

BLOOD VASCULAR SYSTEM IN HERDMANIA

Q: Give an account of the blood vascular system in Herdmania.

Ans: The circulatory system of Herdmania is open type. It consists of:

- ① Heart and pericardium
- ② Dorsal aorta
- ③ Ventral aorta
- ④ Branchio-vascular vessels
- ⑤ Cardio-vascular vessels.

① Heart:

The heart is situated near stomach. The heart is tubular, thin walled and contractile. It is covered by a membrane called pericardium. The cavity of pericardium, pericardial cavity filled with a pericardial fluid contains coxpuscles. The heart remain attached to pericardium on one side through its length by a connective tissue membrane.

The contraction and relaxation of heart is rhythmic. The peristaltic wave of contraction arise from one end and move to the other. After a short while these get feeble, stop and start again but in opposite direction. One impulse for contraction originate from two centres called pace makers. The pace makers are situated one at each end of the heart. There are no valve in the heart. But there is pear-shaped body in the centre of pericardial cavity. It moves end to end of the heart and regulates the blood flow.

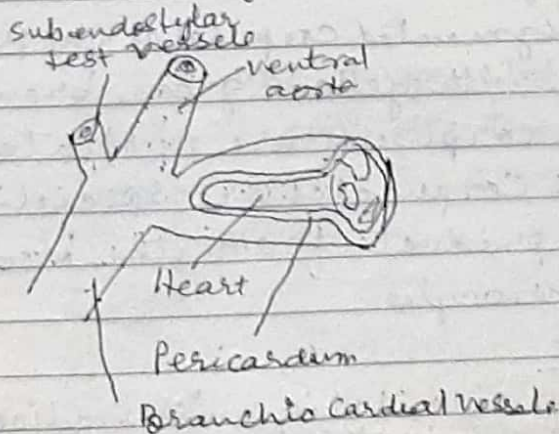


Fig- Heart and pericardium in Herdmania

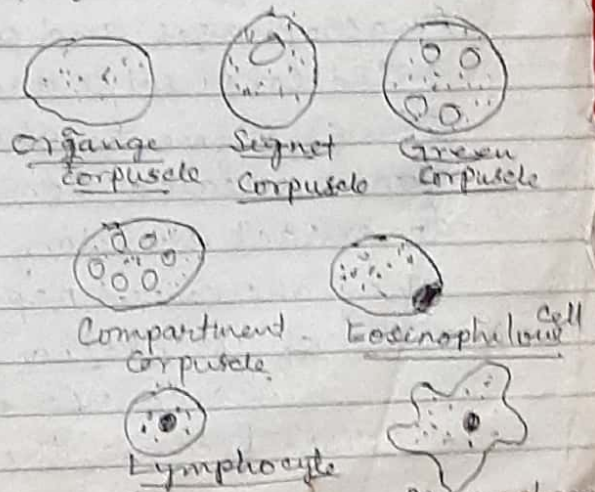


Fig- Various type of blood corpuscles

BLOOD VESSELS :

Ventral aorta : The ventral aorta arises from the ventral end of the heart. It runs forwards along the ventral side of the pharynx. It gives out paired transverse vessels to the pharynx.

Dorsal aorta : It lies on the dorsal side of the pharynx. It sends paired transverse vessels to the pharynx. In the pharynx the transverse vessels of dorsal aorta get connected with the transverse vessels of the ventral aorta.

(4) Branchio-visceral vessel :

It is a small vessel arising from the posterior end of the dorsal vessels. Its origin is not demarcated. It divides into a right oesophageal vessel and left ventro-intestinal vessel. These two again divide into branches and end into alimentary canal.

Cardio-visceral vessel :

It arises from the dorsal end of the heart and immediately issues two minor branches on its right side (1) hepatic branch to the right liver lobe, and (2) oesophago test branch to the oesophagus, stomach, intestine, gonads and test.

BLOOD :

The blood is slightly red colour. It consists of colourless plasma and corpuscles. The corpuscles are two types non-pigmented amoeboid leucocytes (macrophages) and pigmented corpuscles. The pigmented corpuscles are with yellow, green, brown or orange pigments. The corpuscles are nucleated or non-nucleated. Some corpuscles are specialized to extract excretory products from the blood. They are called nephrocytes.

Course of circulation :

The course of circulation is periodically reversed because the ^{makers} ~~parts~~ ^{work} alternately