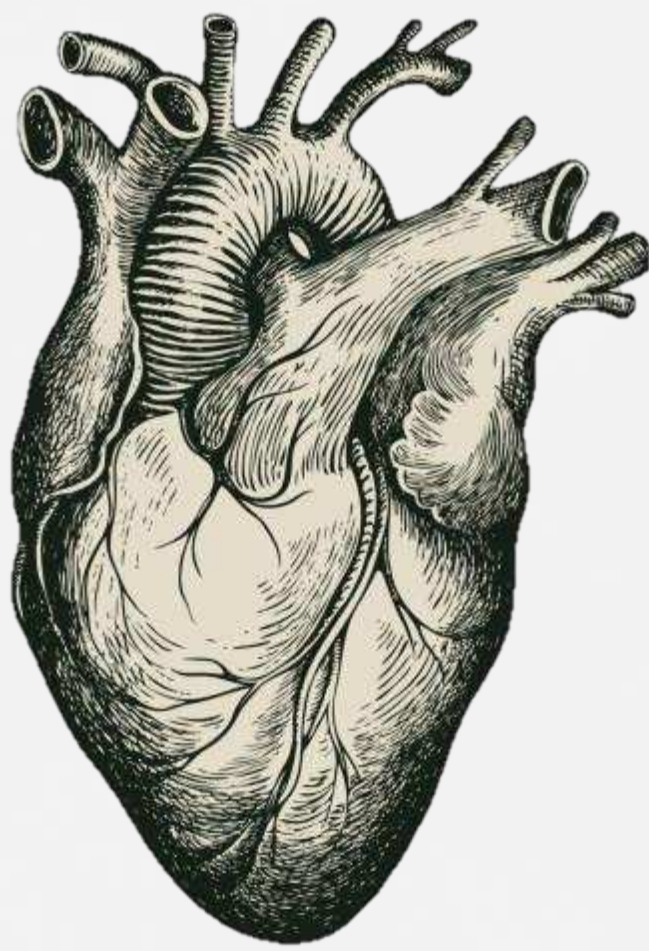


Cardiovascular system



Past papers – Final

Done by : Malek Abu Rahma

Microbiology

Lecture 1

1. Catalase negative, coagulase negative alpha hemolysis and causes subacute endocarditis

ANSWER : Streptococcus viridans

2. Rheumatic fever is a complication of

- A) Group B strep
- B) Group A strep

ANSWER : B

3. Which of the following is the most common cause of infective endocarditis in developing countries :

- A) Staphylococcus aureus
- B) Streptococcus viridans
- C) Fungi
- D) Haemophilus influenzae

ANSWER : B

4. Infection with subacute infective endocarditis is associated with the following:

- A) Abnormal valves
- B) Congenital deformities
- C) Rheumatic lesions
- D) A&B
- E) All A, B and C

ANSWER : E

Microbiology

Lecture 1

5. Not a predisposing factor for infective endocarditis:

- A) Prosthetic valves
- B) Diabetes
- C) Immunodeficiency

ANSWER : C

6. Most common cause of acute endocarditis :

- A) S.aureus
- B) S.epidermidis
- C) Aggregatibacter

ANSWER : A

7. Most common cause of subacute infective endocarditis :

- A) S.pyogenes
- B) Enterococcus
- C) Viridans streptococci

ANSWER : C

8. Most common cause of endocarditis:

- A) Enterococcus
- B) Candida albicans
- C) Salmonella
- D) Viridans streptococci
- E) Brucella

ANSWER : D

Microbiology

Lecture 1

9. A patient came with endocarditis. He has had a prosthetic valve for 5 years. Investigations show catalase positive and coagulase negative bacteria. Which of the following is the cause?

- A) Staph aureus
- B) Staph epidermidis
- C) Staph saprophyticus
- D) Group A strep

ANSWER : B

10. The main mechanism of rheumatic fever:

- A) Bacterial or infectious cause
- B) Autoimmune by antibodies against M protein

ANSWER : B

11. All of the following statements regarding viridans streptococcal group infective endocarditis are correct except the causative agents are correct except:

- A) Causative agents are gram +, catalase -, a Hemolytic optochin resistant and bile and insoluble
- B) pathogenesis involve dextran (biofilm)-mediated adherence onto both normal or damaged heart valve and to each other (vegetation)
- C) St. Mutans, st. mitis Account for many IE cases, and tend to be less susceptible to penicillin
- D) VGS causes hectically febrile illness that rapidly damages cardiac structures, seeds extra cardiac sites, and, if untreated, progresses to death within weeks
- E) Common cause of dental carries hence prophylactic antibiotics prior to dental work for individuals with damaged heart valve is recommended

ANSWER : D

12. Given the diagnosis of infective endocarditis which of the following is incorrect:

- A) IE is a multisystem disease that results from infection, usually bacterial, of the endocardial surface of the heart and the epithelial lining of heart valves
- B) Rheumatic heart disease remains the key risk factor for infective endocarditis in low income countries
- C) Gram positive cocci are the most frequent causative agents of IE
- D) A gram positive, catalase positive, mannitol fermenter is the most common cause in IE in low-income countries
- E) Vancomycin plus gentamycin initiated immediately after blood samples are taken for cultures

ANSWER : D

Microbiology

Lecture 2

13. Which of the following is wrong regarding filoviridae?

ANSWER : It primarily infects liver cells resulting in fever, jaundice and hemorrhage

14. The dengue virus, one is correct:

- A) The virus is limited to Karnataka State, India.
- B) A live attenuated vaccine is available for dengue
- C) Infection with one serotype confers immunity only to the infecting serotype
- D) Dengue virus has five serotypes that cause a variety of clinical manifestations.
- E) Is the least prevalent arbovirus in the world.

ANSWER : C

15. Which of the following is true regarding Dengue fever?

- A) Infection with one serotype gives you immunity for the same serotype only.
- B) It has five serotypes
- C) It has negative ssRA

ANSWER : A

16. Human to human transmission occurs in viral hemorrhagic fevers EXCEPT :

- A) Rift Valley virus
- B) Crimean-Congo hemorrhagic fever

ANSWER : A

Microbiology

Lecture 2

17. All of the following regarding viral hemorrhagic fever are correct EXCEPT :

- A) Hantaviruses, Rift Valley fever and Dengue are not associated with person to-person transmission
- B) Arenaviruses are found in South America and Africa and are transmitted by Arthropods
- C) Yellow fever is associated with 2 types of infectious cycles
- D) Filoviruses cause the most lethal type of hemorrhagic fever
- E) Bleeding occurs frequently and is a common cause of death

ANSWER : B

18. Wrong about hemorrhagic fever:

- A) Vaccines are available for most viral infections
- B) Passive immunization is a good choice for immunocompromised patients

ANSWER : A

19. Wrong about Dengue fever :

- A) The vector is *Aedes aegypti*
- B) Incubation period is 3 to 4 weeks
- C) Has 4 serotypes

ANSWER : B

20. All of the following viruses cause hemorrhagic fever EXCEPT :

- A) Hantaviruses
- B) Bunyaviruses
- C) Polio virus

ANSWER : C

Microbiology

Lecture 2

21. Wrong statement about hemorrhagic fever :

- A) Can be caused by arboviruses and non-arboviruses
- B) Most deaths occur due to severe bleeding

ANSWER : B

22. Which of the following is associated with nosocomial infection:

- A) Hantaviruses
- B) Dengue fever
- C) Yellow fever
- D) Lassa virus
- E) Ebola virus

ANSWER : E

23. Which of the following doesn't transmit by direct contact between persons?

- A) Ebola virus
- B) Lassa virus
- C) Dengue virus
- D) Marburg virus

ANSWER : C

24. Which of the following Ebola types doesn't cause disease in humans

- A) Ebola Reston
- B) Ebola Ivory Coast
- C) Ebola Sudan
- D) Ebola Zaire

ANSWER : A

Microbiology

Lecture 2

25. Which of the following is wrong about VHF (Virus Hemorrhagic Fever)

- A) It causes severe hemorrhage
- B) Hanta virus needs vector to be transmitted

ANSWER : B

26. True about Dengue fever:

- A) DNA genomic
- B) non enveloped
- C) very severe in younger children

ANSWER : C

27. Which of the following is incorrect about VHF:

ANSWER : Ribavirin is used for filoviredea.

28. A heart disease caused by Filovirus:

ANSWER : Ebola hemorrhagic fever

Microbiology

Lecture 3

29. Which of the following infecting agents is the most common cause of myocarditis?

- A) Poliomyelitis virus
- B) Trypanosoma cruzi
- C) Coxsackievirus
- D) Echovirus
- E) Coxiella burnetii

ANSWER : C

30. Most common cause of myocarditis?

- A) Coxsackie B virus
- B) Mumps virus
- C) Rubella virus

ANSWER : A

31. All of the following regarding coxsackievirus B induced myocarditis are correct EXCEPT :

- A) Occurs mostly in average-aged men
- B) Clinical manifestations appear after 3-2 month of infection
- C) Immune-mediated inflammation is the main cause of pathogenesis
- D) Clinical manifestations vary from person to person
- E) Most cases of infection resolve spontaneously

ANSWER : B

32. Doesn't cause myocarditis :

- A) Cytomegalovirus
- B) Rubella virus
- C) Measles virus
- D) Coronavirus

ANSWER : D

Pathology

Lecture 1

33. the following statements conform with angina pectoris except:

- A) Prinzmetal is usually associated with elevated ST segment of ECG
- B) Stable angina is relieved by rest
- C) Unstable angina is considered a pre-infarction
- D) Typical angina is produced mainly on rest
- E) Variant angina is due to vasospasm

ANSWER : D

34. angina pectoris that occurs more frequently and of progressively longer period than other is:

- A) Crescendo
- B) Stable
- C) Variant
- D) Prinzmetal
- E) Effort angina

ANSWER : A

35. a man who suffer from chest pain and breathlessness after climbing the stairs to the 3rd floor, he has:

- A) Stable angina
- B) Prinzmetal angina
- C) Unstable angina
- D) Myocardial infarction

ANSWER : A

36. Thrombosis of atheromatous plaque, the most common complication:

- A) Stable angina
- B) Effort angina
- C) Unstable angina
- D) Prinzmetal angina
- E) Variant angina

ANSWER : C

Pathology

Lecture 1

37. all of the following would mostly lead to unstable angina EXCEPT:

- A) Partially occlusive thrombus
- B) Complete coronary obstruction
- C) Stenosis with superimposed spasm
- D) Distal embolus formation
- E) Atheromatous plaque rupture

ANSWER : B

38. all of the following regarding ischemic heart disease are correct EXCEPT:

- A) Associated with a severe substernal pain that can radiate to the left arm
- B) Variant angina is associated with coronary artery vasospasm
- C) Stable angina is also known as pre-infarction angina
- D) Chronic IHD is usually associated with arrhythmias
- E) Typical angina can be relieved by rest and nitroglycerin

ANSWER : C

39. Stable angina pectoris is also known as crescendo angina

- A) True
- B) False

ANSWER : B

40. diminished oxygen-carrying capacity of the blood represents the most frequent mechanism of cardiac ischemia:

- A) True
- B) False

ANSWER : B

Pathology

Lecture 1

41. The most common complication of thrombus of atheromatous plaques:

- A) Stable angina
- B) Effort angina
- C) Unstable angina
- D) Prinzmetal angina
- E) Variant angina

ANSWER : C

42. Wrong pair:

ANSWER : Atherosclerotic plaque rupture/ Prinzmetal angina

43. Not one of the clinical forms of IHD:

ANSWER : Endarteritis obliterans

44. Which of the following mostly to proceed to MI?

ANSWER : Unstable angina

Pathology

Lecture 1

45. angina pectoris is defined as ischemia that causes pain but is insufficient to lead to death of myocardium

- A) True
- B) False

ANSWER : A

Pathology

Lecture 2

46. ONE match is FALSE regarding the histological findings and the corresponding time frame following acute myocardial infarction:

- A) Macrophages: 7-10 days
- B) Granulation tissue: 2 weeks
- C) Neutrophils: 2-3 days
- D) Wavy fibers: 6 weeks

ANSWER : D

47. The best cardiac enzymes in the evaluation of acute myocardial infarction are:

- A) Myoglobins
- B) Troponins
- C) LDH
- D) Creatine Kinases

ANSWER : B

48. Occlusion of the Right circumflex coronary artery is responsible for the majority of acute myocardial infarctions:

- a) True
- b) False

ANSWER : B

49. Regarding myocardial infarction, all are correct EXCEPT :

- A) Most cases of pre-hospital deaths are due to lethal arrhythmias
- B) Troponin I and T are the best indicators for MI
- C) 40-50% of cases are due to occlusion of the circumflex artery
- D) Coagulative necrosis and wavy fibers are seen within 24 hours of injury
- E) Most cases of in-hospital deaths are due cardiogenic shock

ANSWER : C

Pathology

Lecture 2

50. In right coronary dominant patients, the most frequent coronary artery occlusion causing MI is:

- A) Left main stem
- B) Right main stem
- C) Left circumflex
- D) Left anterior descending
- E) Right posterior descending

ANSWER : D

51. The heart specific enzyme/protein serum elevation indicative of myocardial infarction is :

- A) Lactic dehydrogenase
- B) Creative kinase index
- C) Troponin I
- D) Troponin C

ANSWER : C

52. Wrong complication of MI:

ANSWER : a. Papillary muscle rupture/severe aortic regurgitation

53. Up to 50% of all MI are due to occlusion of

ANSWER : a. left anterior descending artery

Pathology

Lecture 2

54. Papillary muscle rupture can lead to:

- A) Aortic regurgitation
- B) Mitral stenosis
- C) Mitral regurgitation
- D) Aortic stenosis

ANSWER : C

55. hours following acute myocardial infarction , the infarct site reveals a dense neutrophil infiltrate

- A) True
- B) False

ANSWER : A

Pathology

Lecture 3

56. The second most common valve to be affected by rheumatic after mitral is:

- A) Aortic
- B) Pulmonary
- C) Tricuspid
- D) Pulmonary and tricuspid

ANSWER : A

57. The most common cause of death in acute rheumatic carditis is:

- A) Serofibrinous pericarditis
- B) Mitral stenosis
- C) Thromboembolism
- D) Valve incompetence
- E) myocarditis

ANSWER : E

58. The microorganism responsible for rheumatic carditis is:

- A) Alpha streptococcus hemolytic group A
- B) Human papilloma virus
- C) Staphylococcus aureus
- D) All of the above
- E) None of the above

ANSWER : E

59. The valve most commonly affected by rheumatic carditis is the:

- A) Pulmonic
- B) Tricuspid
- C) Mitral
- D) Foramen ovale
- E) Aortic

ANSWER : C

Pathology

Lecture 3

60. All of the following regarding rheumatic heart fever are correct EXCEPT:

- A) Aschoff bodies can be seen in acute rheumatic heart disease
- B) Chronic form of rheumatic heart fever is associated with stenosis
- C) Can affect the pericardium, myocardium or endocardium (including valves)
- D) The most important cause of acquired post-inflammatory valves scarring
- E) It's an infection due to group A - β hemolytic streptococci

ANSWER : E

61. The following conform with rheumatic carditis except:

- A) Incidence peaks during childhood
- B) Death in acute rheumatic carditis is most commonly due to mitral stenosis
- C) Considered of immunologic etiology
- D) Antibiotic prevention is possible
- E) All cardiac tissues can be involved

ANSWER : B

62. Rheumatic fever is an infection of the heart caused by bacteria, especially Streptococci

- A) True
- B) False

ANSWER : B

63. Fever and painful tender joints are common signs and symptoms of Rheumatic fever

- A) True
- B) False

ANSWER : A

Pathology

Lecture 3

64. An 11 years old girl suffered from acute pharyngitis and died shortly after. Her condition became worse before she died. What will we expect to see in a postmortem sample?

ANSWER : Aschoff bodies (bcz its acute)

65. The most common congenital valve disease:

ANSWER : Bicuspid aortic valve

66. Not part of major Jones criteria:

ANSWER : Fever

67. Major cause of death in (acute) Rheumatic Carditis:

ANSWER : Acute Myocarditis

Pathology

Lecture 3

68. Which of the following is true regarding bicuspid valve stenosis?

- A) In early life, it is asymptomatic, Later, there will be early & progressive degenerative calcification of aortic valve
- B) Its prevalence is 50% of live births
- C) It is acquired

ANSWER : A

69. Which of the following is not one of JONES criteria?

- A) Elevated ESR
- B) Arthritis
- C) Erythema marginatum
- D) Carditis
- E) Sydenham chorea

ANSWER : A

70. About valvular disease, which is wrong :

ANSWER : Rheumatic disease affects pulmonary valve.

Pathology

Lecture 4

71. Which of the following regarding infective endocarditis is TRUE:

- A) No fever can be seen during infection
- B) Is an auto-immune mediated disease
- C) Acute endocarditis is due to infection with a low virulent microorganism
- D) Can result in the formation of a septic infarct
- E) Recovery is very difficult and most cases end in death

ANSWER : D

72. Subacute endocarditis is often developed by presence of:

- A) Abnormal valves
- B) Congenital deformities
- C) Rheumatic lesions
- D) A&B is correct
- E) All are correct

ANSWER : E

73. The cardiac vegetations which fragment and embolize most are due to:

- A) Infective endocarditis
- B) Rheumatic carditis
- C) Systemic lupus erythematosus
- D) Non-bacterial thrombotic endocarditis
- E) Marantic endocarditis

ANSWER : A

74. The cardiac valve vegetations most frequently embolizing are those of:

- A) Limban sacks
- B) Rheumatic carditis
- C) Marantic
- D) Infective endocarditis
- E) Associated with cancer

ANSWER : D

Pathology

Lecture 4

75. Influenza viruses represent the most important pathogens in infective endocarditis

- A) True
- B) False

ANSWER : B

76. Prosthetic heart valves are considered risk factors for infective endocarditis

- A) True
- B) False

ANSWER : A

77. IV drug usage is a unique risk factor for infective endocarditis of the pulmonary valve

- A) True
- B) False

ANSWER : B

78. Wrong combination:

ANSWER : Aschoff bodies & acute phase of infective endocarditis

Pathology

Lecture 4

79. Most systemic emboli results from:

ANSWER : Acute myocardial infarction.

80. Which of the following can be found in infective endocarditis?

ANSWER : Vegetations that contain bacteria

81. What could be found as a result of infective endocarditis?

- A) Aschoff bodies
- B) Bacteria on vegetation

ANSWER : B

EMBRYOLOGY

Lecture 1+2

82. The cranial part of the valvular fold on the sinoatrial orifice forms?

- A) Eustachian valve
- B) Thebesian valve
- C) Crista terminalis

ANSWER : C

83. Which of the following is an incorrect match

ANSWER : Eisenmenger complex- noncyanotic

84. Which of the following is true?

ANSWER : Ostium secundum formed due to apoptosis of septum primum

85. What forms the muscular part of the interventricular septum?

ANSWER: Ventricular septum

EMBRYOLOGY

Lecture 1+2 (Dr.Amjad)

86. A child with a shunt between the two ventricles, later in life the shunt is reversed, what is that?

ANSWER : VSD with pulmonary hypertension

87. Wrong about the development of the heart:

ANSWER : the smooth part of both ventricles is derived from the distal part of bulbus cordis

EMBRYOLOGY

Lecture 3+4

88. Which of the following forms the renal part of IVC?

- A) Subcardinal vein
- B) Supracardinal vein
- C) Sacrocardinal vein

ANSWER : A

89. The congenital anomaly that allows blood to pass from pulmonary vein to the aorta?

ANSWER : Patent ductus arteriosus

90. Ductus arteriosus is from?

ANSWER : Left distal 6th arch

EMBRYOLOGY

Lecture 3+4 (Dr.Amjad)

91. A 3-year-old boy presents with cyanosis and shortness of breath that develops when he plays with friends. According to his mother, the boy was born cyanotic. The boy is very small and short for his age, and he squats on the floor next to his mother. Chest radiography reveals a boot-shaped heart, normal heart size, and a right aortic arch. Echocardiography reveals a large ventricular septal defect with an overriding aorta, pulmonary stenosis, and right ventricular hypertrophy. Which of the following is the most likely diagnosis?

- A) Coarctation of the aorta
- B) Patent ductus arteriosus
- C) Rheumatic heart disease
- D) Tetralogy of Fallot
- E) Transposition of the great vessels

ANSWER : D

92. Someone has very weak femoral impulses and chest ray shows that ribs have been notched. What is the cause?

- A) SVC obstruction
- B) Aortic coarctation
- C) Heart disease

ANSWER : B

93. The last event in conversion of foetal circulation into adult circulation:

ANSWER : closure of ductus arteriosus due to increase in pulmonary oxygen tension

94. A newborn with transposition of the great vessels, the most likely associated heart abnormality is :

ANSWER : ventricular septal defect

EMBRYOLOGY

Lecture 3+4 (Dr.Amjad)

95. Wrong about foetal circulation:

ANSWER : all shunt close at birth

96. Which of the following is not related to the development of the RIGHT VITELLINE VEIN ?

- A) The superior mesenteric vein.
- B) The hepatic sinusoids.
- C) The hepatocardiac portion of the inferior vena cava.
- D) The portal vein.
- E) Anterior cardinal vein.

ANSWER : E

97. Wrong about portal vein:

ANSWER : before its formation, ductus venosus connect between right umbilical and left vitelline veins

98. Choose the WRONG match:

- A) Right umbilical vein - ligamentum teres hepatis
- B) Septum spurium - fusion of cranial end of right and left venous valve of the sinoatrial valve
- C) Ductus venosus ligamentum venosum
- D) Ductus arteriosus - ligamentum arteriosum
- E) The umbilical arteries - medial umbilical ligaments

ANSWER : A

Physiology

99. An abnormal P wave on the ECG indicates an abnormality in the:

- A) Right bundle branch.
- B) Atria.
- C) Ventricles.
- D) AV node.
- E) Left bundle branch.

ANSWER : B

100. The QRS voltage was 0.5 mV in lead I and 1.5 mV in lead III. What is the QRS

voltage in lead II:

- A) 2.5 mV.
- B) 1.5 mV.
- C) 1.0 mV.
- D) 2.0 mV.
- E) 0.5 mV.

ANSWER : D

101. In the frontal plane when mean cardiac axis angle is +55, this will cause a large negative deflection in which lead:

- A) Lead II.
- B) aVR.
- C) aVL.
- D) Lead III.
- E) aVF.

ANSWER : B

102. If the SA node is non-functional, one of the following will take over:

- A) AV node.
- B) Perkanje fibers.
- C) Bundle of his.
- D) Once the SA fails death is the faith.
- E) Parasympathetic stimulation can take over.

ANSWER : A

Physiology

103. You have the following choices read them then answer the question that follows :

1) Lead I. 2) lead II. 3) lead III. 4) AVF. 5) AVR.

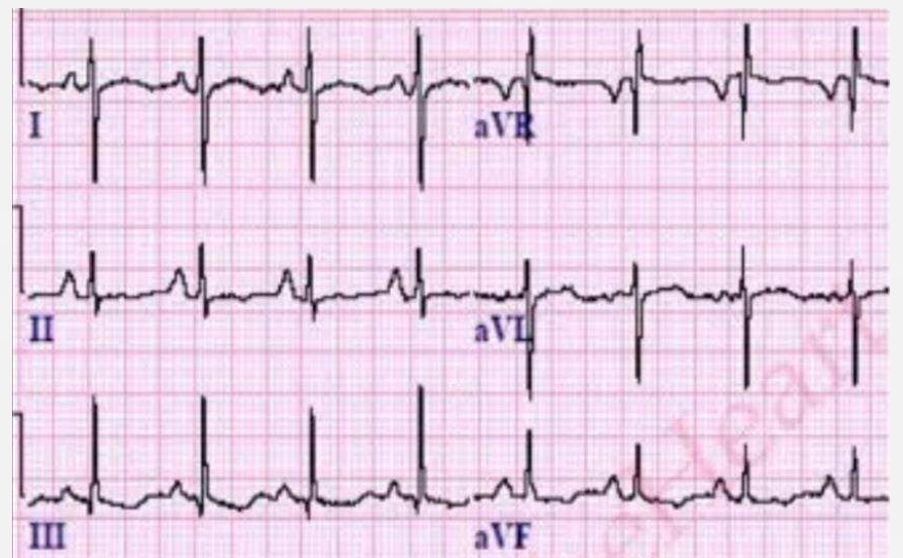
The mentioned above that are unipolar and read the electrical activity of the frontal plane of heart is/are:

- A) 1,2,3.
- B) 4,5.
- C) 1,4.
- D) 4,2.
- E) 6.

ANSWER : B

104. This ECG strip was recorded with standard speed and calibration. This ECG strip clearly shows:

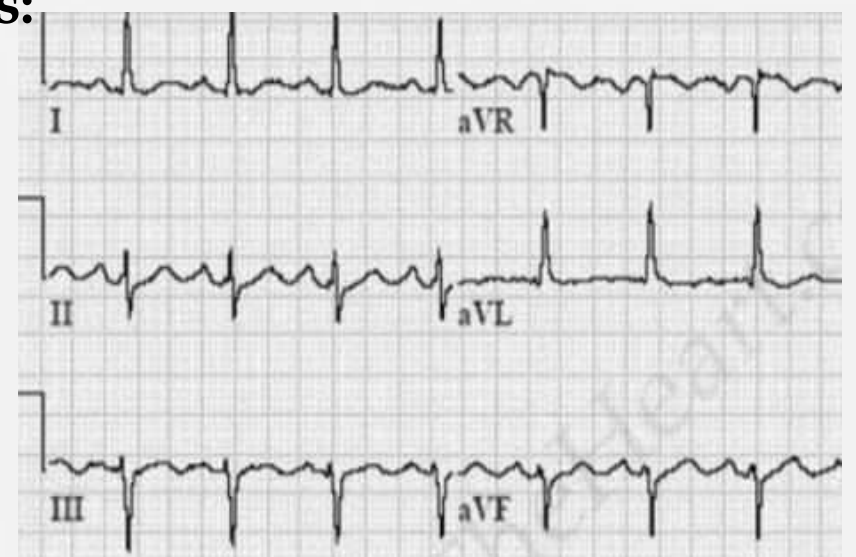
- A) Isoelectric QRS complex in lead III.
- B) Inverted T wave in lead aVF.
- C) Left axis deviation.
- D) Right axis deviation.
- E) ST segment depression in lead I.



ANSWER : D

105. The right interpretation of the following ECG is:

- A) normal.
- B) Right axis deviation.
- C) Left axis deviation.
- D) Extreme left axis deviation.
- E) Extreme right axis deviation.



ANSWER : C

106. T wave precedes:

ANSWER : Isovolumetric relaxation

Physiology

Dr. Fatima

107. Which of the following has the highest velocity of blood?

- A) Aorta
- B) Capillaries
- C) Small arteries
- D) arterioles

ANSWER : A

108. A group of your colleagues are inventing an artificial blood vessel, they found out Reynold's number to be high, which of the following is true regarding Reynolds number?

- A) Thrombosis would decrease Reynold's number
- B) Anemia causes an increase in Reynold's number

ANSWER : B

109. Which of the following is true regarding resistance ?

- A) Amputation of a limb will not increase the overall resistance
- B) When the diameter of the artery is increased it will increase the conduction at a certain pressure.
- C) The total resistance is lower than the resistance in the arterioles alone

ANSWER : B

110. Which of the following is a function of Angiotensin 2?

- A) Acts on hypothalamus to decrease thirst
- B) Acts directly on the arterioles by binding to Gprotein coupled AT2 receptors to cause vasoconstriction
- C) Acts directly on the kidney to increase excetion of water and Na+
- D) Acts on zona glomerulosa cells of the adrenal cortex to stimulate the synthesis and secretion of aldosterone.

ANSWER : D

Physiology

Dr. Fatima

111. A patient with renal failure undergoes dialysis, and arteriovenous (A-V fistula) directly from the radial artery to the antecubital vein of the forearm is created to permit vascular access for dialysis. What occurred to the venous side?

- A) Inward eutrophic remodelling
- B) Hypertrophic remodeling
- C) Outward remodeling
- D) Outward hypertrophic remodeling

ANSWER : D

112. Which of the following is a vasoconstrictor ?

- A) Bradykinin
- B) Histamine
- C) Endothelin

ANSWER : C

113. True regarding neural BP control:

- A) Information from the carotid sinus and aortic arch baroreceptors is carried by vagus nerve
- B) The carotid sinus baroreceptors are responsive to increases or decreases in arterial pressure

ANSWER : B

114. Regarding Reynold's number, which of the following is correct?

- A) Anemia causes an increase in Reynold's number
- B) Thrombosis decreases Reynold's number
- C) Increased blood viscosity increases Reynold's number
- D) When Reynolds' number rises above approximately 2000, turbulence will not occur.

ANSWER : A

Physiology

Dr. Fatima

115. Which of the following is true regarding local control of tissue blood flow?

- A) Reactive hyperemia is when a tissue becomes highly active, such as an exercising muscle so the rate of blood flow through the tissue increases
- B) Active hyperemia is When the blood supply to a tissue is blocked for a few seconds to hours then is unblocked, blood flow through the tissue usually increases immediately
- C) Angiogenesis is stimulated by increased metabolic requirements and tissue hypoxia

ANSWER : C

116. In case the diameter of arterioles decreased, what would happen to flow, conductance and resistance ?

- A) Decrease, decrease, increase
- B) Decrease, increase, decrease
- C) Increase, decrease, increase
- D) Increase, increase, decrease

ANSWER : A

117. Which of the following is most probably a cause of high pulse pressure?

- A) Increased compliance
- B) Decreased compliance

ANSWER : B

118. Increased tone of arteries and resistance vessels can be due to

ANSWER : Increased endothelin

Physiology

Dr. Fatima

119. All of the following regarding turbulence is correct except:

- A) It is associated with the sounds of the closure of heart valves .
- B) Turbulence is associated with more resistance than laminar blood flow .
- C) Turbulence is directly proportional to the cube root of the driving pressure.
- D) It is associated with very high velocity of the blood.
- E) It occurs normally in the aorta and narrowed blood vessels

ANSWER : C

120. The major structure that contributes to peripheral resistance is:

- A) Aorta
- B) Arterioles
- C) Vena Cava
- D) Capillaries
- E) Venules

ANSWER : B

121. Resistance to laminar flow is :

ANSWER : Inversely proportional to the fourth power of the radius.

122. Parallel arrangement of vessels ensures that all organs receive blood of the same composition.

- A) True
- B) False

ANSWER : A

Physiology

Dr. Fatima

123. If $P = 90$ mm Hg at the beginning of vessel 1, and $P = 10$ mm Hg at the end of vessel 1, whereas $P = 190$ mm Hg at the beginning of vessel 2, and $P = 110$ mm Hg at the end of vessel 2. Which one has higher flow rate given the resistance is the same?

- A) Both have the same flow rate
- B) The information given is not enough
- C) Vessel 2
- D) Vessel 1

ANSWER : A

124. One of the following statements is correct regarding laminar flow:

- A) Turbulent flow is always pathological
- B) It has parabolic profile of velocity.
- C) All blood particles flow in the same speed within a vessel.

ANSWER : B

125. If you removed a kidney for a patient, what will be the effect on total resistance?

- A) Total resistance will increase
- B) Total resistance will decrease
- C) Total resistance will not change

ANSWER : A

126. High Oxygen level is also a vasodilator

- A) True
- B) False

ANSWER : B

Physiology

Dr. Fatima

127. Elevated blood pressure will induce vasoconstriction.

- A) True
- B) False

ANSWER : A

128. Increased right atrial pressure will lead to:

ANSWER : Increased sodium loss

129. What factors cause stimulation of peripheral chemoreceptors?

ANSWER : Low O₂, high CO₂, low pH

130. An old man has a blood pressure of 180/100, A probable cause of his high pulse pressure is :

ANSWER : Decreased arterial compliance

Physiology

Dr. Fatima

131. Which of the following does not increase pulse pressure?

- A) Aortic regurgitation
- B) Aortic stenosis
- C) Arteriosclerosis
- D) Patent ductus arteriosus

ANSWER : B

132. Which of the following is mostly true?

- A) A few minutes after removal of the obstruction there will be increased blood flow (the answer is meant to describe reactive hyperemia)
- B) Another option said that reperfusion occurred after an hour .

ANSWER : A

133. What do baroreceptors not do ?

ANSWER : Decrease renin secretion

134. In case of sudden increase in the peripheral pressure, what happens to the afferent impulses from baroreceptors and the effect of the efferent vasoconstrictor ?

ANSWER : Increased afferent impulses from baroreceptors, decreased efferent vasoconstrictor effect.

Physiology

Dr. Fatima

135. Pulse pressure increases in :

ANSWER : Patent ductus arteriosus

136. Baroreceptor reflex does NOT work at all in patients with hypertension.

- A) True
- B) False

ANSWER : B

137. Peripheral and central chemoreceptors are most sensitive to O₂.

- A) True
- B) False

ANSWER : B

138. The largest cross sectional area in the vascular system is at the level of:

- A) Aorta
- B) arterioles
- C)veins
- D) capillaries

ANSWER : D

Physiology

Dr. Fatima

139. The resistance offered by all capillaries is the highest in the vascular system.

- A) True
- B) False

ANSWER : B

140. The lymphatic vessels are affected by sympathetic stimulation.

- A) True
- B) False

ANSWER : A

141. Changes in compliance of the veins cause redistribution of blood between the veins and the arteries

- A) True
- B) False

ANSWER : A

Pb1

142. Regarding valvular diseases, which of the following is true?

- A) Aortic regurgitation is associated with reduced tolerance to tachycardia
- B) Mitral stenosis is treated by vasodilators
- C) Mitral stenosis is associated with reduced tolerance to tachycardia
- D) Aortic stenosis is treated by vasodilators
- E) Aortic regurgitation is treated by Beta blockers

ANSWER : C

143. patient has pulmonary edema, heart failure, good urination and warm, the best treatment is:

- A) Dobutamine
- B) Furosemide
- C) Furosemide with dobutamine
- D) Furosemide with hydralazine

ANSWER : B

144. Indication for CABG:

- A) Single artery disease without distal main left coronary
- B) Double artery diseases without distal left coronary
- C) Triple arteries disease without distal left coronary
- D) Triple arteries diseases with distal main left coronary

ANSWER : D

145. Which of the following is the best conduit for coronary aortic bypass:

- A) Radial artery
- B) Left internal thoracic artery

ANSWER : B

Pbl

146. Patient comes with a pressure 149/70 mmHg, what is his blood pressure according to ACC/AHA guidelines?

- A) Stage 1
- B) Stage 2
- C) Stage 3
- D) Stage 4
- E) Unclassified hypertension

ANSWER : B

147. A patient came with triad disease (>70% stenosis) and needs CABG immediately. Where to take the graft from?

- A) Great saphenous vein
- B) Synthetic graft

ANSWER : A

148. A patient with acute ischemic stroke with 200/100 blood pressure came to emergency. What should you do?

- A) Give him oral antihypertensive
- B) Need to do more investigation
- C) Get him to ICU with IV antihypertensive

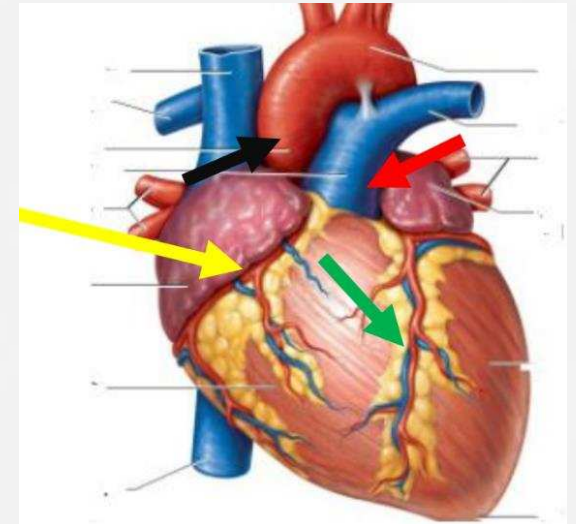
ANSWER : C

Labs

Embryology

149. Which of the following originates from truncus arteriosus? (figure is below)

- A) Red and yellow
- B) Red and Green
- C) Red and black



ANSWER : C

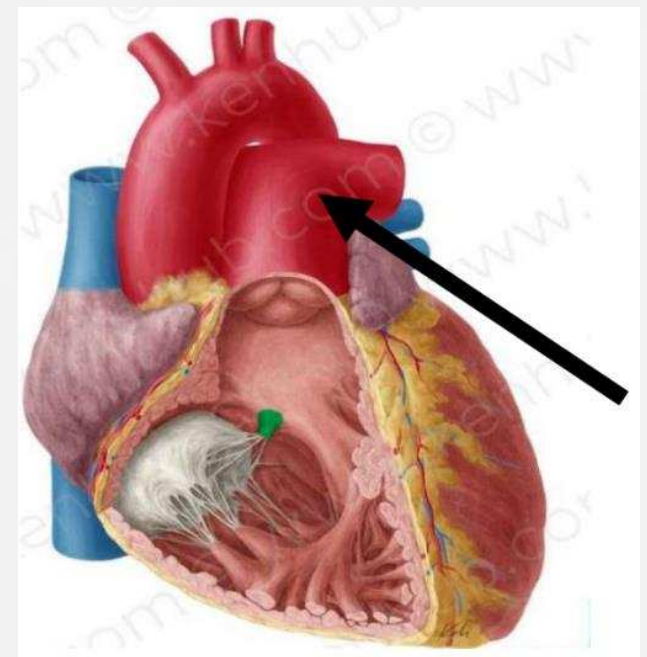
150. In this picture, the heart is shifted to the left due to

ANSWER : Right ventricle hypertrophy



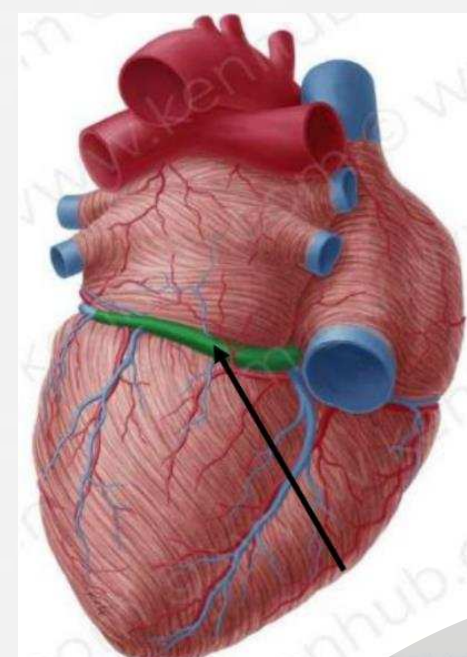
151. The embryonic origin of the pointed structure

ANSWER : Left 6th proximal arch



152. The embryonic origin of the pointed structure is

ANSWER : Left horn



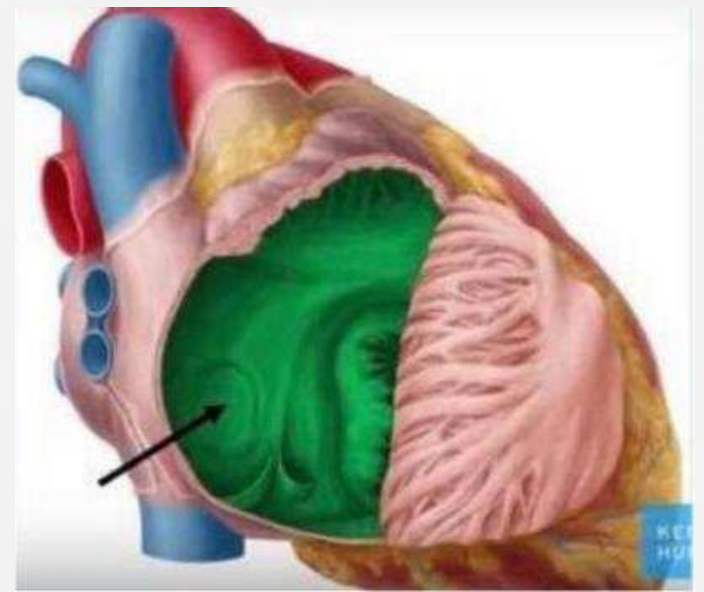
Labs

Embryology

153. The pointed structure represents the:

- A) The proximal bulbar septum
- B) Septum primum
- C) The free edge of the septum secundum
- D) The septum spurium
- E) The distal bulbar septum

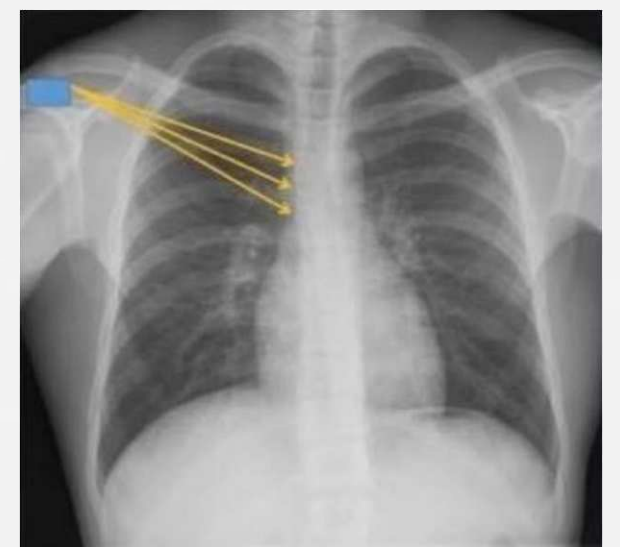
ANSWER : B



154. TRUE:

- A) It is the aortic knuckle
- B) It is formed by the right common cardinal vein and the proximal portion of the right anterior cardinal vein
- C) It is formed from the anastomosis between the anterior cardinal veins
- D) It is the right auricle
- E) It is formed from the terminal portion of the left posterior cardinal vein

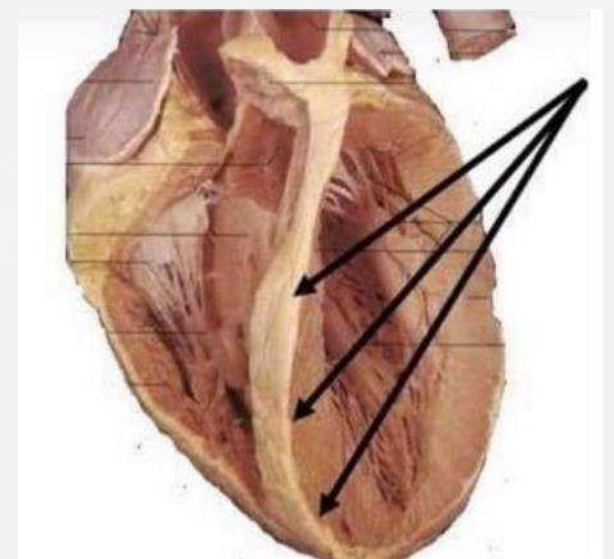
ANSWER : B



155. FALSE:

- A) It begins its development as a projection from the base of the ventricle
- B) It is supplied by LAD
- C) It is muscular
- D) During its development, it forms two horns which reach endocardial cushions
- E) A defect in it, will cause a noncyanotic condition for the rest of patient's life

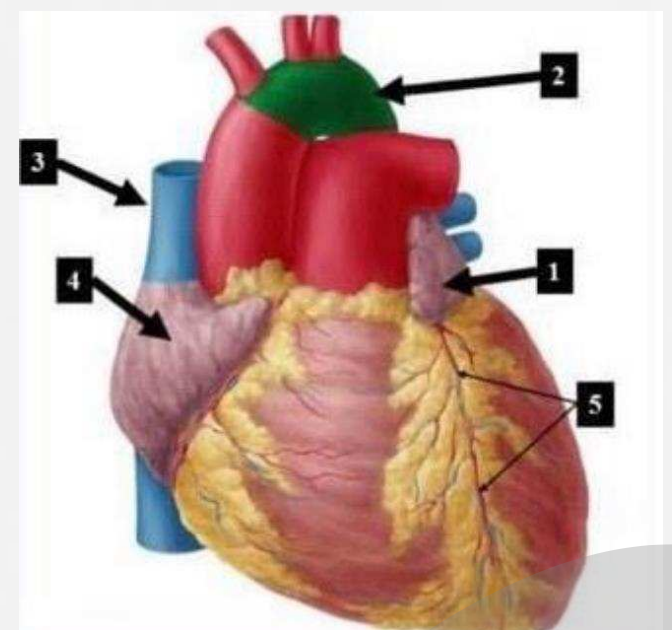
ANSWER : E



156. Which of the pointed structures originate from primitive atrium .

- A) 2 and 1
- B) 3 and 1
- C) 4 and 3
- D) 1 and 4
- E) 3 and 2

ANSWER : D



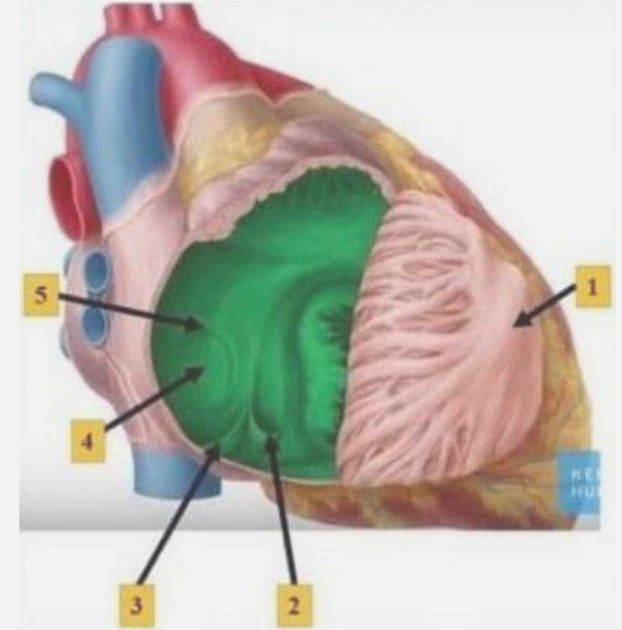
Labs

Embryology

157. The inferior portion of the right sinuatrial valve develops into ?

- A) 2, 3
- B) 3, 5
- C) 1, 3
- D) 1, 2
- E) 3, 4

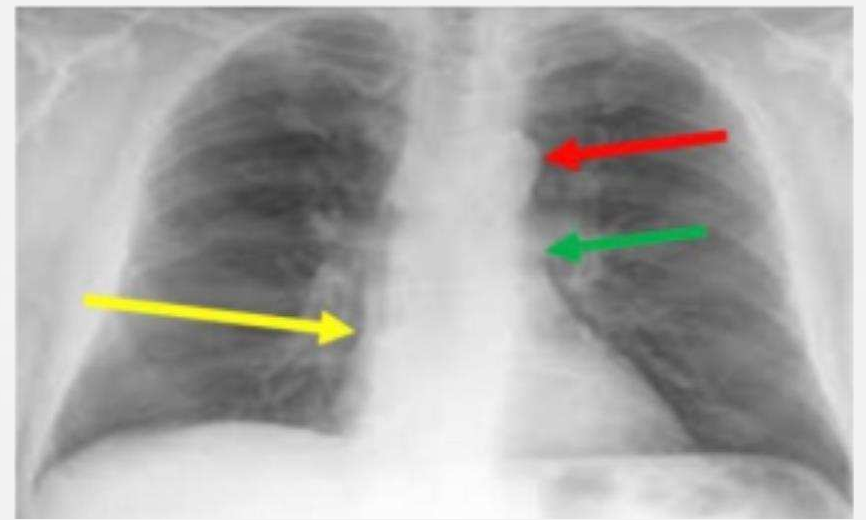
ANSWER : A



158. What is the embryonic origin of yellow arrow

- A) Bulbus cordis
- B) Primitive ventricle+ bulbus cordis
- C) Sinus venosus+ primitive atrium
- D) Primitive atrium

ANSWER : C



Labs

radiology and practical histology

159. In this picture, the heart is shifted to the left due to

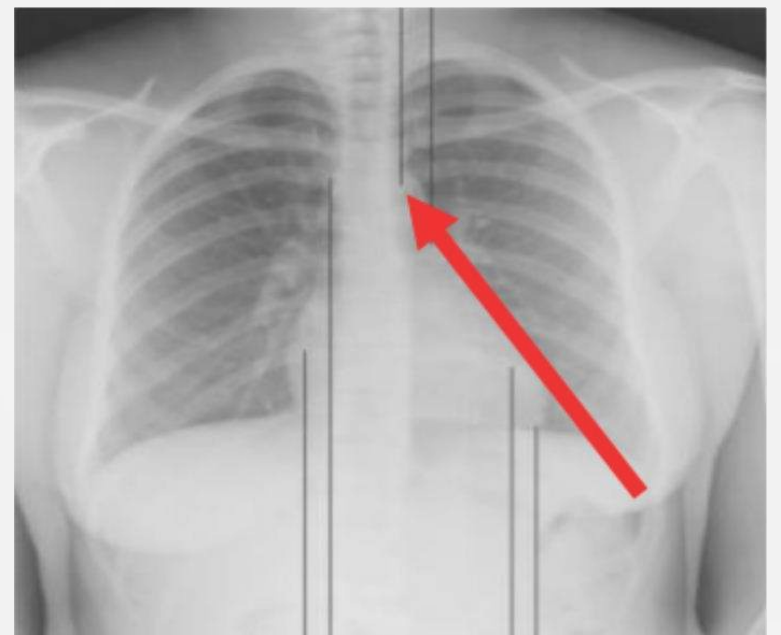
ANSWER : Right ventricle hypertrophy



160. Identify

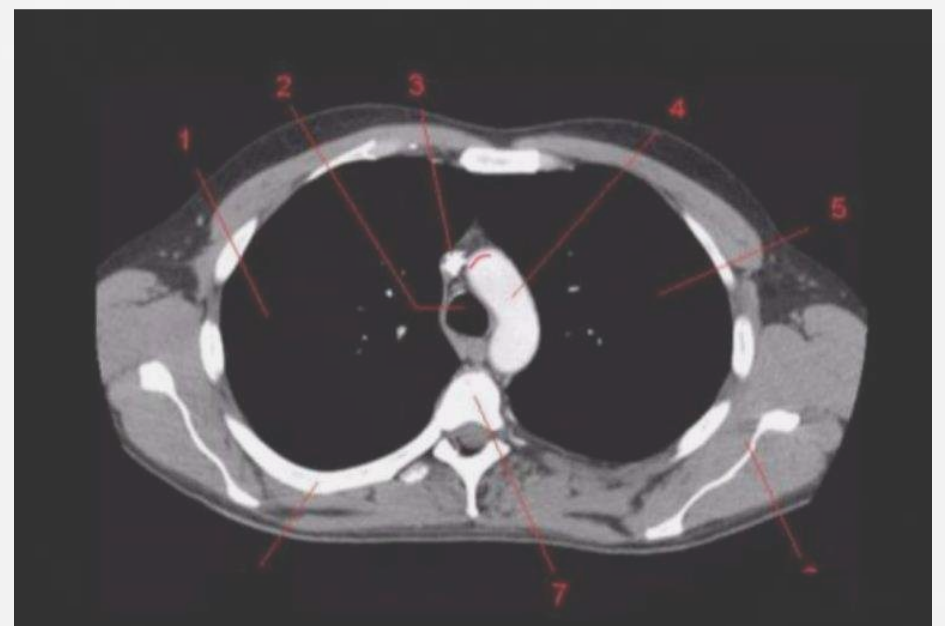
- A) Aorta
- B) Pulmonary trunk

ANSWER : A



161. Posterior to the left of structure 4 is

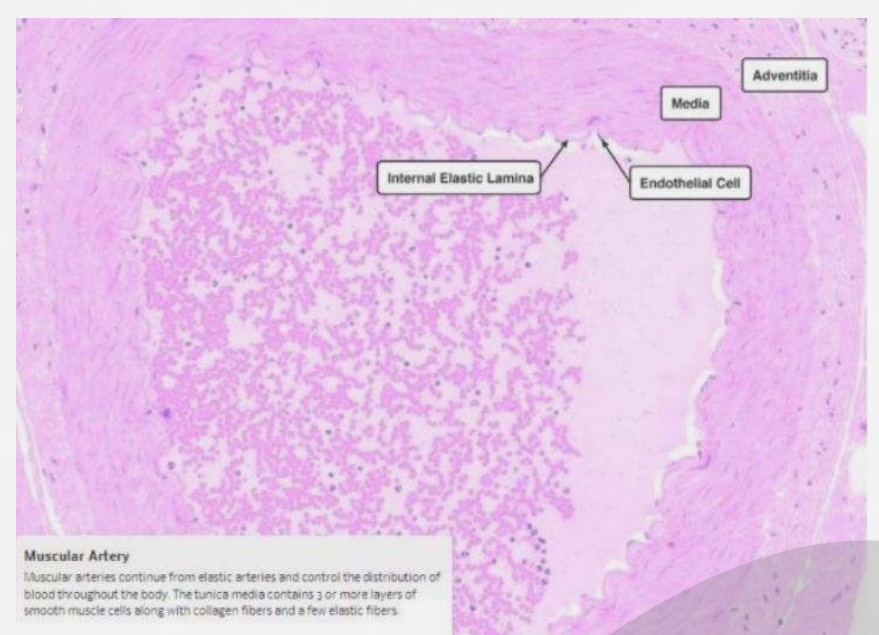
ANSWER : Esophagus



162. what type of vessel could this be ?

- A) radial artery
- B) aorta
- C) inferior vena cava
- D) iliac artery

ANSWER : A



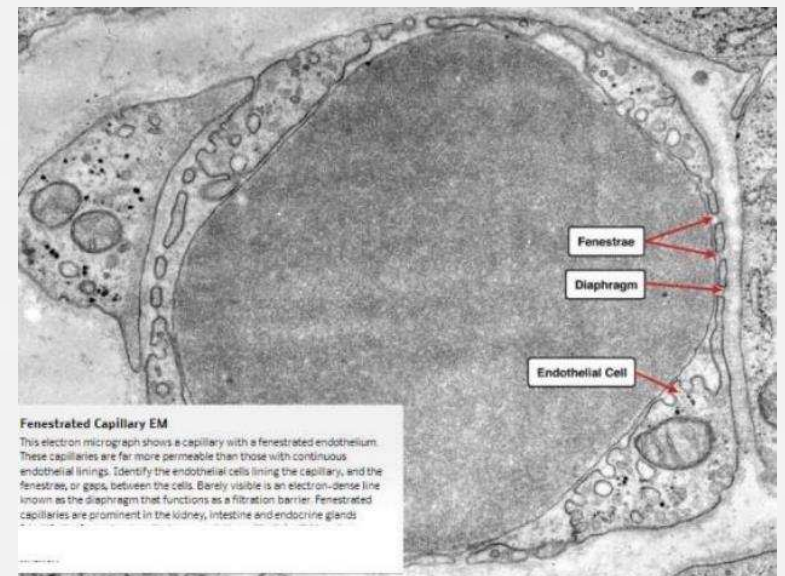
Labs

radiology and practical histology

163. Identify

- A) Fenestrated capillary
- B) Continuous capillary

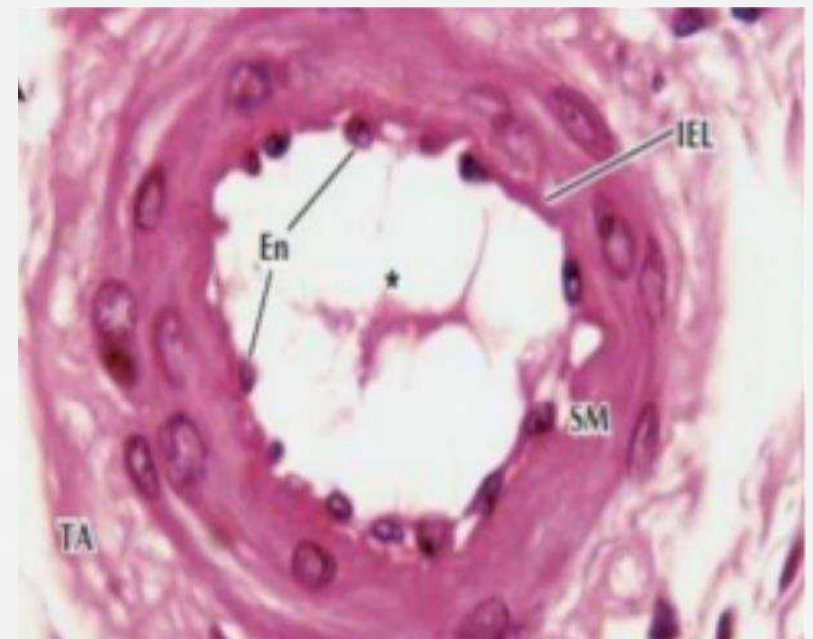
ANSWER : A



164. This section has been taken from:

- A) Elastic Artery
- B) Muscular artery
- C) arteriole
- D) vein

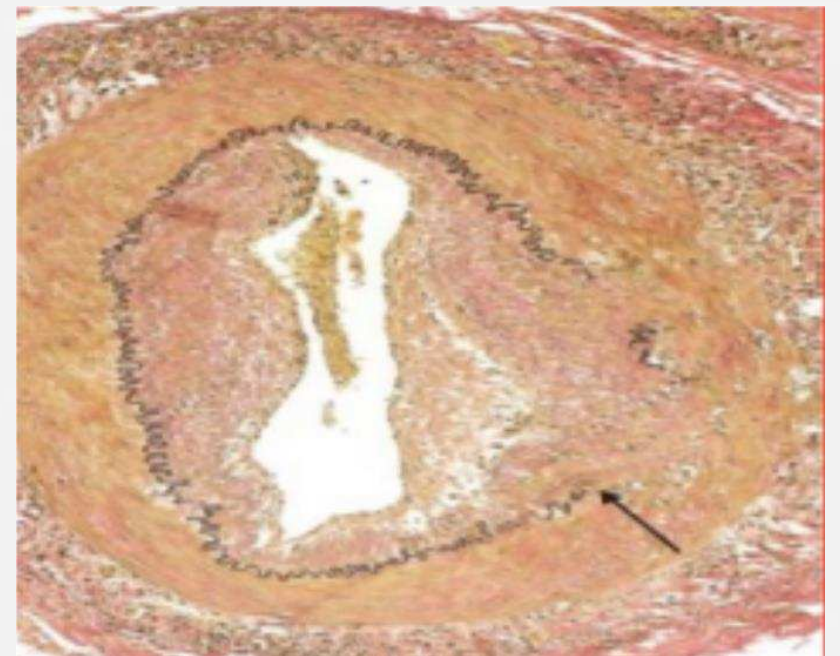
ANSWER : C



165. This section from temporal artery shows fragmentation of

- A) Loose connective tissue
- B) Internal elastic lamina
- C) Smooth muscle cells

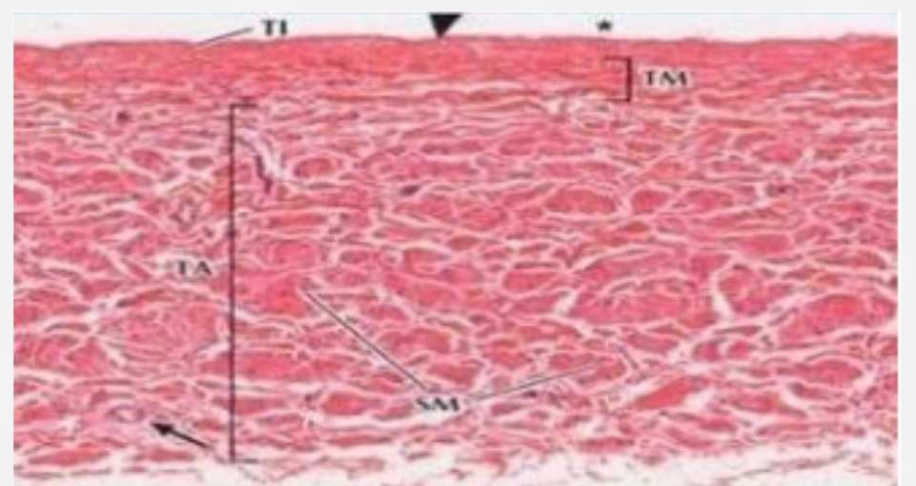
ANSWER : B



166. This vessel could be ?

- A) Inferior vena cava
- B) Radial artery
- C) Resistance small artery (arteriole)
- D) Aorta
- E) Femoral artery

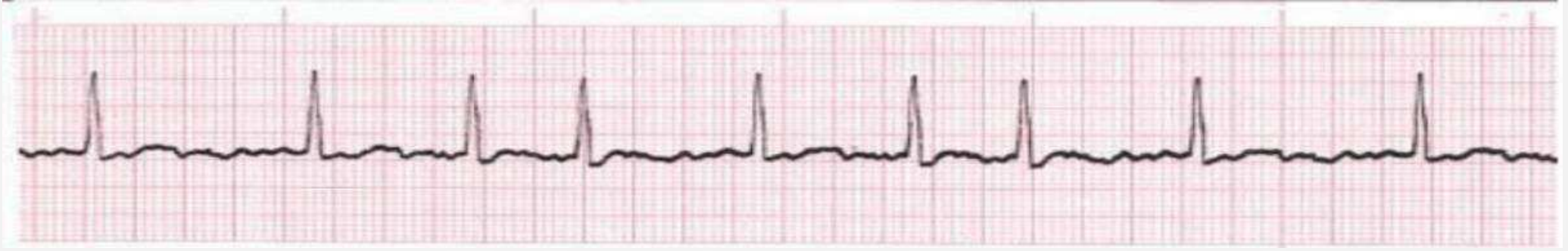
ANSWER : A



Labs

physiology

167. This ECG shows:



ANSWER : Atrial fibrillation

168. All of the following combinations are true EXCEPT

- A) V2: Left sternal edge, 4th intercostal space
- B) V3: Midway between V2 and V4
- C) Red lead- right arm
- D) Green lead- left leg
- E) V1: Right 2nd intercostal space

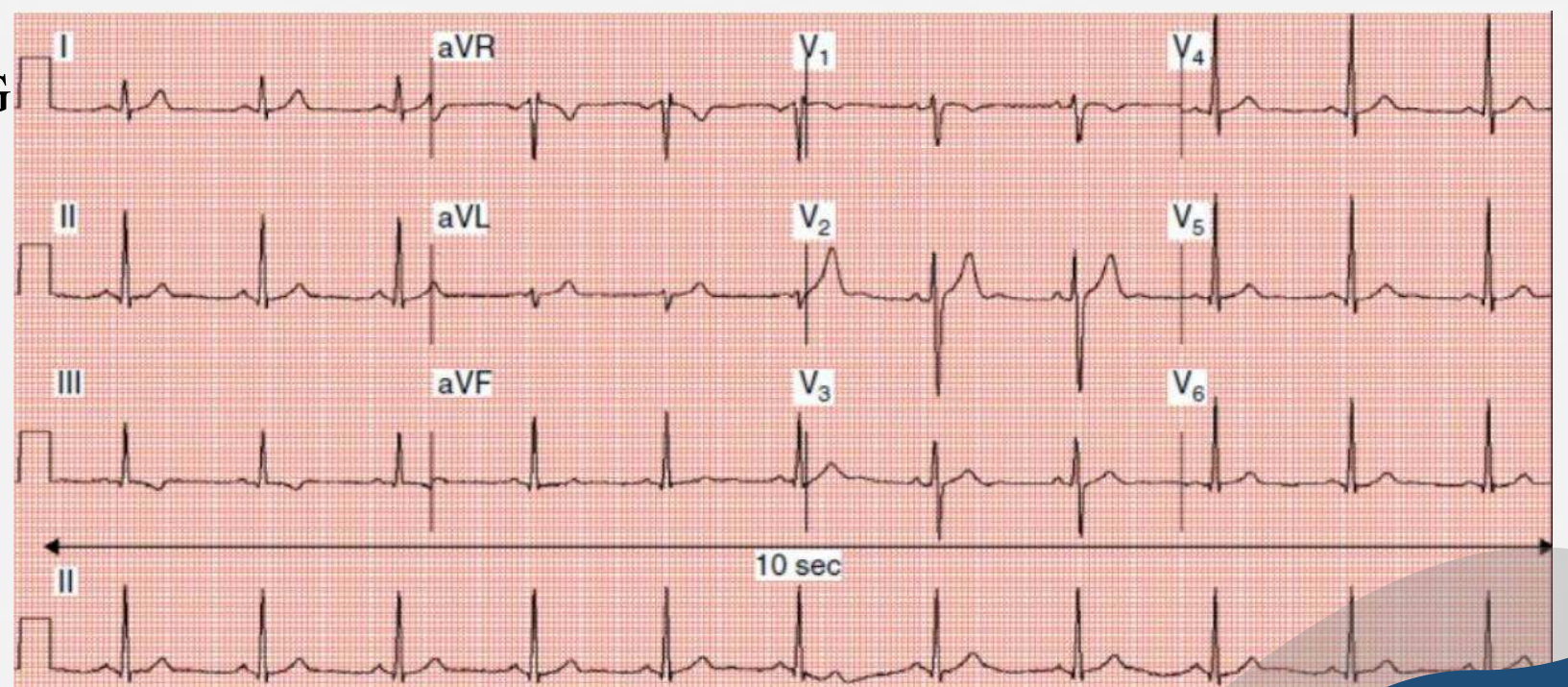
ANSWER : E

169. If abnormality was only found in lead II, III, aVF, most probably there is a problem in:

- A) Anterior septal part of ventricles.
- B) Inferior part of ventricles.
- C) Lateral part of ventricles.
- D) Base of ventricles.
- E) None of the mentioned choices is correct.

ANSWER : B

170. Regarding this ECG



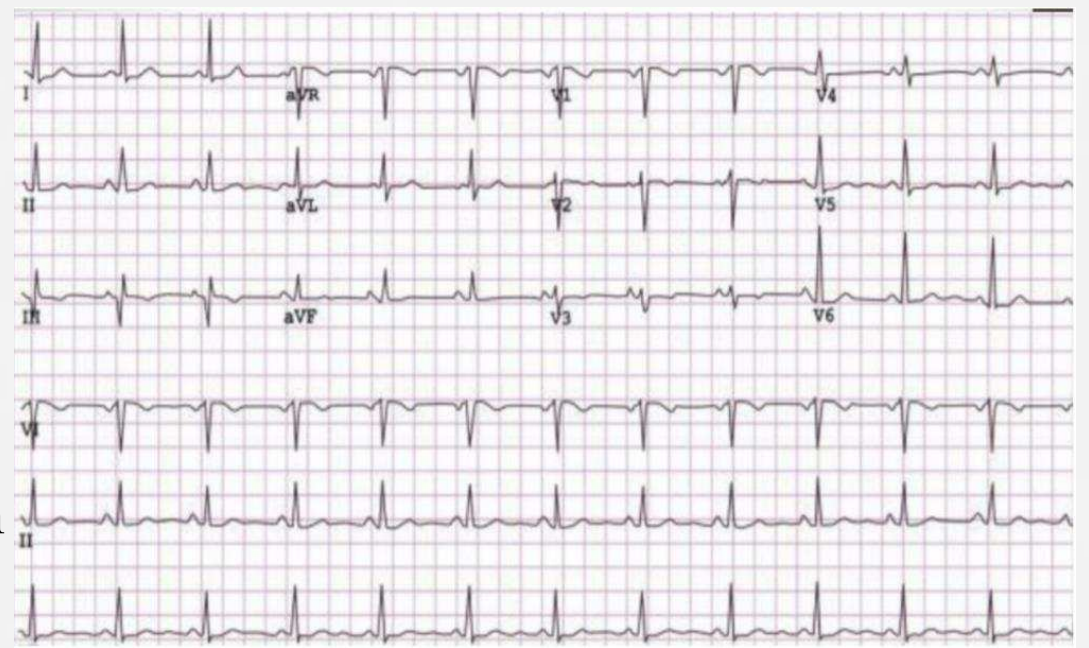
ANSWER : Normal progression of QRS

Labs

physiology

171. Which of the following is true regarding this ECG?

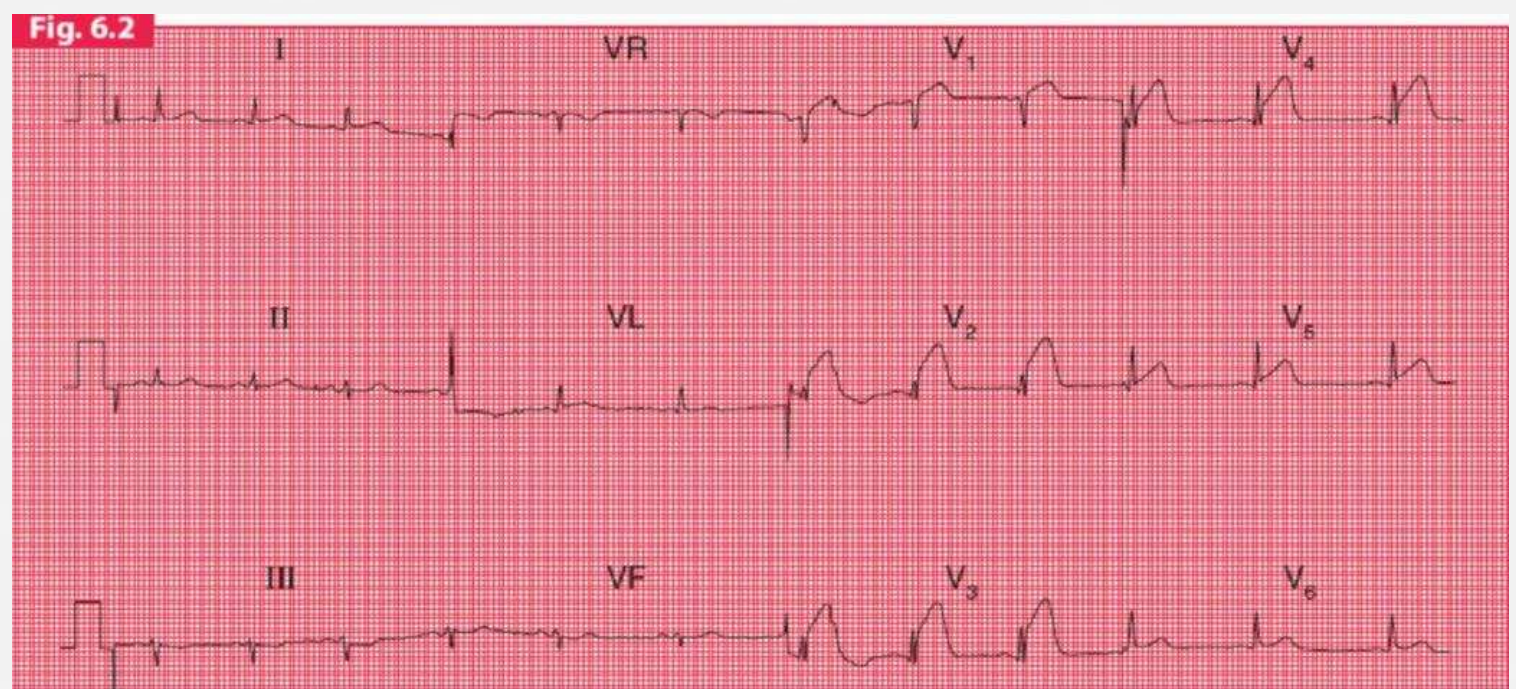
- A) The progression of R wave is abnormal in chest leads
- B) Heart rate is normal
- C) This patient is suffering from arrhythmia
- D) This patient may have a right axis deviation



ANSWER : B

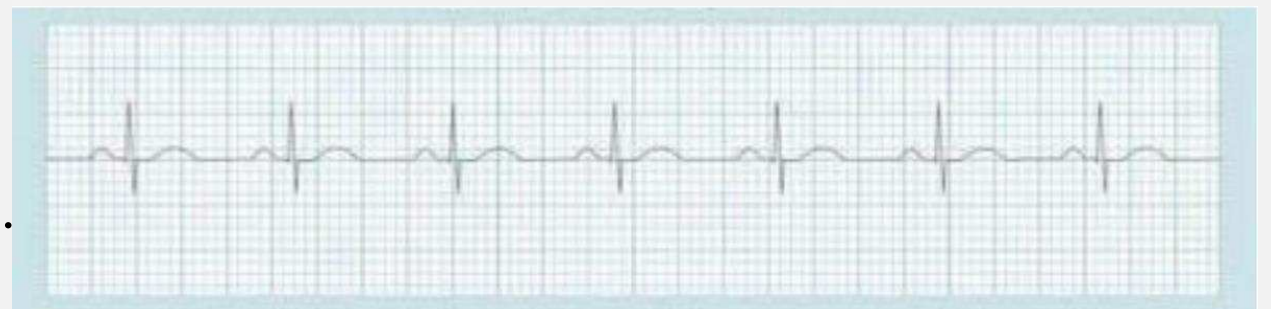
172. This ECG shows:

- A) Acute MI
- B) Atrial flutter
- C) Atrial fibrillation
- D) Sinus tachycardia



ANSWER : A

173. Study the following ECG strip (Lead II) carefully and choose the correct statement. The strip was recorded with standard speed and calibration



- A) The heart rate is 75 beats per minute .
- B) The PR interval is 0.24 seconds
- C) The ST shown in this ECG is due to myocardial ischemia
- D) The ECG shown above is normal sinus rhythm
- E) The QRS duration shown in this ECG is due to left bundle branch block.

ANSWER : D

174. What abnormality can be seen in the following ECG strip which was recorded with standard speed and calibration ?

- A) First degree heart block
- B) Second degree heart block
- C) Atrial flutter
- D) Third degree heart block
- E) Normal sinus rhythm.

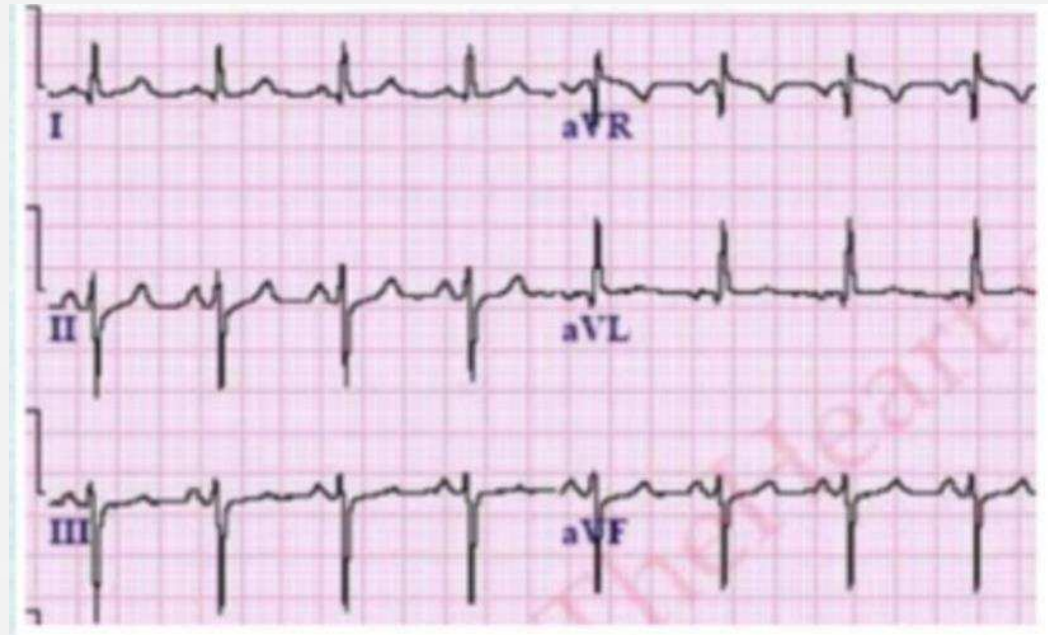


ANSWER : B

Labs

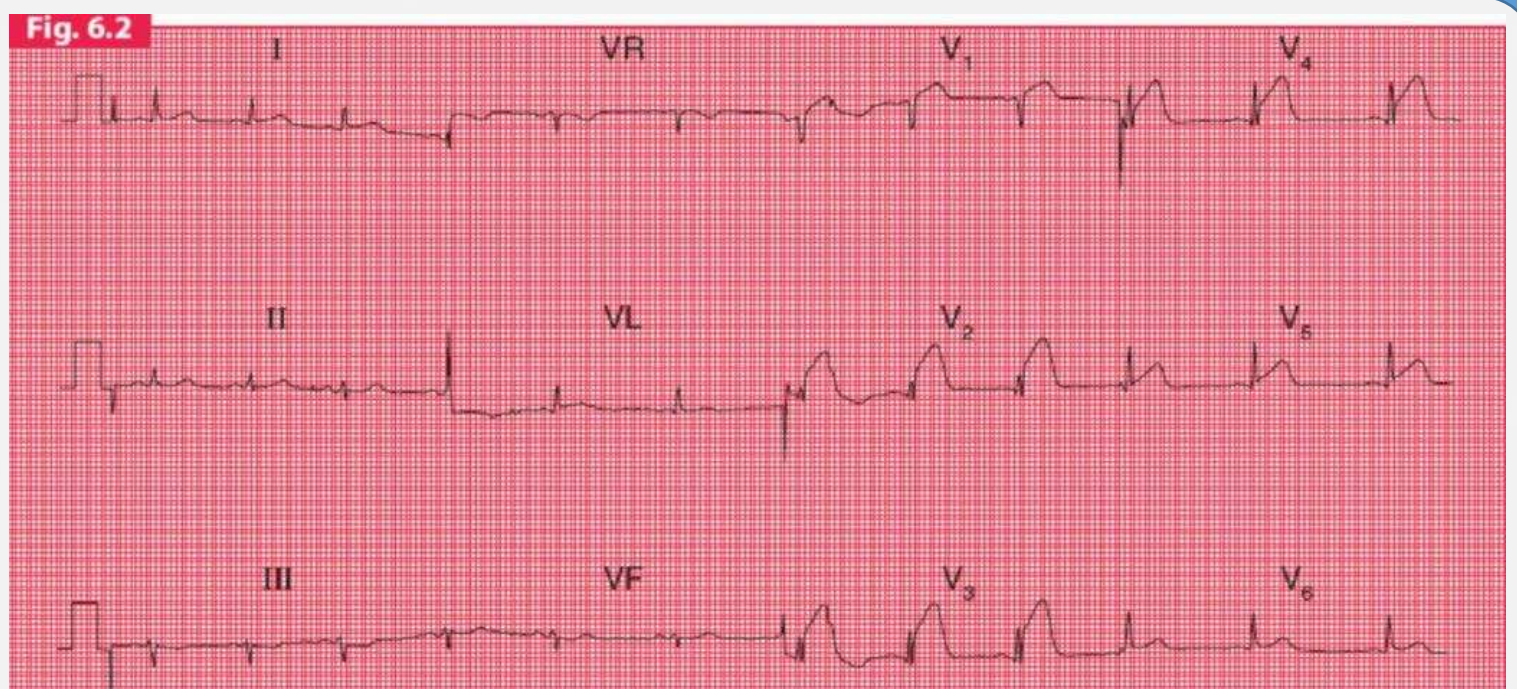
physiology

175. This ECG shows



ANSWER : Left axis deviation

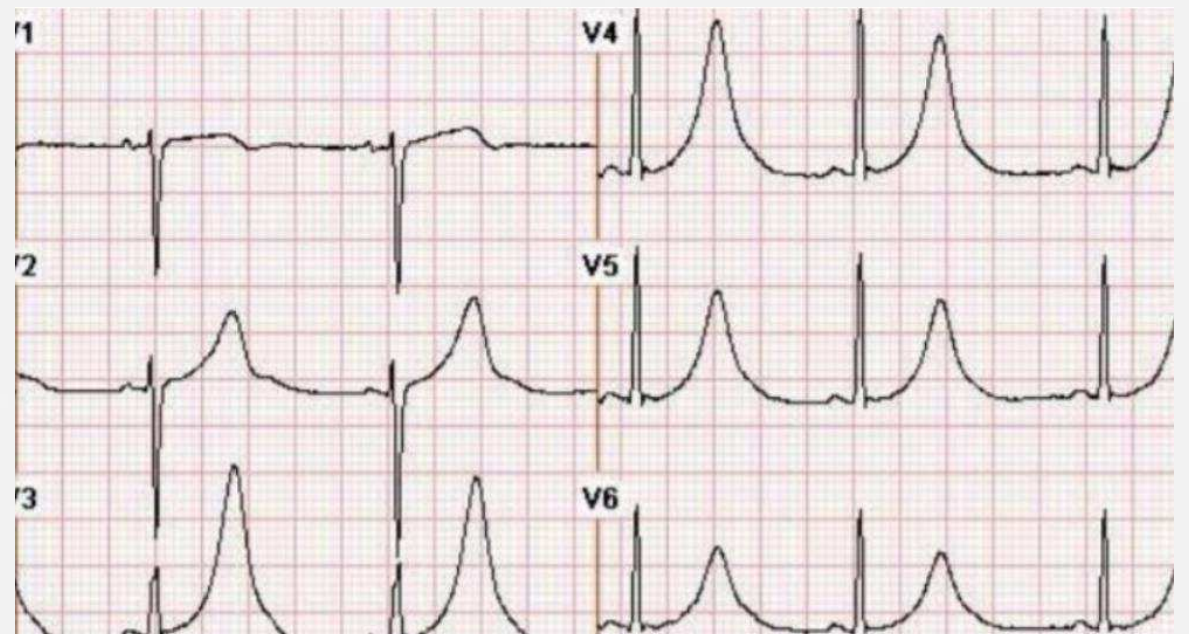
176. This ECG shows



ANSWER : Anterior wall ischemia

177. which of the following causes this ECG?

- A) Hyperkalemia
- B) Hypokalemia
- C) Ischemia



ANSWER : A

178. This ECG shows: (all normal calibration and speed)

- A) Angina
- B) Third degree heart block
- C) Second degree heart block with conducted beats
- D) Atrial flutter



ANSWER : C

اللهم سلم غزاة وأهلها من كل سوء وشر، اللهم انصرهم وثبت أقدامهم وكن لهم ناصرًا ومعينًا

لا تنسوني من صالح دعائكم

Malek Abu Rahma

The End
Good Luck シ