

## **Efficacy of Surgical Ablation of Atrial Fibrillation in Patients with Rheumatic Heart Disease**

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Background: Although atrial fibrillation (AF) ablation is efficient in many patient cohorts, its effect on rheumatic heart disease remains controversial. We describe a retrospective comparison of surgical ablation using the same technique in rheumatic versus non-rheumatic patients.

Methods: Between April 2004 and November 2009 we performed AF ablation in 204 patients using the "Hybrid Maze" technique, with bipolar radiofrequency ablator and cryoprobe. Patients were retrospectively allocated to: a rheumatic (77 patients, 38%) and non-rheumatic heart disease group (127 patients, 62%). Demographic parameters were similar in both groups, as well as the number of patients with permanent and persistent AF and long-standing AF in each group. Permanent AF was present in 39 (51%) and 51 patients (40%) in the rheumatic and non-rheumatic groups, respectively. Heart function and functional class were also similar, while more rheumatic patients had a severely enlarged left atrium (200-300 cc) ( $p=0.02$ ).

Results: There were two peri-operative deaths. Post-operative complications were similar in both groups, with 51 rheumatic (66%) and 91 non-rheumatic patients (72%) in sinus rhythm at discharge. Total, complete, mean follow-up was 19 months after which 59 (77%) and 91 patients (72%) were in sinus in the rheumatic and non-rheumatic group, respectively, of whom 81% were without anti-arrhythmic medications. Ablation failure risk factors included: pre-operative permanent AF ( $p=0.02$ ).

Conclusions: The efficacy of AF ablation proved similar in rheumatic and non-rheumatic patients, providing pre-operative AF type and duration were similar. Larger left atria in rheumatic patients did not influence ablation results.