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Title: OBSTRUCTIVE CORONARY ARTERY DISEASE IN PATIENTS UNDERGOING RHEUMATIC VALVULAR HEART SURGERY

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Background & Aims: The presence of concomitant obstructive coronary artery disease (CAD) in patients with valvular heart disease (VHD) carries significant prognostic implications. Therefore, the objective of this study was to determine the frequency and severity of obstructive CAD in patients undergoing valvular heart surgery for rheumatic heart disease (RHD) at a tertiary care hospital in Karachi, Pakistan.

Methods: This descriptive study included patients of either gender, between 40 to 70 years of age, diagnosed with RHD on transthoracic echocardiography, and undergone valvular heart surgery. As a routine, pre-operative diagnostic coronary angiography was performed and the presence and severity of obstructive CAD were recorded.

Results: Among 126 patients, 73% (92) were male, and the mean age was 48.3 ± 7.1 years. Smoking was the most common risk factor with a frequency of 22.2%, followed by hypertension (7.1%) and diabetes (4.8%). Obstructive CAD was observed in 24.6% with 19.4% with single-vessel disease, 16.1% with two-vessel disease, and 64.5% with three-vessel disease. The presence of obstructive CAD was found to be positively associated with older age ($p=0.040$) and type of RHD ($p=0.048$).

Conclusions: The obstructive concomitant CAD is prevalent in around 1/4th of patients, most of them with multi-vessel diseases, undergoing valvular heart surgery for rheumatic heart disease. It has been further observed that older age and the type of RHD are positively associated with the incidence of concomitant CAD in these patients.