

Discussion 3

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A 12 Lead Electrocardiogram A 12 Lead Electrocardiogram Question The first step into the 12 leads is to identify the six limbs in their sequence. Each limb is then attached to the electric terminal points identified and labeled. The six limbs include I, II, III, AVR, AVL, and AVF.

The ventricular contraction is then recorded in relation to the voltage of the impulse triggering its occurrence. The initial time taken should be recorded at a normal breathing rate between limb I and AVF. The difference shows the range since the two points lay the furthest from each other. The increase or decrease is also noted over time during the blood flow in and out of the heart.

The chest leads measurements should also be taken. The six chest leads are; V1-V6. The records in this stage are vital since they show the time of electric travel from one node to another. The records give the average time taken by the ventricles to recover or refill with blood.

Lead I voltage is then measured with reference to the electrodes between the right arm and the left leg. The records give the longest time of electric travel between the furthest limbs (Christoffels, 2009). The records should be taken for each limb with the relative nodes identified in different parts of the body. The readings taken should show the time of electric travel and the ventricle recovery.

Question 2

ST segment elevation in lead II, III and AVR creates some movements in the left auricle of the heart. It causes the contraction and relaxation of the left auricle muscles as a result of an electric impulse (Surawicz, 2009). The relaxation and contraction forces blood through the valve thereby causing it

to close and open. The contraction and relaxation affects the right atrioventricular valve.

Question 3

ST segment elevated in VI-V2 affect the left ventricle. It results in a systematic contraction and relaxation of the left ventricle. It combines a series of action relating to the contraction and relaxation of the lower part of the heart muscles. It affects the left coronary artery causing it to open and close at regular intervals. It results in the entry and expulsion of blood from the chamber that also sets the heartbeat pace (Katz, 2010). It also triggers a strong force that forces the blood out of the heart through the aorta.

Question 4

ST segment elevated in V3-V4 affects the right ventricle's muscles. The opening and closing of the valve is triggered by an electric impulse that originates from the left ventricle muscles. The segment produces an electrical conduction system that controls the Purkinje fibers. The effects are caused by an impulse resulting from an electric conduction system (Christoffels, 2009). It also affects the semilunar valve causing it to open and close at regular intervals.

Question 5

ST segment elevated in V5-V6 affects the septum. The septum hardens during the contraction of the left ventricle. It allows the left ventricle to generate a thrust thereby pushing the blood out of the heart with a huge force. It affects the tricuspid valve causing its muscle to relax and contract. The thick wall that separates the right and the left parts of the heart receives some electric impulses that cause it to make slight contractions (Katz, 2010).

Question 6

ST segment elevated in Lead I-AVL affects the bicuspid valve. The segment also causes the valve to contract and relax to allow the blood to move into the right ventricle. It affects the inferior vena cava valves that cause the movement of blood out of the heart. The movements are electrically triggered by an impulse (Surawicz, 2009). The valves receive an impulse triggered by the contraction or relaxation of the left auricle of the heart.

References

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