

## Extraordinary treatment of supraventricular arrhythmia in pregnant

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### Abstract

Patient is 37 years old female and 35 months pregnant. She admitted emergency service with palpitation. Supraventricular tachycardia (SVT) was shown on ECG. She hasn't cardiovascular disease priority. Any drugs weren't used to treat for SVT because parents didn't want. She had pregnant with test tube method. We placed temporary pacemaker to over-drive pacing method in her heart. Sinüs rhythm was shown after overdriving. Both mother and fetus were exchanged as healthy.

**Keywords:** mother and fetus, symptomatic bradyarrhythmias, antiarrhythmic drugs

### Introduction

Cardiac arrhythmias during pregnancy are not a routine problem as well as uncommon. So life-threatening tachyarrhythmias are infrequent. Symptomatic bradyarrhythmias are also quite rare [1]. There are unfortunately few randomized studies, little data on the efficacy or safety of antiarrhythmic drugs or even explicit guidelines to support decision making on pregnant women with arrhythmias [2]. Especially serious arrhythmias physicians may use antiarrhythmic drugs (AAD) by considering potentially risk on pregnant [3]. AADs effect on fetal growth, development and fetal arrhythmias [4]. So we must choose treatment at least harmful to mother and fetus.

### Case report

She was 37 years old female and 35 months pregnant. Although she has married for 8 years, she haven't baby. So she decided tube baby methods, she got pregnant after few experiment. She hadn't any cardiovascular problem priority exclude palpitation. She felt palpitations occasionally before pregnant., she didn't feel palpitation until 35 months. She was admitted palpitation and cold sweat to emergency service for 3 hours. Supraventricular tachycardia (SVT) was shown on electrocardiogram (ECG) (Figure 1). Emergency service doctor didn't give any drugs lest fetus might damaged. So we hospitalized to patient in intensive coronary care unit. We suggested that using electroshock methods to parents as well as drugs. They found risk this method. So we decided to overdriving. This methods was explained to parents and they approved it. We placed temporary pacemaker lead in right atrium accompanied by ecocardiography without flouruscopy. We performed overdriving with 180 bpm. Then we showed sinus rhythm on ECG (Figure 2) and she was feel relax. We consulted jynecology to mother and fetus. They didn't detect any problem mother and fetus. We observed to patient for 24 hours in intensive coronary unit. Finally we exchanged to mother and fetus as healthy.

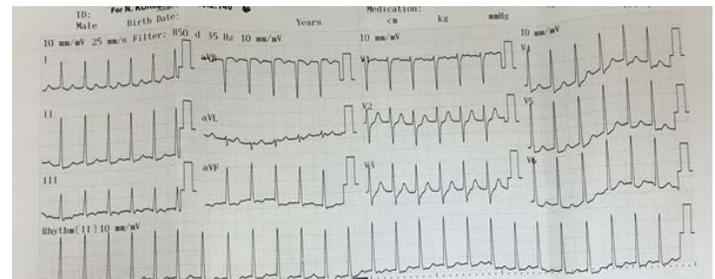


Figure 1. Supraventricular tachycardia (SVT) electrocardiogram.

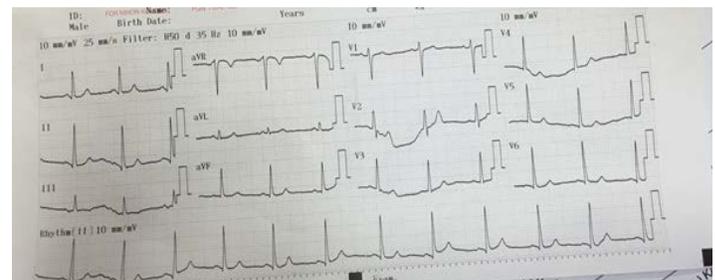


Figure 2. Sinus rhythm on ECG.

### Discussion and conclusion

SVT is common shown second and third trimesters rather than first trimester. Empirical treatment may not use in pregnant patients [5]. AV re-entrant tachycardia, Wolff-Parkinson-White (WPW) form of AV reciprocating tachycardia and AV nodal re-entrant tachycardia are most common arrhythmia seen in pregnancy and is seen with equal frequency. Physician must consider the risk/benefit ratio for both the mother and the fetus. Almost all drugs are transmitted in placenta and effect fetus [1]. Electrophysiology is not performed due to radiation exposure. If drugs can achieve rhythm undercontrol, it is preferable to defer ablation until the pregnancy is completed [6]. If patient has hemodynamic instability, electrical cardioversion may use at all stages of pregnancy. A small amount

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of energy reaches the fetus after electrical cardioversion. Physician is considered a theoretical risk of initiating preterm labor [7].

Overdrive pacing is frequently used to terminate for tachycardia during electrophysiological study. We placed temporary pacemaker lead in right atrium with ecocardiography. We performed overdriving with 180 bpm. SVT was successfully terminated. Patient was discharged after 24 hours.

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