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FIBROMUSCULAR DYSPLASIA AS A SYSTEMIC ARTERIOPATHY: TWO CASES OF UNDERRECOGNIZED COMPLICATIONS

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Relevance. Fibromuscular dysplasia (FMD) is an idiopathic, non-atherosclerotic and non-inflammatory arteriopathy of medium-sized arteries, often causing stenosis, aneurysms, and dissections. Two devastating complications, coronary artery aneurysms (CAA) and vertebral artery dissection (VAD) remain underdiagnosed.

Aim: to evaluate clinical and imaging evidence on FMD-related CAA and VAD, using illustrative cases to characterize presentation, diagnosis, and therapeutic challenges.

Materials and methods. From a narrative analysis of patient reports, two prototypical cases were analysed: (1) a 24-year-old female with acute dysphagia and confusion, (2) a 72-year-old male with exertional angina Canadian class 2-3.

Results and their discussion. In case 1, a 24-year-old woman initially diagnosed with a psychogenic disorder underwent brain MRI that revealed a left lateral medullary infarction (partial Wallenberg syndrome). T1-weighted sequences showed a hyperintense signal in the left vertebral artery, suggesting dissection. CT angiography confirmed high-grade stenosis, irregular luminal contours, and bilateral beading of carotid and vertebral arteries pathognomonic for multifocal FMD. Swallowing X-ray demonstrated pharyngeal stasis and tracheal aspiration, explaining dysphagia and recurrent pneumonia. This case illustrates that VAD can mimic psychiatric illness, and FMD should be suspected in young stroke patients with arterial irregularities. In case 2, a 72-year-old male with hypertension, type 2 diabetes, and hypercholesterolemia presented with exertional angina pectoris. Coronary angiography showed multivessel disease: 50% left main stenosis, 75-90% LAD bifurcation lesions, and 90% ostial diagonal branch stenosis. Notably, the right coronary artery had multiple aneurysmal dilatations from 5 up to 40 mm with a 75% pre-bifurcation stenosis. Brachiocephalic ultrasound revealed left internal carotid artery stenosis of 65% (peak systolic velocity 93 cm/s). Although histopathology was not obtained, the pattern of multifocal aneurysms is highly suggestive of FMD even obstructive coronary artery disease was clear diagnosed. Current guidelines recommend one-time CT angiography from head to pelvis for all SCAD patients, but such screening is rarely performed in older, male-dominant cohorts.

Conclusions. FMD is a systemic arteriopathy that can cause life-threatening coronary and vertebrobasilar complications. VAD should be considered in young patients with unexplained dysphagia or lateral medullary syndromes, even when psychiatric symptoms prevail. CAAs carry a risk of rupture and sudden death, requiring individualized management. The strong female predominance of FMD may obscure its occurrence in older males, who relatively frequent present with multivessel atherosclerotic disease and ischemic symptoms. The imagine use is a cornerstone of decision-making and management of patients instead of symptom and syndrome-based diagnosis.