

## Use of IV Sotalol in Newborns with Supraventricular Tachycardias

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**Introduction:** Class III antiarrhythmics are often used in infants with supraventricular tachycardias (SVTs) that are unresponsive to typical first line agents (i.e. beta blockers), though oral preparations are suboptimal given the pharmacokinetics. In this case series, we describe the use of intravenous (IV) sotalol for the treatment of neonatal SVTs.

**Methods:** A retrospective chart review was performed to describe the use of intravenous sotalol for effective treatment of different types of supraventricular tachycardia.

**Results:** IV sotalol was used in three neonates (average age 6.7 +/- 5.7 days old, average weight 3.5±0.1kg) for 3 different types of SVT: ectopic atrial tachycardia (n=1), atrioventricular reentrant tachycardia (n=1), and atrial flutter (n=1). Initial patient dosage was 30 mg/m<sup>2</sup>/dose (as extrapolated from recommended oral dose incorporating age related reduction factor). Infusions were delivered over 5 hours in an ICU setting with an average ΔQTc prolongation of 45±14msec after initial infusion. There was no hemodynamic instability noted during initial or subsequent infusions. All patients had conversion to and maintenance of sinus rhythm following the first infusion with conversion to oral sotalol (1:1 conversion) after maintenance of sinus rhythm for 48 hours. All patients had normalization of QTc prior to discharge.

**Conclusion:** This series represents the youngest cohort of patients treated IV sotalol for various SVT mechanisms (both automatic and reentrant). Despite conservative dosing recommendations and infusion duration, there was significant transient QTc prolongation with initial doses which improved after the transition to oral therapy. IV sotalol represents an additional IV class 3 antiarrhythmic that can be used in this population.