Reduction in Costs after AF Ablation and Impact of Clinical Events

INTRODUCTION

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

METHODS

- Clinical events and associated costs were obtained from a MarketScan® Research 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, pericarditis, perforation/tamponade, and pulmonary vein stenosis.
- Gamma regression with log link was used to estimate costs.

RESULTS

- 50% of patients (5,004 of 9,949 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.

DISCUSSION AND 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.)