Ivabradine for the treatment of automatic atrial tachycardia

(1) ASST Grande Ospedale Metropolitano Niguarda, Milano, Italy
(2) Ospedale Policlinico Milano, Italy

INTRODUCTION
Ivabradine is a selective inhibitor of the pacemaker specific current funny. The use of this drug for the control of the heart rate in the adult population, particularly who doesn't tolerate beta blockers therapy, is known. There are, instead, a few scientific papers about using Ivabradine for treatment of automatic atrial tachycardia in pediatric patients.

METHODS
We present 5 cases of pediatric patients (age 1-168 months, media age 33.8) who were admitted to our clinic with automatic atrial tachycardia: 2 of them had junctional tachycardia. At admission the mean heart rate of ectopic tachycardia was 160 bpm. No one had heart malformation and ejection fraction was depressed in only one patient with cardiomyopathy and muscular dystrophy. All patients started beta blockers as first line treatment with poor control of heart rate so in 4 out 5 patients we used association therapy with propafenon, amiodaron or digoxin with only mild control of heart rate.

RESULTS
We use Ivabradine at the dose 0.175 mg/Kg/days till 0.2 mg/Kg/days; in one patient as substitution of beta blocker and in the other in association with digoxin 2 pts, amiodaron and sotalol 1 patient respectively. After introduction of Ivabradine in all we observed recovery of synus rhythm stable in one patient while in the other remain episodes of ectopic tachycardia with a better control of heart rate. The mean heart rate after Ivabradine introduction was of 90-100 bpm. The mean follow up after introduction of Ivabradine was of 9 months (from 1 month till 30 months). We didn't observe acutely or during follow up any side effects.

CONCLUSIONS
In accordance to our experience, even if the number of patients treated is small, we can conclude that Ivabradine is useful for treatment of ectopic atrial-junctional automatic tachycardia not responsive to common therapy. It will be necessary to enlarge number of patients treated with Ivabradine to confirm the usefulness of this drug.