

Why Ligamentum Arteriosum Remain Between Two Major Arteries and not Tendon or Muscle?

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A ligament is that type of fibrous connective tissue that connects two bones. Therefore, it is used for articulation. It differs from tendon which is a connective tissue that connects muscle to bone. Its arrangement in order to withstand tension. There is a similarity between tendon and ligament; both are connective tissue and made of collagen [1,2].

The ligamentum arteriosum is a remnant of the fetal tissue called ductus arteriosum, located between major arteries namely the left pulmonary artery and the aorta, at the aortic isthmus [2,3].

When a newborn baby breathes by using the lungs, this vessel is no longer needed and usually closes by itself during the first two days after birth [2,3].

Therefore, this vessel responds to these changes and becoming a ligamentum arteriosum. This closure prevents oxygenated blood from returning to the pulmonary circulation, a phenomenon that occur in most people within the first three months of life [2,3]. Sometimes remain as patent ductus.

The ductus arteriosus changed to ligament and not tendon or muscle because of the major blood vessels when they full with blood they become ridged and similar to bone. Since the ligament present between two bones and not tendon or muscle, therefore the ductus arteriosus changed to the ligamentum arteriosum to withstand the forces of pulsation within the aorta and prevent any friction between two arteries and this may lead to damage of the walls of both arteries and hemorrhage may result so. Both tendon and muscle never do such job in that place.

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