conc.of 3 -9% of total Hb d) it may be increased > 6.5% of total Hb 	D

23) All is true Methaemoglobin Except:

- a) chocolate colored
- b) It is a derivative in which Fe is in the ferric state .
- c) it is a true oxidation product of Hb .
- d) Bind O₂
- e) Can't bind O₂

D

26) Sickle cell disease:

- a) Due to mutation in γ -globin gene
- b) Due to mutation in β - globin gene
- c) Due to mutation in ϵ - globin gene
- d) Due to mutation in α -globin gene
- e) Due to mutation in δ - globin gene

B

27) All is true about sickle cell disease except:

- a) Low O₂ tension promotes RBCs sickling
- b) damage the cell membrane
- c) Increase the cell's elasticity
- d) decrease the cell's elasticity
- e) vessel occlusion and ischemia

C

28) Which HB has the highest affinity for oxygen?

- a) Oxy HB
- B) Carboxy HB
- c) Met HB
- D) Carbamino HB
- e) Myoglobin

B

<p>29) Which of the following statements about myoglobin is true?</p> <p>A) Myoglobin is primarily found in plasma.</p> <p>B) Myoglobin is responsible for oxygen transport in the bloodstream.</p> <p>C) Myoglobin contains four heme groups per molecule.</p> <p>D) Myoglobin has a higher oxygen affinity compared to hemoglobin.</p>	D
<p>30) Which of the following statements about types of jaundice is correct?</p> <p>A) Hemolytic jaundice occurs due to liver damage or dysfunction.</p> <p>B) Obstructive jaundice is caused by excessive breakdown of red blood cells.</p> <p>C) Prehepatic jaundice is characterized by the obstruction of bile flow within the liver.</p> <p>D) Post-hepatic jaundice results from the blockage of bile ducts outside the liver.</p>	D
<p>31) Which of the following statements about myoglobin is true?</p> <p>A) Myoglobin is a protein found primarily in muscle cells.</p> <p>B) Myoglobin is responsible for the transport of oxygen in the bloodstream.</p> <p>C) Myoglobin is composed of four subunits.</p> <p>D) Myoglobin is an enzyme involved in the breakdown of glucose.</p>	A
<p>32) Type of bilirubin increased in plasma in haemolytic jaundice:</p> <p>a) Unconjugated (indirect)</p> <p>b) Conjugated (direct)</p> <p>c) Both</p> <p>d) None of the above</p>	A

<p>33) Type of bilirubin increased in plasma in obstructive jaundice:</p> <ul style="list-style-type: none">a) Unconjugated (indirect)b) conjugated (direct)c) Bothd) None of the above	<p>B</p>
<p>34) Type of bilirubin increased in plasma in hepatocellular jaundice:</p> <ul style="list-style-type: none">a) Unconjugated (indirect)b) conjugated (direct)c) Both typesd) None of the above	<p>C</p>
<p>35) All of the following are with diagnosis of obstructive jaundice except</p> <ul style="list-style-type: none">a) Elevated serum direct bilirubinb) presence of urine bilirubinc) increased urine urobilinogend) Absence fecal urobilinogen	<p>C</p>
<p>36) All of the following are with diagnosis of haemolytic jaundice EXCEPT"</p> <ul style="list-style-type: none">A) Elevated serum direct bilirubinB) Absence of urine bilirubinC) increased urine urobilinogenD) increased fecal urobilinogen	<p>A</p>
<p>37) The amino acid substitution of Val for Glu in Hemoglobin S results in: aggregation of the protein because of interactions between molecules:</p> <ul style="list-style-type: none">A) covalentB) disulphidec) hydrogen bondingD) hydrophobicE) Ionic	<p>D</p>

<p>38) Cyanmethaemoglobin can be formed from:</p> <p>A) Oxy Hb B) Met Hb C) Carboxy Hb D) All of these</p>	B
<p>39) Abnormal chain of amino acids in sickle cell anaemia is:</p> <p>A) Alpha chain B) Beta chain C) Delta chain D) Gama chain</p>	B
<p>40) Normal level of total bilirubin in plasma is less than:</p> <p>A. 0.2 mg/dL. B. 1.2 mg/dL. C. 2.2 mg/dL. D. 10 mg/dL. E. None of the above.</p>	B
<p>41) Manifest jaundice occurs when plasma bilirubin level exceeds:</p> <p>A. 1.2 mg/dL. B. 2.5 mg/dL. C. 3 mg/dL. D. 5 mg/dL. E. 10 mg/dL.</p>	B
<p>42) Urobilinogen is formed:</p> <p>A. In the liver parenchymal cells. B. In the reticuloendothelial system. C. In the intestine by bacteria D. In the urine. E. By pancreatic enzymes.</p>	C

<p>43) Unconjugated bilirubin:</p> <ul style="list-style-type: none">A. Is the component measured as "direct bilirubin"B. Is more soluble in aqueous solutions than conjugated bilirubinC. Is the predominant form of bilirubin found in bileD. Is measured "indirectly" by diazo reagentsE. Is esterified by one or two UDP-glucuronic acids	D
<p>44) A jaundiced patient has elevated direct bilirubin with normal levels of indirect bilirubin. This patient is probably:</p> <ul style="list-style-type: none">A. An infant with neonatal (physiological) jaundiceB. Has glucuronyl transferase deficiencyC. ThalassemicD. Suffering from an obstructed gall bladderE. Suffering from viral hepatitis	D
<p>45) The color of a healing bruise goes from reddish-purple to green and finally to yellow. This color sequence is due to the conversion of:</p> <ul style="list-style-type: none">A. Heme to bile saltsB. Serum bilirubin to liver biliverdinC. Localized heme to biliverdin to bilirubinD. Localized heme to urobilinogen to stercobilinogenE. Bilirubin to mono-conjugated bilirubin to di-conjugated bilirubin	C
<p>46) Carbon monoxide binds to heme:</p> <ul style="list-style-type: none">A) with a higher affinity than oxygen.B) resulting in the oxidation of the Fe(II) to Fe(III)C) in a manner that displaces carbon dioxide, causing CO₂ poisoning.D) from the side opposite oxygen, resulting in a brown colored heme.E) with a lower affinity than oxygen.	A

<p>47) Fecal stercobilinogen is increased in</p> <ul style="list-style-type: none"> a) Hemolytic jaundice b) Hepatic jaundice c) Viral hepatitis d) Obstructive jaundice 	A
<p>48) Jaundice is caused due to:</p> <ul style="list-style-type: none"> a) Excess of uric acid in the blood b) Excess of bilirubin in the blood c) Excess of haemoglobin in the blood d) Excess of potassium in the blood 	B
<p>49) Myoglobin and a single chain of hemoglobin have similar structures.</p> <ul style="list-style-type: none"> A) primary B) secondary C) tertiary D) quaternary E) none of the above 	C
<p>50) In sickle-cell anemia, the negatively charged glutamic acid residue is replaced by the neutral amino acid</p> <ul style="list-style-type: none"> A) tyrosine B) lysine C) valine D) adenosine E) glycine 	C
<p>51) The degradation of hemoglobin primarily occurs in which organ?</p> <ul style="list-style-type: none"> a) Liver b) Kidneys c) Spleen d) Lungs 	C

<p>52) The breakdown of hemoglobin results in the production of bilirubin, which is:</p> <ul style="list-style-type: none"> a) Excreted in urine b) Excreted in sweat c) Metabolized by the liver and excreted in bile d) Converted into glucose 	<p>C</p>
<p>53) In sickle cell disease, a mutation occurs in the hemoglobin gene, resulting in the production of abnormal hemoglobin. This mutation affects the:</p> <ul style="list-style-type: none"> a) Alpha chains of hemoglobin b) Beta chains of hemoglobin c) Gamma chains of hemoglobin d) Delta chains of hemoglobin 	<p>B</p>
<p>54) A1c (HbA1c) is a form of hemoglobin that used as a marker for long-term glucose control in individuals with diabetes. The "A1c" portion refers to:</p> <ul style="list-style-type: none"> a) A specific mutation in the hemoglobin gene b) The alpha chains of hemoglobin c) The beta chains of hemoglobin d) Glycated hemoglobin molecules 	<p>D</p>
<p>55) Hemoglobinopathies refer to:</p> <ul style="list-style-type: none"> a) Genetic disorders affecting the structure or production of hemoglobin b) Autoimmune disorders affecting hemoglobin synthesis c) Nutritional deficiencies leading to abnormal hemoglobin levels d) Infectious diseases targeting hemoglobin molecules 	<p>A</p>
<p>56) Met HB:</p> <ul style="list-style-type: none"> a) Cause stagnant hypoxia b) HB combine with CO c) The subject suffer from fever d) Result from oxidation of ferrous to ferric 	<p>D</p>

57) Carbon monoxide (CO):

- a) Loosely combines with hemoglobin.
- b) Shifts oxygen dissociation curve to the right.
- c) Interferes with O₂ transport.
- d) Has a lesser affinity to hemoglobin than oxygen.
- e) Interferes with transport of CO₂.

C

58) What is true about symptoms of CO poisoning?

- a. Sever cyanosis
- b. Shallow rapid breathing
- c. Increased heart rate
- d. Cherry red color

D