



Structure of Coronary-Pulmonary Artery and its Conditions

Karampelias Samolis*

Department of Vascular Surgery, National and Kapodistrian University of Athens, Athens, Greece

DESCRIPTION

In humans and most animals, an artery is a blood vessel that transports blood from the heart to one or more parts of the body (tissues, lungs, brain etc.). The pulmonary and umbilical arteries, which carry deoxygenated blood to the tissues that oxygenate blood (lungs and placenta, respectively) are the two exceptions to this principle. The extracellular fluid that contains the arterial system is referred to as the effective arterial blood flow rate [1]. The arteries are part of the respiratory system, which is in charge of providing oxygen and other nutrients to all cells, as well as removing carbon dioxide and waste products, maintaining optimal blood pH, and circulating immune proteins and cells. Arteries differ from veins, which transfer blood to the heart.

Types of arteries

Elastic: These arteries are more flexible than muscle tissue. The increased flexibility allows them to accommodate blood surges. Elastic arteries, which include the pulmonary artery and aorta, exit the heart.

Muscular: There is less elastin and more smooth muscle cells in these arteries. Elastic arteries feed into muscular arteries, and smooth muscle fibers allow them to contract and expand to control blood flow. The coronary and femoral arteries are two examples of these arteries.

Arterioles: Arteries field out into smaller vessels is called as arterioles, which help to distribute blood through microscopic networks of small blood vessels.

Structure of arteries

The anatomy of arteries is divided into two parts: gross anatomy at the macroscopic level and microanatomy which must be analyzed under a microscopic examination. The human arterial system is divided into pulmonary circulation, which carry blood from the heart to the entire body, and pulmonary arteries, which carry deoxygenated blood from the heart to the lungs. The tunica external is also known as tunica adventitia. It is the outermost layer of an artery or vein and consists of collagen

fibrils and elastic tissue, with the largest arteries incorporating vasa vasorum (small blood vessels that supply large blood vessels) [2]. The majority of the layers have distinct boundaries, but the tunica mucous membrane has an ill-defined boundary. Its boundary is usually considered when it reaches or hits connective tissue.

The tunica media, or information providers, is located within this layer and it consists of the smooth muscle cells elastic tissue it is also known as connective tissue, and fibrous tissue. The tunica intima is also known as the endothelium, the inner part that is in direct contact with the circulation of blood. The artery can flex and accommodate through areas in the body because of the elastic tissue [3]. This layer is mainly comprised of endothelial cells and a supporting layer of elastin rich collagen in elastic arteries. The lumen is the hollow organs cavity through which blood flows.

Function of arteries

Arteries are a component of the vascular system. They transport oxygenated blood that has been recirculated from the heart. Coronary arteries also help the heart to pump blood by providing oxygenated blood to the heart, which allows the muscle fibers to operate [4]. Other than the pulmonary arteries, which transport blood to the lungs for oxygenation, arteries carry oxygenated blood from the heart to the body tissue usually veins carry deoxygenated blood to the heart but the vascular blood vessels carry oxygenated in blood. There are two kinds of arteries. The pulmonary artery transports blood from the heart to the lungs, in which oxygen is produced. It is differentiated because the blood has not been "oxygenated" by moving through the lungs. The umbilical artery is another unusual artery that transports deoxygenated blood from a foetus to its mother.

Conditions of the arteries

Atherosclerosis: The accumulation of cholesterol a toxic compound in the arterial walls as atherosclerotic plaque. Heart attacks and strokes can be caused by atherosclerosis in the arteries of the heart, brain, or chest.

Correspondence to: Karampelias Samolis, Department of Vascular Surgery, National and Kapodistrian University of Athens, Athens, Greece, E-mail: samolis.k@gmail.com

Received: 02-Oct-2022, Manuscript No. JVMS-22-18892; **Editor assigned:** 04-Oct-2022, Pre QC No. JVMS-22-18892 (PQ); **Reviewed:** 18-Oct-2022, QC No. JVMS-22-18892; **Revised:** 25-Oct-2022, Manuscript No. JVMS-22-18892 (R); **Published:** 04-Nov-2022, DOI: 10.35248/2329-6925.22.S11.482.

Citation: Samolis K (2022) Structure of Coronary-Pulmonary Artery and its Conditions. J Vasc Surg. S11:482.

Copyright: © 2022 Samolis K. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Vacuities (arteritis): Inflammatory disease of the arteries, which can affect one or more arteries simultaneously. The most common cause of vacuities is an excessive immune system.

Amaurosis fugax: A temporary loss of blood flow to the retina, the light-sensitive tissue that lines the part of the eye, causes vision loss in one eye [5]. It usually occurs when a part of a cholesterol plaque starts breaking off and travels to the retinal artery from one of the carotid arteries the arteries on either side of the chest that supply blood to the brain (the artery that supplies blood and nutrients to the retina.)

Stenosis of the arteries: Atherosclerosis is the most common cause of vascular narrowing. When stenosis occurs in the arteries of the heart, the neck, or legs, the reduced circulation of blood can cause serious health difficulties.

Peripheral artery disease: Atherosclerosis is a condition which causes artery reducing in the legs or groyne. A decreased blood flow to the legs may result in pain or poor wound healing.

CONCLUSION

Arteries have a higher blood pressure than the majority of the circulatory system. During the ventricular contraction, the blood

pressure in the arteries differs significantly. It reaches its maximum because when heart is contracting and it is lowest when the heart is relaxed. The pressure variation causes a pulse, which can be felt in various areas of the body, such as the radial pulse. Arterioles collectively have the greatest influence on both local blood flow and overall blood pressure.

REFERENCES

1. Torres-Vázquez J, Kamei M, Weinstein BM. Molecular distinction between arteries and veins. *Cell Tissue Res.* 2003;314(1):43-59.
2. Lawson ND, Weinstein BM. Arteries and veins: Making a difference with zebrafish. *Nat Rev Genet.* 2002;3(9):674-682.
3. Corada M, Morini MF, Dejana E. Signaling pathways in the specification of arteries and veins. *Arterioscler Thromb Vasc Biol.* 2014;34(11):2372-2377.
4. Cunningham L. The anatomy of the arteries and veins of the breast. *J Surg Oncol.* 1977;9(1):71-85.
5. Swaye PS, Fisher LD, Litwin PA, Vignola PA, Judkins MP, Kemp HG, et al. Aneurysmal coronary artery disease. *Circulation.* 1983;67(1):134-138.