

## ***Radiofrequency Catheter Ablation of Supraventricular Tachycardia at Critical Care Department , Cairo University ,a 15-year Registry.***

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### ***Abstract***

**Background :** Catheter ablation is a curative treatment with excellent success and minimal complication rates for patients with supraventricular arrhythmias.

**Objective:** To know the number of catheter ablation procedures, treated arrhythmogenic substrates, outcomes and complications, using the information provided by participants during the period from Jan 1999 to Dec 2013 at Critical Care Medicine Department Cairo University.

***Patients and Methods:*** The material of this retrospective study included 1300 studies involving 1208 patients, who underwent electrophysiologic study & radiofrequency ablation of supraventricular tachycardia (SVT) in 15-year duration (From Jan. 1999 to Dec. 2013) at Critical Care Medicine Department, Cairo University. Data were obtained from patients' files and the following points were looked for: age, sex, history analysis, clinical examination, electrocardiogram (ECG) resting & with tachycardia, echocardiographic evidence of possible underlying heart disease, indication for electrophysiologic study (EPS) & radiofrequency (RF) ablation, EP diagnosis, result of RF ablation, detection of intra & post catheter complications and detection of recurrence, redo & their results.

***Results:*** Our study included 1300 arrhythmia patients who had EPS, out of them 1208 patients had underwent RF catheter ablation. Minimum age was 4 years and maximum age was 80 years with a mean age  $36.4 \pm 14.62$  years and 686 patients (52.8%) were male while 614 patients (47.2%) were female. Most of the patients (86.5%) were between the age of 15-60 years (group II), patients younger than 15 years were 7.2% and patients older than 60 years were 6.3%.

Atrioventricular reentrant tachycardia was the most common diagnosis, it was documented in 598 patients (46%), followed by AVNRT in 482 patients (37.1%) . Other types of SVT were uncommon as atrial flutter in (5.4%), atrial tachycardia in (4.4%). There were 28 patients (2.2%) had two types of SVT. The overall success rates were 96.1% for atrial tachycardia, 85.2% for atrial flutter , 89.9% for accessory pathways , and 98% for AVNRT . There was no significant difference in the success rates between different age groups . Ninety one patients (7%) had complications. Only 2.2% experienced major complications including a single case of mortality, myocardial infarction in one patient, pulmonary embolism in one patient, stroke in one patient and permanent pacemaker in 15 patients.

**Conclusion:** The results confirm that radiofrequency ablation is safe and effective, supporting ablation therapy as a first-line therapy for the majority of patients with cardiac arrhythmias. The adequate success rate and the low complication rate reflect the growing experience of the Critical Care Department ,Cairo University in RF catheter ablation.

Key words

Supraventricular tachycardia

Electrophysiological diagnosis

Radiofrequency ablation