Arteries Vs Capillaries Vs Veins, Structure and Function

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The discussion post helped a lot in not only understanding the blood vessels structure but also the its functions. Blood vessels can be described as a channel that facilitates in distributing blood among all the tissues of the body. Blood vessels help in making up two closed systems of tubes starting and end at the heart. One system is known as pulmonary vessels that are responsible for transferring blood through the right ventricle all the way to the lungs and then returns back to the left atrium. The other system is known as systemic vessels that are responsible for carrying blood from the left ventricle to the tissues and also in all the body parts. Systematic vessels then return back to the right atrium. Based on both their function and structure the blood vessels can be categorized as arteries, veins, and capillaries.

The main responsibility of the arteries is to carry the blood away from the heart. However, pulmonary arteries are responsible for transporting blood that contains low oxygen while systematic arteries are responsible for transferring oxygenated blood. In contrast, veins are responsible for carrying blood to the heart. When the blood passes through capillaries it enters the veins called venules. From the veins, the blood is then passed through larger veins until it reaches the heart. While discussing capillaries, they are the smallest blood vessels that are responsible for creating a connection between arteries and veins.

It is undeniably true that adequate blood supply is necessary for the proper functioning of the body and especially neurons. In research published by the author D. H. Woolam, he studied the vascular arrangement of the central nervous system (Woollam & Millen, 1955). For this purpose, they examined spinal cords of 16 rats. The results revealed that anterior radicular arteries are responsible for supplying anterior and lateral horns and also the basal parts of the posterior horns of grey matter (Woollam & Millen, 1955). This supply is typically rich in the thoracic region as compared to the lumbar and cervical regions of the cord. This finding helps in understanding the difference in the metabolic requirement of the various regions.

Although, I really liked your discussion and I must say that you did a commendable job. However, the thing I liked the most is the way you remember the difference between veins, arteries, and capillaries along with their function.

**References**

Woollam, D. H. M., & Millen, J. W. (1955). The arterial supply of the spinal cord and its significance. *Journal of neurology, neurosurgery, and psychiatry*, *18*(2), 97.