Atrial Fibrillation

Endoscopic ablation and Postoperative studies

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In Sweden 300,000 people have atrial fibrillation (AF). It is associated with an increased risk of stroke, heart failure and cardiovascular death. Some patients are asymptomatic while others are highly symptomatic with reduced quality of life. In patients undergoing aortocoronary bypass graft (CABG) surgery one-third experience an episode of AF. In most cases it is self-terminating and the patient is discharged in sinus rhythm. The long-term effects on heart rhythm have not been studied. Total endoscopic ablation is an alternative to catheter ablation (CA) in certain patients with symptomatic AF, but its clinical role needs further evaluation. In patients with long-standing persistent AF, continuous duration >12 months, CA is ineffective.

In this thesis we showed that postoperative AF is a major risk factor for future AF and cardiovascular morbidity and mortality. AF was an independent risk factor regardless of whether it was present before or after surgery. Better follow up strategies and anticoagulation treatment is of importance. We also describe the technique of total endoscopic ablation of AF using a right-sided unilateral approach. In our first ten patients with one year follow up it was feasible and safe with acceptable results. In a prospective controlled study, 36 patients aged >50 years with symptomatic long-standing persistent AF were randomized to either total endoscopic ablation or rate control therapy. Loop recorders for continuous arrhythmia detection were implanted in all patients. Total endoscopic ablation significantly reduced AF burden at 12 months compared with controls. Myocardial function, physical working capacity and subjective physical and mental health improved.