

The location of coronary arterial ostia in the normal hearts of Sri Lankans

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Proficiency in the location of the arterial ostia is significant for easy coronary catheterization. A study was conducted in 110 fresh autopsied hearts harvested from diseased Sri Lankan adults to investigate the range of normality in coronary ostia in relation to the aortic sinuses.

Number of ostia, their vertical position in relation to the supra-avalvular ridge and the horizontal position, in relation to the level of commissure on either side were documented.

The aortic valves in 109 hearts were normal having three cusps, while one was bicuspid. In addition to the two main coronary ostia, 46 hearts (42%) had a small accessory opening for the right coronary artery, to the left of the main right ostium at the same level. The left coronary ostium was inferior to the supra-avalvular ridge in 76 (69.1%), at the level of ridge in 29 (26.4%) and superior to the ridge in 5 (4.5%). The right coronary ostium was inferior to the supra-avalvular ridge in 103 (93.6%), at the level of ridge in 4 (3.6%) and superior to the ridge in 3 (2.7%). The mean distance from the mid point of left coronary ostium to the level of the commissure to the right was 9.9 (2.3) mm and to the left was 9.5 (2.3) mm. The mean distance from the right coronary ostium to the commissure level on the right was 9.3 (2.4) mm and to the left was 12.6 (1.8) mm.

This study shows that the majorities of the right coronary orifices are found immediately below the supra-avalvular ridge and are towards the right commissure. This favors the artery to take a more direct course. In order of frequency, majority of the left coronary orifices are situated immediately below or at the level of the ridge and are more central in location. Nearly half of the hearts have an accessory orifice in the right aortic sinus, which gives an alternate route for right coronary flow to the conus.

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