Congenital coronary artery fistulas as a cause of angina pectoris

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Introduction: Congenital coronary artery fistulas (CAFs) are coronary artery anomaly characterized by a direct connection between one or more coronary arteries and any of the 4 chambers or any of the great vessels. The incidence is approximately 0.08-0.3% of patients undergoing coronary angiography.[1] Coronary angiography is the gold standard for detecting the presence of coronary artery fistulas and estimation of their hemodynamic significance. CAFs that drain into the LV may cause myocardial ischemia due to coronary steal syndrome but rarely lead to hemodynamic impairment, due to high pressure in the LV.[2] Ageing increases the risk of their dilatation, thereby increasing the risk of complications.

Case report: 72-year-old female with a history of arterial hypertension, dyslipidemia, and chronic obstructive pulmonary disease was hospitalized for anginal symptoms. She reported anginal symptoms during minimal physical activity and relieved by nitroglycerine. Echocardiography showed preserved systolic function with a discrete hypocontractility of the apical segment of the anterolateral and anterior wall. Coronary angiography showed coronary arteries without angiographically significant stenosis. However, intensive opacification of myocardial walls after contrast injection and contrast drainage into the ventricles through extensive multiple microfistulas were observed. Due to multiple and small-sized CAFs our patient was not suitable for interventional or surgical closure. The antianginal therapy was upgraded with trimetazidine (2x35 mg) and ranolazine (2x500 mg) with favorable response.

Conclusion: Although a rare cause of angina pectoris, the coronary steal syndrome caused by the coronary arterial-ventricular fistulas should be considered during diagnostic work-up. Besides myocardial ischemia, CAFs may cause arrhythmias, heart failure, and infective endocarditis.

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LITERATURE

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