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Non-immune fetal hydrops due to tachycardia: three cases with different clinical outcomes

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Introduction

Fetal tachycardia can lead to fetal heart failure and subsequent fetal hydrops. When signs of hydrops are present, the common treatment is the class Ic antiarrhythmic drug flecainide.

Methods

We report on three cases of non-immune fetal hydrops due to tachycardia.

Results

In all three cases, the fetuses were diagnosed at around 30 weeks' gestation with signs of fetal hydrops (pericardial/pleural effusion, ascites) of varying severity and fetal tachycardia (approximately 200 bpm). All the mothers were treated with flecainide. In the first case, the fetal heart rate converted after a few days, the hydropic signs resolved and the baby was delivered without complications. There was no need for postnatal antiarrhythmic treatment.

In the second case, the fetal heart rate converted after two weeks, the baby was delivered at term and required postnatal antiarrhythmic treatment with amiodarone. In the third case, the fetus was delivered prematurely at 32 weeks due to maternal mirror syndrome, antenatal antiarrhythmic treatment had been unsuccessful. The infant was in critical condition and neither medical nor electrical conversion of the heart rate was effective. The baby died at the age of one week due to congestive heart failure and subsequent multi-organ failure.

Conclusion

Fetal tachycardia can lead to severe cases of fetal hydrops and may be fatal. The success of treatment with flecainide depends on the duration of the tachycardia. Even if conversion of fetal heartrate is achieved in utero and signs of hydrops resolve, a long-term postnatal antiarrhythmic therapy may be indicated.



Figure 1: Fetal tachycardia measured in M-Mode

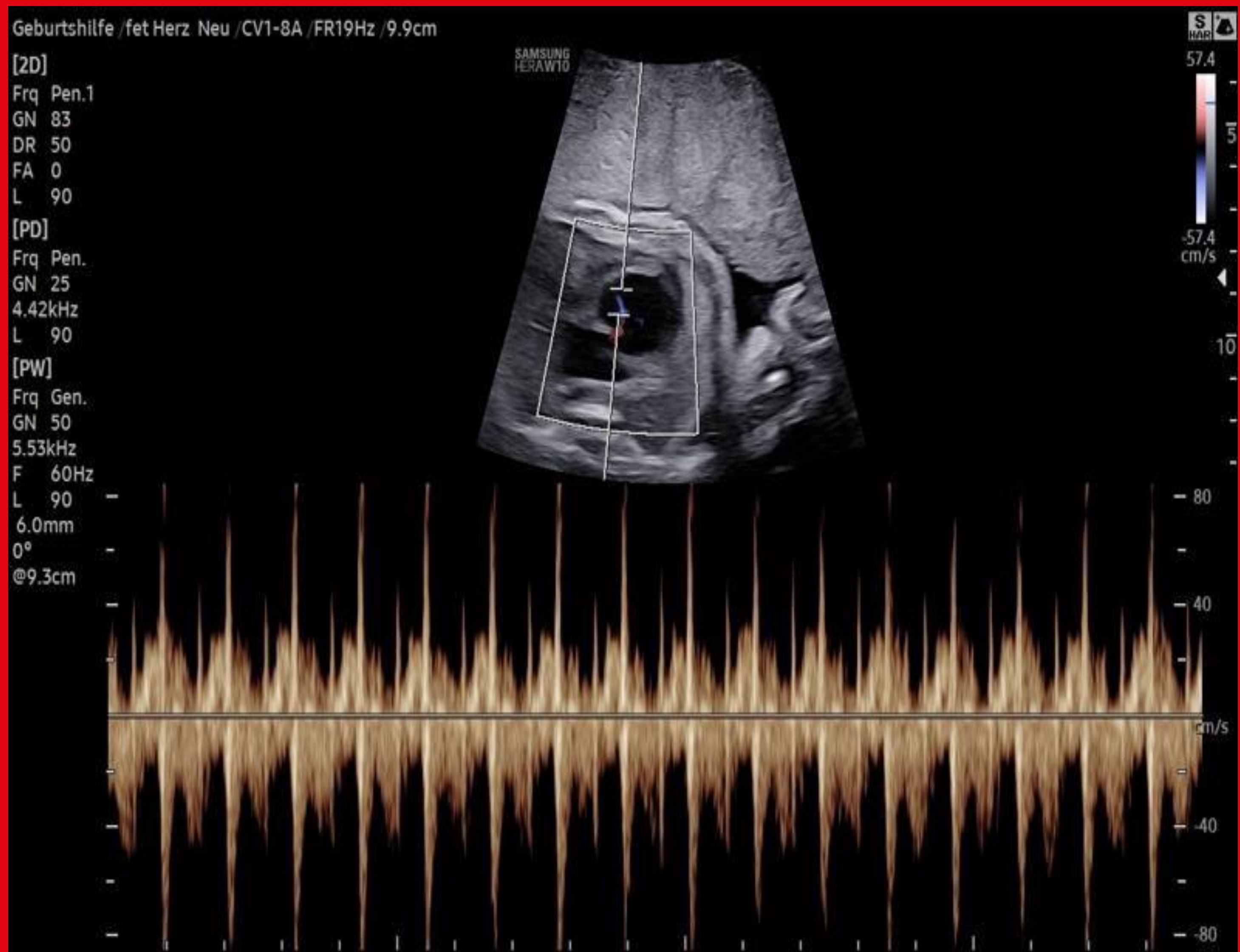


Figure 2: Tricuspid valve doppler