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Left Atrial Appendage Occlusion with the Amplatzer Cardiac Plug.

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Background: Atrial fibrillation (AF) is associated with a reduction of flow rates particularly in the left atrial appendage (LAA), increasing the risk for in situ thrombus formation and ischemic strokes. A significant proportion of patients are ineligible for anticoagulation. During AF, 90% of thrombi are located in the LAA. Recently LAA occlusion has been demonstrated to be non-inferior to anticoagulation.
Methods: Patients with AF, a CHADS2 score of ≥2 and a contraindication to anticoagulation, were offered the option of percutaneous LAA occlusion with the Amplatzer Cardiac Plug (ACP). The ACP is a nitinol mesh device, comprising a retaining lobe that is deployed within the LAA and an attached disc that covers the LAA ostium. A transvenous approach was used, with access to the left atrium achieved via a transeptal puncture, or through a patent foramen ovale. Following contrast injections, measurements of the device landing zone 1cm beyond the LAA ostium were performed by quantitative angiography and echocardiography. Post procedurally, patients were treated with clopidogrel for 1 month and aspirin.
Results: LAA occlusion was attempted in 9 patients. Contraindications to anticoagulation included gastrointestinal bleeding (4), recurrent falls (2), poor compliance (1), retinal (1) and cerebral hemorrhage (1). Mean CHADS2 score was 3(2-6). The procedure was successful in all 9 patients. The mean landing zone was 20mm (15-23) and the mean device size chosen was 22mm (18-26) . In 4 cases the initial selected device was replaced with a different size for successful device deployment. At follow-up (2 weeks-4 months) a single patient suffered a GI bleed. Conclusions: Our initial experience with the ACP for LAA occlusion demonstrates short-term feasibility and safety. Improved sizing technique will reduce the need for changing device size intraprocedurally. Larger numbers and long-term follow-up are required to demonstrate efficacy.