Abstract: P1471

Clinical outcome of the 2nd generation cryoballoon for pulmonary vein isolation in patients with persistent atrial fibrillation - A sub-study of the randomized trial evaluating single versus dual cryo

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Topic(s):
Rhythm Control, Catheter Ablation

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Introduction

The 2nd generation cryoballoon has been shown to be an efficient technique for pulmonary vein isolation (PVI) for the maintenance of sinus rhythm and improved quality of life in patients with paroxysmal atrial fibrillation (PAF). Studies on persistent atrial fibrillation (PersAF), however, are lacking and have not assessed atrial fibrillation (AF) symptoms or quality of life, improvement of which is the primary goal of the ablation procedure.

Purpose

To assess the efficacy of the 2nd generation Cryoballoon for PVI in patients with PersAF, and to compare it to patients with PAF.

Methods

The outcome (arrhythmia recurrence at 12 months) was prospectively assessed in patients with PersAF(n=77) and compared to that in patients with PAF(n=62), who underwent PVI within a randomized trial evaluating single versus dual applications with the 2nd generation cryoballoon. Other endpoints included symptoms of AF, quality of life, procedure related characteristics, redo ablation rates and adverse events. Variables predicting recurrences were studied including all patients.

Results

Freedom from arrhythmia recurrence was 64.9% after a single ablation and 68.8% after one or more procedures, which was significantly lower compared to PAF patients; 82.2% (p=0.029) and 83.9% (p=0.048) respectively, at 12 months (Figure 1). The improvements in EHRA score (-1.3±0.8, p<0.0001), AF symptom severity score (-5.0±4.2, p<0.0001) and EQ5D-5L global score (+10.4±20.3, p=0.0002) after ablation was significant compared to baseline. The re-ablation rate was 7/77 (9.1%) which did not differ from that in PAF patients, 9/62 (14.5%), p=0.42. Procedure duration, 104.8±37.4 versus 113±31.2 minutes (p=0.129), application time, 1605±659 versus 1521±557 seconds (p=0.103) and total adverse events after 12 months, 8/77 (10.4%) versus 5/62 (8.1%) (p=0.77) did not differ in PersAF versus PAF patients.

Conclusion

Both symptoms and QoL improved significantly in patients with PersAF after ablation. Freedom from AF was clinically significant but lower than in PAF patients. The cryoballoon seems an effective technique also in patients with persistent AF.
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