Percutaneous occlusion of malignant left atrial appendage in patient with recurrent ischemic stroke

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Introduction: The left atrial appendage (LAA) is the most common place of thrombosis in patients with atrial fibrillation (AF). Numerous studies have shown that oral anticoagulation (OAC) significantly reduces the risk of thromboembolism. However, there are no recommendations regarding how to treat cardioembolic recurrent strokes when patients are well anticoagulated. 1-3

Case report: 68-years-old male with permanent non-valvular AF, currently taking apixaban, was hospitalized for the second time due to recurrent ischemic cerebrovascular stroke. At the time of his first presentation six months ago, he was well anticoagulated with warfarin (international normalized ratio was 3.56) and have had a CHA₂DS₂VASc score 2. He had no significant carotid disease or mobile aortic arch atheroma. Transesophageal echocardiography (TEE) revealed a significantly dilated left atrium (LA) with dense spontaneous echo contrast (SEC). There was no organized thrombus in the LA nor in the LAA. The contractile function of the LAA was severely decreased, with peak systolic velocity of 33 cm/s on Doppler evaluation. Despite taking effective anticoagulant medications for both times our patient experienced recurrent ischemic stroke and yet again had dense SEC in the LA and LAA. In order to prevent upcoming cardioembolic event, we decided to preform percutaneous LAA closure with Amplatzer Amulet device under TEE guidance. Successful LAA closure was confirmed by color Doppler imaging and a single postocclusion angiography. The patient was discharged with OAC (warfarin) in addition of 100 mg/day of acetylsalicylic acid to prevent thrombus formation on device. Follow up TEE was performed one month after the procedure. Good position of LAA occluding device was confirmed with no evidence of thrombus formation on the left atrial face of the device.

Conclusion: In general, after implantation of LAA occluding device, OAC is not indicated. However, combination therapy with indefinite OAC plus LAA closure in patients with AF with recurrent strokes despite good anticoagulation should be considered in order to prevent a new stroke.

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