

**Evolving Management Of Fetal Tachycardia: Comparison Of Monotherapy, Stepwise Escalation And Maximum Dose Combination Treatment At A Single Institution**

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**Objectives:** To compare the efficacy of initial monotherapy, stepwise escalation, and high dose combination treatment in fetal supraventricular tachycardia (SVT) and to evaluate the relationship between tachycardia response-time and treatment protocol.

**Methods:** Retrospective review of 50 cases managed with flecainide and digoxin for fetal SVT at the University Hospital of Wales between 2001 and 2015. Patients were divided into three groups: Group 1 (n=9) had initial digoxin or flecainide monotherapy for up to two weeks before combining the two; Group 2 (n=10) had digoxin plus flecainide stepwise escalation treatment; and Group 3 (n=31) had maximum dose of flecainide and digoxin combination treatment from the start.

**Results:** In all, tachycardia termination or fetal heart rate reduction below 180 beats per minute was achieved in 49 (98%) fetuses with a median response-time of two days (range 1-27 days). Median response time was one day (mean  $1.8 \pm 1.1$  days, range 1-7 days ) in group-3 fetuses compared to nine days (range 5-18 days) and 19 days (range 9-27 days) in group-2 and group-1 fetuses respectively ( $p < 0.001$  group-3 vs. group-1 and group-2).

**Conclusions:** High dose flecainide and digoxin combination treatment is safe and offers more effective control of fetal SVT than monotherapy or stepwise escalation protocols resulting in the shortest arrhythmia response time.