Background
The best treatment for sustained fetal SVT with 1:1 AV relationship or sustained fetal AFl is not known.

Methods
Longitudinal retrospective comparison. 155 consecutive fetuses with supraventricular tachyarrhythmia presented 2000-2012. 127 had SVT with 1:1 conduction and 28 had AFl.

Results
SVT sub-group analysis

Flecainide was more effective than digoxin in SVT, especially when hydrops was present (p = 0.04). IUD or NND occurred in 9/21 hydropic fetuses were treated with digoxin compared to 0/9 (p = 0.03) treated with flecainide.

AFI sub-group analysis

Overall treatment success was 16/25 (64%).

Therapeutic response observed with different agents

Time to conversion was a mean of 8 days in non-hydropic fetuses and a mean of 12 days in those with hydrops (p = 0.42).

Hydrops was observed in 12% of those refractory to AFl therapy and in 44% of those converting to SR. The presence of Hydrops did not reduce the likelihood of conversion to sinus rhythm.

Whether conversion occurred or not, intra-uterine or neonatal death did not occur (0/8 hydropic fetuses, 95% CI 0-0.37). Gestation at delivery was median 38 (range 31-39) weeks

Conclusions

a) SVT
- In the absence of hydrops, conversion rates were high regardless of which drug therapy was used.
- When hydrops was present flecainide was more effective than digoxin.
- No adverse fetal outcomes were attributed to flecainide.

b) Atrial Flutter
- Surprisingly, hydrops did not reduce the likelihood of conversion to SR. Hydrops was also well tolerated in-utero in comparison to SVT with 1:1 AV relationship, possibly because of a) later onset of AFl and b) more favourable atrio-ventricular coupling.