

Prevention of atrial-esophageal fistula after catheter ablation of atrial fibrillation.

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Abstract

PURPOSE OF REVIEW:

The formation of atrial-esophageal fistula after catheter ablation for atrial fibrillation is a rare but devastating complication with high mortality. Prevention is of utmost importance. We review the usefulness of currently available preventive measures.

RECENT FINDINGS:

Recent studies using endoscopy after atrial fibrillation ablation show the development of esophageal ulcerations in 14-17% of the patients. Risk factors for the occurrence of esophageal ulcerations seem to be a high esophageal luminal temperature during ablation, increased power during energy application at the posterior left-atrial wall, a short left atrium-to-esophagus distance, the use of nasogastric tubes and general anesthesia. The main available tools for prevention of atrial-esophageal fistula include: 1) Assessment of the esophagus position in the preprocedural CT/MRI scan. Its usefulness is limited by the potential of the esophagus to move. 2) Tagging of the esophagus and real-time visualization of its course during the procedure. This can be achieved by introduction of a catheter into the esophagus and visualization in the three-dimensional electroanatomical system, by intracardiac ultrasound or by fluoroscopy. 3) Continuous monitoring of the esophageal luminal temperature during ablation with special temperature sensors. 4) Reduction of power during energy application at the posterior left-atrial wall in close proximity to the esophagus. Despite application of preventive measures, cases of atrial-esophageal fistulas have been reported.

SUMMARY:

Several measures for prevention of atrial-esophageal fistula formation are available nowadays. Although these measures cannot completely eliminate the risk of fistula, it appears prudent to apply a combination of them during atrial fibrillation ablation.

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