

### **Outcome of hydropic fetuses with supraventricular tachycardia need not be dismal**

*Wong A. (1), Uzun O. (1), Babaoglu K. (2), Tunca G. (1), Duman D. (1), Sevik D. (1), Goodwin A. (3), Nathan M. (3), Conner C. (1), Beattie B. (1)*  
*University Hospital of Wales, Cardiff, Wales, UK. (1); Kocaeli University Medical Faculty Teaching Hospital, Kocaeli, Turkey (2); Princess of Wales Hospital, Bridgend, Wales, UK. (3)*

**Background:** Prognosis of fetuses with hydrops and supraventricular tachycardia has been portrayed as poor in most published reports. This may lead to biased counselling, unnecessary Caesarean section, preterm delivery and even termination of pregnancy. However, when treated effectively even hydropic fetuses may have similar outcomes like non-hydropic ones.

**Aims:** To evaluate contemporary fetal and postnatal outcomes of hydropic fetuses with supraventricular tachycardia (SVT) when it is treated with effective antiarrhythmic medications and monitored systematically.

**Methods:** This is a retrospective review of single centre experience over a 15-year period. All fetuses received high dose flecainide and digoxin combination treatment. Tachycardia response rate, time to arrhythmia and hydrops resolution, fetal and postnatal morbidity and mortality rates were analysed.

**Results:** 24 cases had SVT, hydrops and signs of cardiac dysfunction. Two patients with medical termination and one case of intrauterine death were excluded from the study. Mechanism of SVT was atrioventricular re-entry tachycardia (AVRET including WPW and PJRT) in 14 and atrial flutter (AF) in seven cases. Median heart rate was 271 beats per minute (bpm) in AVRET and 400 bpm in AF.

Among the 21 fetuses treated, overall tachycardia response rate was 90% with restoration of sinus rhythm in 80% of the cases. Tachycardia responded to medication in 93% of AVRET with median conversion time of 1.5 days. In fetuses with AF tachycardia termination or rate control occurred in 71% of cases within a median of 1 day. Hydrops resolved in all SVT cases except in one fetus who had a long RP tachycardia and did not-respond to any other medications and even direct intrafetal treatment.

There was no maternal morbidity owing to medical treatment. Four fetuses went into spontaneous preterm birth and one fetus was delivered early due to worsening hydrops. No neurological morbidity was documented in surviving neonates. There was one postnatal death due to respiratory complications of prematurity in the non responsive long RP case.

**Conclusions:** High dose flecainide and digoxin combination offers a rapid and effective treatment strategy in fetuses with hydrops and supraventricular tachycardia. This report may aid more accurate counselling of hydropic fetuses.