Catheter ablation for treatment of atrial fibrillation
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Record Status
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Citation

Authors' objectives
This report evaluates the current state of evidence regarding effectiveness and harms of catheter ablation for atrial fibrillation (AF) with a focus on longer-term outcomes and evidence relevant to the Medicare population.

Authors' conclusions
There was insufficient evidence to draw conclusions regarding the efficacy, effectiveness, and safety of catheter ablation in the Medicare population. In the general population, there was moderate evidence that RFA is superior to medical therapy for enhancing patient freedom from recurrence of atrial arrhythmias in both the short and long term regardless of AF type, but reablation was common. RFA does not appear to impact all-cause mortality in the short or long term in those with paroxysmal AF (low strength of evidence); however, there was insufficient evidence to draw conclusions regarding other primary clinical outcomes in the short or long term. Firm conclusions regarding health-related quality of life were not possible given heterogeneity across studies for instruments employed, measurement timing, and clinical characteristics. For harms, no differences between RFA and medical therapy in 30-day mortality, stroke, or 3-month risk of AF were seen, with low strength of evidence. Evidence comparing cryoballoon ablation with medical therapy or with RFA was insufficient to draw conclusions regarding efficacy or safety, with the exception of low strength of evidence for greater freedom from protocol-defined failure following cryoballoon ablation versus medical therapy. To better understand the impact of catheter ablation on key outcomes (stroke, mortality, health-related quality of life, and symptom improvement) compared to other treatment strategies, large methodologically sound studies are needed, particularly on persistent AF patients. Studies with sufficient sample sizes are needed to effectively determine whether catheter ablation versus other treatments will benefit certain patient subgroups more than others, and whether there are subgroups in which catheter ablation might best used as a first- versus second-line treatment.

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