192. ISCHEMIC STROKE IN A PATIENT WITH MECHANICAL MITRAL VALVE AND SUBTHERAPEUTIC INR: THERAPEUTIC CHALLENGES AND MULTIDISCIPLINARY MANAGEMENT

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Introduction. Mechanical heart valve prostheses are associated with a persistent risk of thromboembolic complications, requiring carefully balanced long-term anticoagulation. Deviations from therapeutic targets may lead to acute cerebrovascular events, creating complex clinical scenarios that necessitate prompt diagnosis and coordinated multidisciplinary management.

Case presentation. On admission, the patient presented with dyspnea, palpitations, and chronic fatigue. ECG showed atrial fibrillation with a ventricular rate of 75 bpm and left bundle branch block. INR was subtherapeutic (1.7). Transthoracic echocardiography revealed a 10-mm mobile mass on the ventricular surface of the mechanical mitral valve. Subsequently, the patient developed acute ischemic stroke with left-sided hemiparesis. Brain CT and CT angiography confirmed thrombotic occlusion of the right middle cerebral artery (M1 segment). Endovascular thrombectomy was successfully performed. Follow-up echocardiography showed disappearance of the mass, confirming the cardioembolic origin of the stroke. Neurological deficits improved progressively, anticoagulation therapy was optimized, and INR reached the therapeutic range (2.52).

Discussions. Patients with mechanical mitral valve prostheses remain at high risk for thromboembolic events, particularly in the presence of atrial fibrillation and subtherapeutic anticoagulation. Vitamin K antagonists are mandatory in this population, as direct oral anticoagulants are contraindicated. Subtherapeutic INR represents the main modifiable risk factor for prosthetic valve thrombosis and cardioembolic stroke. In this case, the identification of a mobile mass on the prosthetic valve and its subsequent disappearance after cerebral embolism strongly support a cardioembolic mechanism. Echocardiography and CT angiography were essential for diagnosis and therapeutic decision-making. Mechanical thrombectomy proved to be an effective reperfusion strategy in acute large-vessel occlusion. Rapid multidisciplinary management and optimization of anticoagulation were crucial for favorable neurological recovery and secondary prevention.

Conclusions. This case highlights the diagnostic and therapeutic challenges of cardioembolic stroke in patients with mechanical mitral valves. Early recognition of embolic sources, rapid access to endovascular thrombectomy, and individualized anticoagulation adjustment (continuous INR monitoring) were key to favorable neurological recovery and secondary prevention.

Keywords. Ischemic stroke, mechanical valve, subtherapeutic INR, thrombectomy.

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