

An Uneventful Pregnancy in A Patient With Wolff-Parkinson-White Syndrome, Following Radio-Frequency Ablation



Medical Science

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ABSTRACT

Wolff-Parkinson-White syndrome or preexcitation syndrome is a condition which has an extra pathway for hearts electrical signals. Asymptomatic cases may not need any treatment, but if patient becomes symptomatic electrophysiological study to detect an extra pathway and radio frequency ablation following it is proven to be helpful in most of the cases. Previous asymptomatic cases can become symptomatic during pregnancy due to the physiological changes that occur during pregnancy and any tachyarrhythmias in pregnancy should be considered seriously and evaluated because of potential life-threatening consequences to both mother and fetus. Here we are presenting a case who had undergone radiofrequency ablation and had an uneventful pregnancy following it.

Introduction- Wolff-Parkinson-White syndrome (WPW) is one of the pre-excitation syndromes in which activation of an accessory atrioventricular (AV) conduction pathway leads to bypass the AV node and cause earlier ventricular activation than the normal pathway [1]. It is one of the most common causes for Supra ventricular tachycardia in pregnancy

Case Report – Mrs X, 31 year old primigravida with newly detected gestational diabetes mellitus and well controlled on medical nutritional therapy was admitted in the antenatal ward as she completed her EDD. She underwent an elective cesarean section on maternal request and gave birth to a healthy male baby weighing 3kgs. She was diagnosed as a case of WPW syndrome 8 years back when she had giddiness for 2 months and sudden attack of chest pain and had undergone radio frequency ablation for recurrent palpitations 2 years back following which she conceived naturally. Her antenatal period was uneventful and also intraoperatively her pulse rate ranged between 76-86 b/min with blood pressure ranging from 100/60 mmHg to 120/90 mmHg and ECG within normal limits. Post operative period was uneventful. She was discharged on 5th postoperative day with both mother and the baby in good general condition

Discussion

Pathophysiology- Normally, electrical signals follow a certain pathway through the heart. This helps the heart beat regularly. This prevents the heart from having extra beats or beats happening too soon. In people with Wolff-Parkinson-White syndrome, some of the heart's electrical signal goes down an extra pathway. This may cause a very rapid heart rate called supraventricular tachycardia. Most people with Wolff-Parkinson-White syndrome do not have any other heart problems. However, this condition has been linked with other cardiac conditions, such as Ebstein anomaly. A form of the condition also runs in families [2].

Symptoms may include chest pain or chest tightness, dizziness, light-headedness, fainting, palpitations and shortness of breath.

Sometimes tachycardia will be the only sign and blood pressure will be normal or low in most cases. Wolff-Parkinson-White syndrome may be diagnosed through a continuous ambulatory ECG monitoring (Holter monitor) [2]. The distinct electrocardiographic (ECG) characteristics of WPW syndrome are a short PR interval and a widened QRS interval with a delta wave [3]. Electrophysiologic study (EPS) is done using catheters that are placed in the heart. This test may help identify the location of the extra electrical pathway [2].

WPW Syndrome and Pregnancy- The exact incidence of WPW syndrome during pregnancy is not known; however, some reports have indicated that pregnancy may facilitate the onset of tachyarrhythmias in patients with previous asymptomatic pre-excitation. The physiologic volume overload occurring during the pregnancy results in an increased left ventricular end diastolic volume that may lead to an increased myocardial irritability. Many case histories suggest a favorable outcome for mother and baby after an uncomplicated SVT [4].

Treatment includes antiarrhythmic drugs such as procainamide or amiodarone, may be used to control or prevent tachycardia. The long-term treatment for Wolff-Parkinson-White syndrome is very often catheter radio frequency ablation. Catheter ablation cures this disorder in most patients. The success rate for the procedure ranges between 85 and 95%. Success rates may vary depending on the location and number of extra pathways [2].

Conclusion- Tachyarrhythmia in pregnancy in association with WPW is considered serious and should be evaluated because of potential life-threatening consequences to both mother and fetus. In such patients, close monitoring should occur to prevent maternal and fetal morbidity and mortality. Patients with mild symptoms and normal hearts need reassurance; treatment with antiarrhythmics is reserved for intolerable symptoms. Following radio frequency ablation the prognosis is usually very good.

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