

A case of fetal supraventricular tachycardia
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Introduction

- Fetal tachyarrhythmias usually respond to mono drug therapy.
- Resistant cases may need poly therapy with close monitoring and follow up.

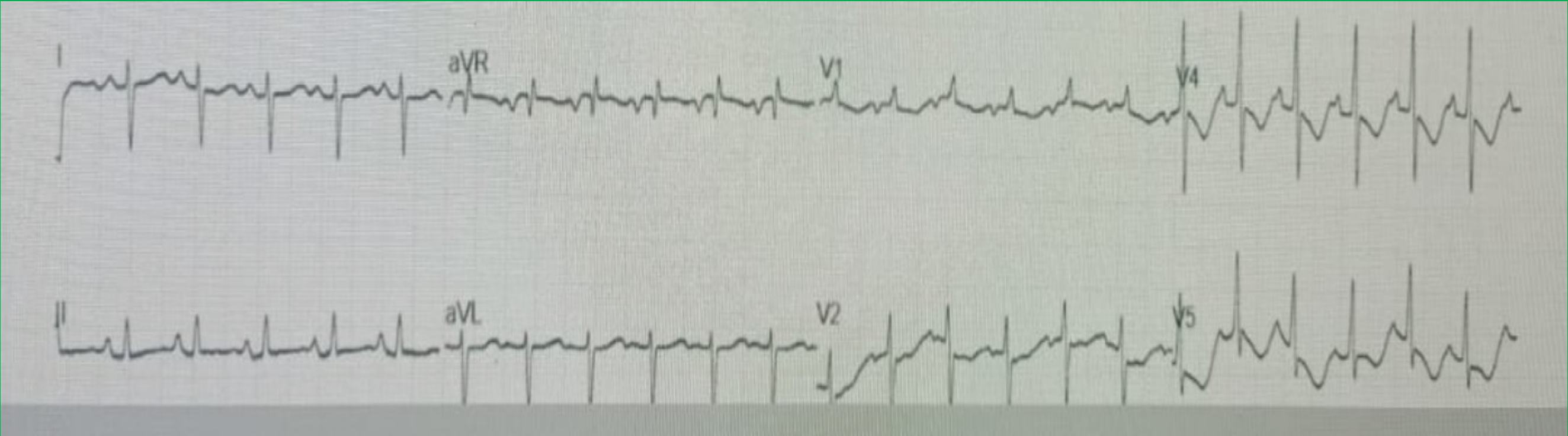
Case Description

- 29-year-old prime with type 2 DM on oral hypoglycaemic agents + Insulin for one year.
- Hb A1c at booking 6.9 %.
- First trimester combined screen low risk for aneuploidies and Preeclampsia.
- H/O Category B Covid Infection at 16 weeks .
- Targetted anomaly scan at 18 weeks showed fetal supraventricular tachycardia with a heart rate of 282 bpm.
- No structural cardiac defects.
- TORCH panel, maternal ECG, echocardiogram and electrolytes were normal.
- Managed by a multidisciplinary team consisting of cardiologist, pediatric cardiologist, neonatologist, MFM specialist and obstetrician.
- Started on flecainide 100 mg bd which was increased to 150 mg bd but the fetal heart rate was high.Digoxin 0.25 mg bd was added, but stopped as serum digoxin level was high.
- Sotalol 80 mg bd was added to flecainide and the heart rate was stabilized .
- With in a week heart rate was controlled with T Sotalol 40 mg bd and T Flecainide 100 mg bd. She was monitored with ECG and electrolytes.

- Fetal monitoring was done by biweekly fetal heart rate, fortnightly fetal echo and growth scans.
- She had elective caesarean section at 34 weeks after a course of steroid and delivered a female baby of weight 2.2 kg.
- The baby had mild respiratory distress was on continuous positive air way pressure for 24 hours Propranolol 2mg/ kg / day, was started which was reduced to 1 mg / kg /day at the time of discharge.
- On post-natal follow up baby is doing well.

Discussion

- SVT constitute 70 – 75 % of fetal tachyarrhythmias.
- It can cause fetal heart failure, nonimmune hydrops, polyhydramnios, preterm delivery, preeclampsia and oedema in the mother which is called Ballantyne's syndrome.
- Sustained fetal tachyarrhythmia (> 50 % of observed time of 45 mts) result in hemodynamic compromise.
- First line drugs are digoxin, flecainide and sotalol. Monotherapy is tried first and combination has increased side effects .
- 71 % of babies are born with normal sinus rhythm.
- Spontaneous conversion occurs in 6 % of cases.
- Direct Cardio version is needed in 11 % cases.
- Radio frequency ablation may be needed in resistant cases.



Conclusion

- Cardiac Rhythm Abnormalities complicate 1-2 % of pregnancies.
- Covid 19 infection can cause persistent fetal SVT by affecting cardiac conduction in fetus and ACE2 receptor in myocardium.

References

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