Reduction in Costs after AF Ablation and Impact of Clinical Events

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INTRODUCTION

This study evaluated the cost of patient management based on the events occurring after catheter ablation for atrial fibrillation.

METHODS

Clinical events and associated costs were obtained from a MarketScan® database analysis of cases between April 2009 and March 2012 using the following criteria: first atrial catheter ablation, diagnosis of atrial fibrillation at ablation, and coverage during the year before until the year after ablation.

Clinical events of interest were identified as: use of antiarrhythmic drugs (AAD), repeat ablation, vascular access complication, pulmonary edema (PEdema), pericarditis, perforation/tamponade and pulmonary vein (PV) stenosis.

Gamma regression with log link was used to estimate costs.

RESULTS

50% of patients (5004 of 9949 patients) did not experience any adverse events (Figure 1).

The cost of medical treatment for each patient in the year before the ablation was $24,781.

In patients with no events, the cost of treatment per patient dropped to $14,823 post-ablation, but was subject to incremental costs in patients with adverse events.

17% of patients required a repeat ablation procedure, which was associated with $29,028 in added costs.

The incremental cost of cardiac tamponade or perforation was $8,382.

CONCLUSIONS

Treatment costs decrease 40% after AF ablation in patients with no adverse events.

The authors suggest that tools and techniques aimed at reducing events after catheter ablation would further improve cost-effectiveness.

Figure 1  Cost of baseline treatment and incremental events. (Adapted from Mansour et al, 2016.)

*Approximate percentages