

The acute medical management of a late diagnosis of Fetal Atrial Flutter

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Background

Fetal Atrial Flutter (AF) is the second most common fetal tachyarrhythmia that exists in less than 1% of pregnancies.¹ It characterised as a rapid regular atrial rate of 300-600bpm with a ventricular rate dependant on the AV Block which is most commonly 2:1.^{1,2} The usual gestation of diagnosis of AF ranges from 31-36 weeks with possible complications including congestive heart failure, hydrops, neurologic morbidity or intrauterine death.¹ Early diagnosis and treatment is important and AF is normally managed with transplacental therapy however may require postnatal cardioversion on delivery. We aimed to present a case of fetal tachyarrhythmia diagnosed at 38+4 weeks gestational age and was treated with Sotalol.

Case

A 35 year old female G1P0 presented on her routine midwife antenatal check at 38 + 4 weeks. She is a low risk pregnant woman without significant medical nor family history. There were no abnormal findings on assessment however on fetal heart auscultation, a HR > 200bpm was detected. An urgent obstetric ultrasound was performed which showed a structurally normal fetal heart with atrial rate of >400 bpm and ventricular rate of >200 bpm consistent with 2:1 atrial flutter. The fetal biometry and fetal wellbeing assessments were normal without evidence of fetal hydrops. She was referred to fetal cardiologist and

advised delivery and transfer with immediate recourse to electric cardioversion in the postnatal period as already term. Trial of medical cardioversion was done while waiting for the receiving hospital to accept care. She was commenced on Sotalol 80mg BD which was increased to 160mg BD over 2 days with daily ultrasound monitoring. Atrial flutter persisted despite incremental dose of Sotalol. She was subsequently transferred to another tertiary centre for postnatal electric cardioversion. She had an emergency caesarean section with good APGAR scores and heart rate was 180bpm with regular narrow complex sinus rhythm, therefore cardioversion was not required.

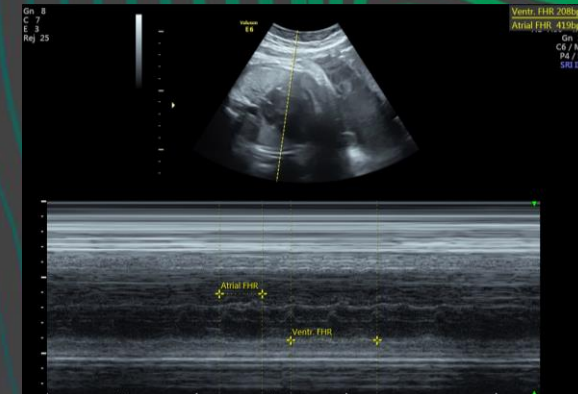
Discussion

Although AF was diagnosed at term there was no evidence of hydrops and in-utero cardioversion was attempted with Sotalol unsuccessfully. On delivery, there was spontaneous resolution of AF which has been previously reported in other studies. Early diagnosis and prompt treatment remains critical for optimal outcomes.

References

1. Rauf, M., Sevil, E., Ayse, B., Ebru, C. and Cemsid, K., 2017. A case of fetal atrial flutter treated successfully by cardioversion in the postnatal period. *Biomedical Research*, 28(7).
2. Wu TH, Huang LC, Ho M, Lee CC, Chiu TH, Hung YC. Fetal atrial flutter: a case report and experience of sotalol treatment. *J Obstet Gynecol* 2006; 45: 79-82.

1. Fetal HR and rhythm on admission



2. Fetal HR and rhythm with Sotalol



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