Morphometric Study Of The Right Coronary Artery

**Introduction:** The anatomy of the coronary arteries is fascinating and most varied. The aim of the present work was to study the gross anatomy of the right coronary artery (RCA) regarding its importance for interventional cardiologists and cardiac surgeons.

**Materials and Methods:** The material of the present study included 30 preserved hearts obtained from the dissecting rooms of anatomy departments, Faculty of Medicine, Beirut Arab University and Alexandria University.

**Results:** Present study revealed that the length of the first segment of RCA ranged from 5.7 to 8.0 cm with a mean of 6.3 ± 0.6 cm; Its external diameter ranged from 4.0 mm to 7.0 mm with a mean of 5.1 ± 0.7 mm. The length of the second segment of RCA ranged from 3.4 to 6.0 cm with a mean of 4.9 ± 0.7 cm; Its external diameter ranged from 3.1 mm to 5.6 mm with a mean of 4.3 ± 0.8 mm. The right conus artery was found to arise at a distance 0.5 to 2.4 cm with a mean of 1.5 ± 0.6 cm from the beginning of RCA. At a distance 0.6 cm to 2.6 cm with a mean of 1.6 ± 0.6 cm from its beginning, the RCA was found to give its SAN branch. At a distance 2.7 cm to 5.6 cm with a mean of 4.2 ± 0.8 cm from its beginning, the RCA was found to give its acute marginal branch. Whether it terminated at or beyond the cardiac crux, RCA was found to give origin to the posterior interventricular branch in all specimens. In all specimens the AVN artery was found to arise from RCA at the region of cardiac crux. Myocardial bridging was recorded in 2 specimens.

**Conclusion:** This study directs the attention towards the importance of the right coronary artery in the supply of the myocardium and the patterns obtained here may be clinically relevant during percutaneous coronary interventions or surgical revascularization.

**KEY WORDS:** Right coronary artery, Right conus artery, Posterior descending artery, Acute marginal branch, SAN artery, AVN artery.