

## **PO 2 - PERIOPERATIVE MANAGEMENT OF WOLF-PARKINSON-WHITE SYNDROME IN CESAREAN DELIVERY**

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Incidence of Wolf-Parkinson-White Syndrome (WPWS) during pregnancy is unknown. Reports suggest that previously asymptomatic patients may develop tachyarrhythmias during pregnancy<sup>1</sup>. Meticulous and ongoing perioperative monitoring is essential, being the main anesthetic concern the detection and management of arrhythmias.

A 36-year-old female (68 kg; 166 cm), ASA III, WPWS diagnosed and a family history of sudden death underwent a cesarean section (C/S) at 31 weeks of gestation.

During pregnancy, occasional palpitations were reported, ranging from 10-30 minutes. Prior to C/S, a multidisciplinary evaluation was performed. No significant findings were revealed during physical examination, blood analysis, chest X-ray and echocardiography. ECG and Holter findings were suggestive of WPWS.

ASA standard monitoring was established, and two 18G IV lines were secured. Anti-arrhythmic drugs were prepared, and defibrillator patches were placed for emergency cardioversion. Preloading was carried out with 500 mL ringer lactate. Spinal anesthesia with 8 mg levobupivacaine, 2.5mcg sufentanil and 100mcg morphine was performed. Patient was placed supine with a wedge under the right hip. An episode of hypotension occurred (MAP 46mmHg) after induction, treated successfully with phenylephrine (50 mcg). Low dose oxytocin was administered. Patient remained hemodynamically stable throughout post-op and was discharged 4 days later.

The goal in the perioperative management is to avoid increases in sympathetic tonus. Commonly used anti-arrhythmic drugs should be reserved for patients with hemodynamic changes, severe symptoms or sustained arrhythmias, as such drugs cross the placenta<sup>2</sup>. Non-pharmacological treatment like vagal maneuvers are well tolerated, though unnecessary in this case.

Pre-loading and avoidance of aortocaval compression by using left lateral tilt helps prevent decreased atrial filling, reduces hypotension and vasopressor requirement, which could trigger supraventricular arrhythmias. Levobupivacaine was selected in light of reduced hemodynamic effects. Only low dose oxytocin was administered to minimize risk of arrhythmia precipitation.

Paroxysmal supraventricular tachycardia may be treated with vagal maneuvers, adenosine or esmolol, whereas hemodynamically unstable patients should be treated by cardioversion<sup>2</sup>.

Awareness on WPWS is important, as changes in physiology of conduction and drug-induced complications may lead to increased maternal and fetal risk.

**References:**

1. Robins K, Lyons G. Supraventricular tachycardia in pregnancy. *Br J Anaesth.* 2004; 92:140-143.
2. Jetley P, Chatterjee R, Bafna U, Jetley NK (2015) WPW Syndrome: Intricacies of Anesthetic Management in Cesarean Delivery. *J Cardiol Clin Res* 4(1):1052.



