Left atrial appendage occlusion for atrial fibrillation and bleeding diathesis

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Abstract

Background: Patients with AF and likelihood of bleeding can undergo left atrial appendage occlusion (LAAO) as an alternative method of stroke prophylaxis. Short-term anti-thrombotic drugs are used post-procedure to offset the risk of device-related thrombus, evidence for this practice is limited. **Objectives:** To investigate optimal post-implant antithrombotic strategy in high bleeding-risk patients. **Methods:** Patients with AF and high-risk for both stroke and bleeding undergoing LAAO were advised their peri-operative drug therapy by a multi-disciplinary physician panel. Those deemed to be at higher risk of bleeding from anti-thrombotic drugs were assigned to minimal treatment with no antithrombotics or aspirin-alone. The remaining patients received standard care (STG)with a 12week course of dual-antiplatelets or anticoagulation post-implant. We compared mortality, device-related thrombus, ischemic stroke and bleeding events during the 90 days post-implant and long-term. Event-free survival was assessed using Kaplan-Meier survival analysis, with logrank testing for statistical significance. **Results:** 75 pts underwent LAAO of whom 63pts(84%) had a prior serious bleeding event. The 42pts on minimal treatment were older(74.3±7.7vs71.2±7.2) with higher HASBLED score (3.6±0.9vs3.3±1.2) than the 33pts having standard care. There were no device-related thrombi or strokes in either group at 90 days post-procedure; STG had more bleeding events (5/33vs0/42,p=0.01) with associated deaths (3/33vs0/42,p=0.05). During long-term follow up (median 2.2yrs), all patients transitioned onto no antithrombotic drugs (43pts(61%)) or a single-antiplatelet (29pts(39%)). There was no evidence of early minimal treatment adversely affecting long-term outcomes. **Conclusions:** Short-term anti-thrombotic drugs may not be needed after LAAO implant in patients with high bleeding risk and could be harmful. Larger, prospective studies would be warranted to test these findings.

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