

Abstract

Background: The introduction of the technique of ablation in SVT in 1982, has revolutionized the therapy of different types of PSVT namely; AVNRT, AVRT, AT, and AF1 and stimulated the interest of investigators all over the world. The ablation therapy of cardiac arrhythmia is based on the rationale that for every arrhythmia, there is a critical anatomic region of abnormal pulse generation or propagation required for that arrhythmia to be initiated and sustained. Destruction of that myocardial tissue will result in elimination of tachycardia. In spite of that, there were reported recurrences among different types of SVT.

Methods: The material of this study including patients who underwent electrophysiological study & radiofrequency ablation of supraventricular tachycardia in the past five years, starting from Jan. 2002 to Jan. 2007 at The Critical Care Medicine Department, Cairo University, to confirm the role of electrophysiological study in diagnosis and to evaluate the efficacy of radiofrequency ablation, its complications and recurrence rate and causes.

Results: Out of 400 pts, 381 (95.25%) had been subjected to RF ablation while the remaining 19 pts (4.75%) refused ablation for fear of possible complications. Out of the 381 pts 366 (96.1%) had their target tachycardia successfully terminated, of them 26 pts (7.1%) experienced recurrence after having successful RF ablation. Nine pts (34.6%) of total recurrence was reported in pts with AVNRT, 7 pts (26.9%) of total recurrence was reported in pts with AVRT utilizing septal APs (Rt AS and /or Rt PS AP), 4 pts (15.4%) was reported with double AP, 2 pts (7.7%) of total recurrence was reported in pts with AF1, one pt (3.8%) of total recurrence was reported in cases of AT. Redo ablation has been carried out successfully in 25 pts (96.2%), and one pt (3.8%) refuse ablation for fear of complications.

Conclusions: Although invasive electrophysiological evaluation and RF ablation eliminated different types of SVT. However, there may be increased incidence of recurrence among pts with AVNRT and AVRT utilizing concealed septal AP and multiple APs secondary to the complexity of AV nodal physiology, the critical location of septal AP, the procedural expertise, and poor electrophysiologic criteria for good procedural success.

Keywords: Supraventricular tachycardia, electrophysiological study, radiofrequency ablation, recurrence.