

## **BIPOLAR RADIOFREQUENCY ABLATION OF ATRIAL FIBRILLATION IN PATIENTS UNDERGOING OTHER CARDIAC SURGERY .**

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**Objectives:** Atrial fibrillation (AF) is common in patients referred to cardiac surgery. The aim of this study was to investigate the outcome after concomitant left atrial bipolar radiofrequency ablation of AF in patients undergoing other cardiac surgery.

**Material and Methods:** Thirty-three patients referred to cardiac surgery had AF and were found suitable for a bipolar left atrial radiofrequency procedure. Patients had permanent (n=23) or paroxysmal atrial fibrillation (n=8) with a median duration of 5.0 years (range:1 month-20 years). Concomitant procedures were CABG (n=23), AVR (n=3), CABG+AVR(n=6) or aortic surgery (n=1). The ablation procedure consisted of bilateral pulmonary vein isolation and ligation of the left auricle.

**Results:** One patient died due to mediastinitis and one patient experienced an apoplexia on the second postoperative day. There were no other complications. At follow up (median 6 months, range 1-22 months) 13 patients (41%) had sinus rhythm. Patients in sinus rhythm at follow up had significantly smaller preoperative atrial diameter (44+/- 6 vs 54 +/- 7 mm, p=0.003) Patients with paroxysmal AF had significantly higher conversion rate at follow up compared to patients with permanent AF (88% vs 25%, p=0.001). There was no relationship between preoperative duration of permanent AF and conversion to sinus rhythm.

**Conclusions:** Bipolar radiofrequency ablation of pulmonary veins concomitant to other cardiac surgery is effective in selected patients. Preoperative paroxysmal AF and smaller left atrial size is associated with a favorable outcome. In patients with permanent AF, pulmonary vein isolation alone results in a low conversion rate to sinus rhythm.