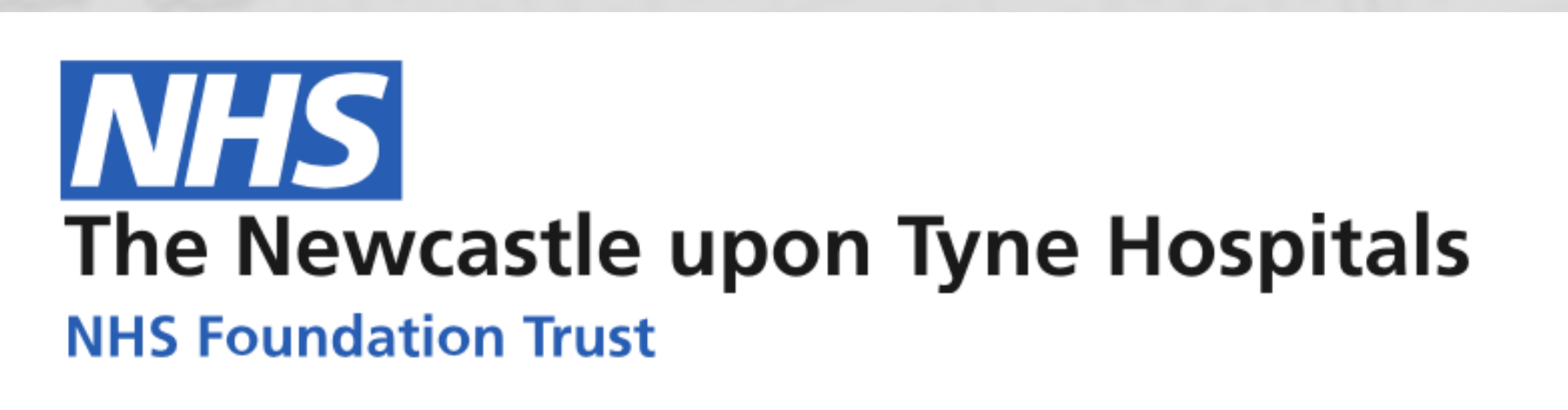


# A case report of a parturient with supraventricular tachycardia intrapartum.



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## Case

A 21-year-old (G1P0), presented for induction of labour at 42 weeks due to large gestational age (>97% centile, 4.8kg). During the **second stage of labour** she developed a **spontaneous supraventricular tachycardia** (SVT) requiring medical management.

- The patient had a **heart rate of 202bpm**, a **blood pressure of 117/61** and was **asymptomatic**.
- 12-lead ECG confirmed **atrioventricular nodal re-entry tachycardia** (AVNRT) (Photo 1). **Vagal manoeuvres** including carotid sinus massage and Valsalva were **attempted without response**.
- Adenosine (6mg) was administered** and **AVNRT converted to sinus rhythm** (Photo 2).
- The patient subsequently required Kielland's rotational forceps delivery under a spinal anaesthetic. APGAR scores at 1 and 5 minutes were 8 and 9 respectively.
- Bloods were unremarkable other than a magnesium of 0.62mmol/L (Normal range 0.7 – 1.0mmol/L). Transthoracic echocardiogram 3 days postnatal revealed a mildly dilated left ventricle with normal function. Cardiology follow-up was arranged.

## Discussion

Tachyarrhythmia's may manifest for the first time during pregnancy. Paroxysmal SVT (22-33 per 100,000 pregnancies) [1] is one of the most common arrhythmias after AF and premature beats. In a haemodynamically stable patient, vagal manoeuvres and adenosine are recommended.

Adenosine transiently depresses sinus node activity and slows atrioventricular conduction and is considered safe in pregnancy and with breast feeding [1]. Adenosine deaminase, the enzyme responsible for degradation, declines in pregnancy so doses of 6-12mg are often sufficient[2].

The European Society of Cardiology 2018 guidelines categorise haemodynamically stable SVT as low risk and advise only consultation with a cardiologist and for the mode and location of delivery to be advised by obstetricians [3].

Synchronised electrical cardioversion may be necessary in SVT resistant to pharmacological therapy or haemodynamically unstable patients. It has been used in all stages of pregnancy without significant complications [4]. Transient foetal dysrhythmias have been described and CTG monitoring is advised [5].

Photo 1: A 12 Lead ECG demonstrating Atrioventricular nodal re-entry tachycardia.

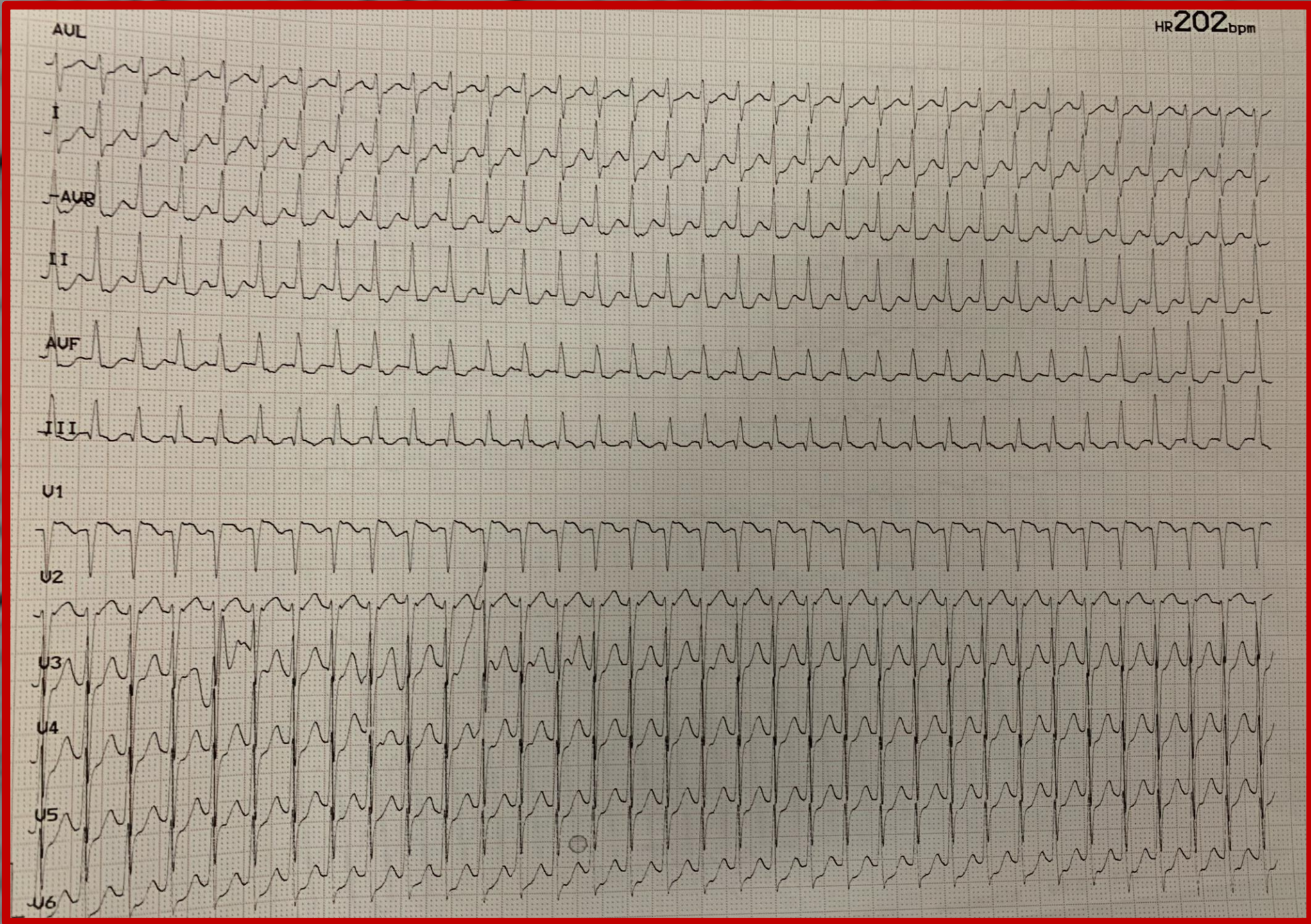
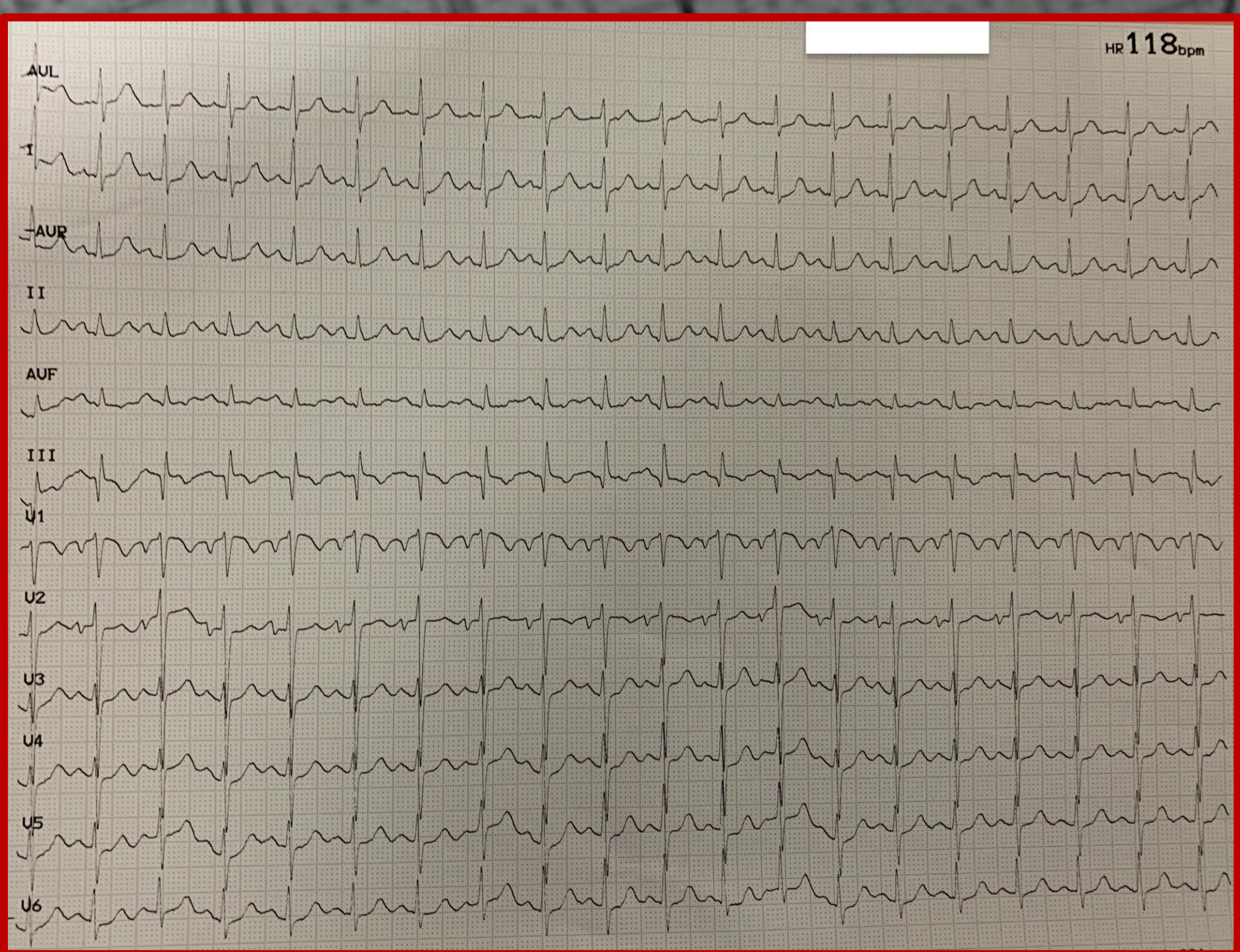


Photo 2: A 12 Lead ECG after 6mg Adenosine had been administered.



## Conclusion

We present a case of a 21 year-old developing AVNRT during the second stage of labour which responded to Adenosine 6mg. Supraventricular tachycardia's are not uncommon in labour and often respond to pharmacological therapy. Synchronised electrical cardioversion is recommended in unstable patients as in non-pregnant women.

## Key learning points

|  |                                                                                                                       |
|--|-----------------------------------------------------------------------------------------------------------------------|
|  | Paroxysmal SVT is one of the most common arrhythmias in pregnancy.                                                    |
|  | Adenosine is considered safe in pregnancy and breast-feeding [1].                                                     |
|  | Adenosine deaminase declines in pregnancy so doses of 6-12mg are often sufficient [2].                                |
|  | Synchronised electrical cardioversion has been used in all stages of pregnancy without significant complications [4]. |

## References

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