

## World Cardiology Summit 2020: Ventricular Septal Perforation Following Takotsubo Cardiomyopathy

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### Introduction:

During pregnancy, the cardiovascular machine is confronted with big adjustments which can precipitate the occurrence of arrhythmias. The hyperdynamic kingdom and altered hormonal reputation is per danger predisposing pregnant girls to arrhythmias. Cardiac arrhythmias all through being pregnant pose a serious risk to the health of every mother and fetus. Tachyarrhythmia, consisting of every supraventricular and ventricular tachycardia, is the most established cardiac complication decided for the period of pregnancy. The paroxysmal supraventricular tachycardia at some stage in being pregnant is the most frequently decided arrhythmias with an incidence of 24 per 100,000 pregnancies. The recurrence prices at some stage in being pregnant in women with a archives of supraventricular tachycardia and ventricular tachycardia have been described in 50% and 27%, respectively. Adverse fetal things to do occurred in 20%. Catheter ablation is the first wish and protection for cardiac arrhythmias in victims besides pregnancy. Some authors advised that pregnant woman want to now now not suffer an ablation device due to the truth of the radiation risks to the fetus. There are very limited documents on hand for the penalties and safety of catheter ablation in pregnancy. We seem to be at the feasibility and safety of catheter ablation in being pregnant with restricted fluoroscopy.

### Keywords:

Tachycardia; Radiofrequency catheter ablation; Atrioventricular reentrant tachycardia; Fluoroscopy time; Catheter ablation.

### Patients:

We studied 10 consecutive victims referred to Hanoi Heart Hospital, Hanoi, Vietnam from September 2015 to August 2019 for tachycardia in pregnancy. All victims underwent catheter ablation with limited fluoroscopy.

### Study methods:

A case-control retrospective study

**Ablation Procedure**

All victims had been rolled spherical the belly with an X-ray protecting apron. In general, three catheters (4–6F) had been positioned at the acceptable ventricular apex, His bundle region, and perfect atrium the utilization of the femoral vein approach and the coronary sinus the use of the left subclavian vein approach. In the electrophysiological study, it used to be as soon as carried out the use of elegant protocols. Heparin used to be used in all of the cases after the vein approach. During all of the procedures, we tried to restrict fluoroscopy as a properly deal as possible. X-ray used to be used entirely in the coronary sinus position and in the course of the aortic valve. The fluoroscopy used to be as soon as set at a minimal of three frames/second. The non-fluoroscopic mapping computing device used Ensite Velocity (St Jude Medical) at some point of the complete procedure. An ablation catheter (7F, 4-mm tip) used to be as soon as often delivered the use of the suitable femoral vein or artery approach. Mapping and ablation had been carried out the use of hooked up methods. The Radiofrequency (RF) strength delivered was once as soon as 30–50 W, and the temperature restrict used to be in my opinion set to 50–70oC.

**Follow up:**

The victims underwent follow-up with the useful resource of cardiologists in the fitness middle outpatient health facility at least from post-procedure to delivery.

All of the pregnant women gave their permission for ablation and traditional the probability of the utilization of an X-ray if necessary. The examine about protocol was once as soon as licensed through the Ethics Committee of the Hanoi Heart Hospital.

**Results:**

Ten victims with tachycardia in being pregnant underwent RF catheter ablation. The advocate age used to be 26,  $30 \pm 4$ , fifty two years of age (from 19 to 34 years old). The gestational age at the time of ablation technique was once as soon as 26,  $29 \pm 2$ , 88 weeks of age (from 21 to 31 weeks old). All victims had no files of coronary coronary heart failure and structural coronary coronary heart diseases. All sufferers had at least one tachycardia in the path of their pregnancies. Two of 10 victims had a information of dysrhythmia before than pregnancy.

All victims have been ablated successfully. In our studied group, there have been two victims with AT, two victims with VT, 4 victims with AVRT, two sufferers with AVNRT. In two victims with AT, areas of ablation had been one of underneath perfect atrial appendage and one of the coronary sinus ostium. Both victims with VT, location of ablation had been suitable ventricular outflow tract. In 4 victims of AVRT, areas of ablation had been two of the left free wall accent pathway, one of the left septal accent pathways and one of the appropriate posterior free wall accent pathways. We ablated the slow pathway

in two victims with AVNRT. The timing of the manner used to be as soon as 66, 50 ± 19, 86 minutes. The timing of fluoroscopy was once as soon as 118, eighty ± 64, 38 seconds. The total dose place product used to be as soon as 0, seventy three ± 0, sixty 4 Gy-cm<sup>2</sup>).

In our each day practice, heparin used to be used in case of get admission to to the left aspect of the coronary coronary heart and for techniques of longer duration. In catheter ablation for pregnancy, we used prophylactic heparin for all cases. Pregnancy is associated with a hypercoagulable reputation and venous congestion. During procedures, the victims underwent catheter ablation which is considered to make better the thrombogenicity, and catheter action through the femoral vein might also embolize the venous thrombosis. Therefore, prophylactic heparin is strongly endorsed to prevent thromboembolic activities in being pregnant existing technique catheter ablation.

#### **Patient's outcome:**

There had been now now not any troubles for the length of and after procedures. All being pregnant normally delivered healthful babies. Only one being pregnant desired cesarean surgery, on the other hand now now not due to cardiovascular problems.

#### **Conclusion:**

Catheter ablation with limited fluoroscopy can be carried out in being pregnant with a immoderate success rate. The catheter ablation approaches produced invulnerable and correct outcomes in pregnancy.

#### **Conflict of Interest:**

the creator declare that the look up was once as soon as carried out in the absence of any commercial enterprise or financial relationships that be construed as a achievable battle of interest.