

## **Early Experience with the Amplatzer Cardiac Plug for Left Atrial Appendage Occlusion**

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**Background:** A significant subset of patients with atrial fibrillation and high risk of stroke, have significant contraindications to treatment with oral anticoagulants. Device occlusion of the left atrial appendage (LAA) has been shown to be equivalent to anticoagulation in eligible patients. We report our initial acute results and technique for the LAA occlusion with the Amplatzer Cardiac Plug (ACP).

**Methods:** The ACP was deployed in patients with contraindications to oral anticoagulation. TEE was performed prior to the procedure for device sizing and thrombus exclusion. All procedures were performed under general anesthetic with fluoroscopic and TEE control. Device sizing was based upon a 2-5mm upsizing of a zone 1cm from the LAA ostium by TEE and angiography. Criteria for device release were compression of the retaining lobe, separation of the retaining lobe from the occlusive disc and concavity of the occlusive disc. Confirmation of residual flow was performed with echo and fluoroscopy.

**Results:** 34 patients underwent LAA occlusion. Mean CHADS2 score was 3.5 with 29/34 having score > 2. Most frequent contraindications to anticoagulants were GI bleeding 11, other bleeding 8, poor compliance 5 and falls 5. All devices were successfully placed. In a single case, due to an extremely large LAA 1/3 deployment criteria was not met. Median device size was 24mm (16-30). In 8 cases (24%) a second device was taken due to incorrect sizing, only 2 of these in the last 25 cases. In a single case LAA perforation was noted during deployment and acutely drained with no long term sequelae. In another patient pulmonary edema occurred due to severe MR and poor LVF.

**Conclusions:** In a high risk group of patients the ACP was used to safely and successfully acutely occlude the LAA based upon set criteria ensuring device stability. Device sizing improved with experience.