

**Can the use of flecainide for incessant refractory supraventricular tachycardia reduce ablation requirements in neonates and infants?**

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**Objectives:**The aim of this study was to evaluate and compare the results of medical and ablation therapy in neonates and infants with incessant refractory SVT.

**Patients and Methods:**The study included a sample of 11 neonates and infants receiving medical and/or ablation therapy in our center between January 2010-December 2013.

**Results:**The mean age and weight were  $101.6 \pm 96$  days and  $5.3 \pm 1.9$  kg. In the echocardiographic assessment, the mean fractional shortening of the cases treated with ablation and medical therapy were  $24\% \pm 4$  and  $28\% \pm 7$ , respectively. Two patients had VSD, 1 had PDA, 1 had HCMP, 1 had a complex cardiac anomaly (c-TGA-VSD, right ventricular hypoplasia-pulmonary hypertension), and 6 patients had PFO. In the first two years of the four-year period, 5 patients had to receive ablation therapy, whereas the remaining 6 patients who presented over the last 2 years were treated with medical therapy to control the refractory SVT. The most noteworthy point here was the addition of flecainide into the medical therapy (which consisted of adenosine, amiodarone, esmolol, and propafenone cardioversion) administered before the ablation procedure (Flecainide as a class Ic agent has only been available in our country over the past two years). Interestingly, we managed to control the refractory SVT by administering a triple therapy regimen with esmolol-propranolol, amiodarone and flecainide in all of the 6 patients admitted in the last two years. The mean follow-up time was 18 months (range, 3 month-4 year). While one patient died during the follow-up, another patient had recurrent tachycardia. The patient diagnosed with myocarditis developed an atrial flutter complicated with a concealed accessory pathway. That patient was given ECMO support due to cardiopulmonary failure. Although the patient's SVT was controlled, we lost the patient on the 15th day of ECMO support. The patient with recurrent tachycardia, who had previously received ablation therapy for a complex cardiac anomaly and WPW, was treated with ablation again. No recurrence of tachycardia was observed in any of the other 9 patients.

**Conclusion:**It seems that the use of propranolol-esmolol and amiodarone combined with flecainide in the medical treatment of drug-resistant SVT may reduce the ablation requirement in neonates and infants.