

Factors Influencing Recurrent Atrial Fibrillation Occurrence Late after the MAZE Procedure

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Background: Atrial fibrillation (AF) surgical ablation is widely used procedure. It's positive early and mid post-operative effect seem to decline in the late follow-up. We describe late follow up of the surgical AF ablation and factors influencing the AF recurrence years after the ablation.

Methods: Between February 2004 and February 2010 we performed AF ablation with the same technique using bipolar radiofrequency ablator and cryoprobe as a part of another cardiac surgery in 231 patients. Patients were 64 ± 11 years. 83 patients had permanent and 93 persistent atrial fibrillation. 27 had left atrial volume >200 cc. 76% of patients underwent mitral valve surgery. 81% had left atrial ablation and 19% biatrial ablation.

Results: Mean follow up was 29 months (range 1-72 months). Sinus rhythm was 95%, 92%, 78%, 75%, 68%, and 71% 6 month, 1, 2, 3, 4 and 5 years after the ablation. Freedom from antiarrhythmic medications was 82%, 92%, 90%, 90%, 88%, and 82% correspondently. The only patient factor related to ablation failure in the late follow-up was pre-operative permanent AF ($p=0.001$). The duration of AF pre-ablation, left atrial size, age and other demographic parameters were not found to be related to AF recurrence.

Conclusions: The efficacy of AF ablation seems to decline in the late follow-up. Patients with permanent AF can be expected to have a high rate of AF recurrence in the late follow-up.