

Anatomy and pathology of coronary artery in adult black Kenyans

Abstract:

To determine the pattern of coronary arterial anatomy and prevalence of postmortem coronary pathology in adult Kenyan Africans. DESIGN: Cross-sectional study. SETTING: The Nairobi City Mortuary and the Department of Human Anatomy, University of Nairobi. METHOD: One hundred hearts were retrieved during consecutive autopsies over a three month duration and systematically dissected. Details on coronary ramification, dominance, atherosclerosis, tunnelling and hypoplastic segments were obtained and statistically analysed. RESULTS: Seven patterns of left coronary ramifications were identified. The right coronary artery anomalously exited from the left coronary sinus in one situation. There were separate ostia for the coronary artery branches in 2% and 31 % of cases on the left and right coronary systems respectively. The right coronary artery was dominant in 82% of the hearts. Coronary ostial sizes and luminal dimensions showed wide variations. Only two of the hearts had atheromatous luminal narrowing greater than 75% of the cross-sectional area. Muscle bridges of average depths of 1.1-2 mm were demonstrable in 29% of the autopsies. Diminutive left anterior descending artery was present in four cases. The right coronary artery was diminutive in one case. CONCLUSION: Coronary atherosclerosis is still a rarity in the setting within which the study was undertaken. The diverse patterns of ramifications of the coronary tree begs for caution during coronary investigations and interventional procedures. Coronary arterial anomalies, myocardial bridges, atheroma and diminutive arteries should be considered in cases of sudden cardiac death in the absence of other pathologies.