

## **Anaesthetic Management of Emergency Lscs, an Unusual Case of Complete Heart Block with Permanent Pace Maker**

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**Abstract:** We present 23 years old pregnant patient diagnosed as complete heart block with implanted permanent pace maker. She underwent emergency cesarean section under epidural anaesthesia successfully. Maternal and fetal outcome was excellent.

**Keywords:** Complete Heart Block, Epidural Anesthesia, Permanent Pacemaker, Pregnancy.

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### **I. Introduction**

Complete heart block also called third degree A-V block. This is the disorder of conduction system where conduction through A-V node is blocked. Complete heart block can be congenital or acquired. It may be associated with other heart diseases. Patient may be asymptomatic but can present with hypotension, syncope, sudden cardiac arrest. Most of the patients with symptoms require permanent pacemaker. Complete heart block in pregnancy is very rare problem [1]. Here we report a case of complete heart block with permanent pacemaker posted for emergency cesarean section, successfully managed with epidural anaesthesia.

### **II. Case Report**

23 years primi gravida posted for emergency cesarean section. Indication of cesarean section was premature rupture of membrane with no progress of labour. Patient had fainting attack 2 years back and was diagnosed as complete heart block by cardiologist. Permanent pacemaker (VVI, type of pacemaker) was implanted by cardiologist 15 days after diagnosis. No other significant history found. On examination patient was conscious, afebrile, pulse-72/min, regular. BP-130/80mmHg, respiratory rate-16/min. CVS-Heart sounds normal, no murmur. RS,CNS-NAD. Spine-NAD, Mouth Opening-MPG Gr.-I. Investigation-Hemoglobin-9.3gm% , Urine-albumin, sugar nil, blood urea-31mg%, ECG- pacemaker rhythm, 2DECHO was normal. High risk informed consent obtained.

Epidural anaesthesia was planned for this patient. Multipara monitor attached to the patient to monitor Spo2, non-invasive blood pressure, ECG. Intravenous line established. Pre-loaded with 500 ml ringer lactate. Emergency cardiac drugs were kept ready. Epidural catheter was introduced in epidural space at the level of L3-L4 intervertebral space in left lateral position. About 3 cm catheter was left in epidural space. After test dose of 3 ml of 2% lignocaine with adrenaline, 12 ml of 2% lignocaine was injected through catheter. At T6 Level of block, surgery was started. After delivery of normal baby, patient was sedated with I. V. 1mg midazolam and 30 mg pentazocine. 10 units of Pitocin was added in IV drip. Patient remained hemodynamically stable throughout surgery. Patient was kept under observation for 48 hours. Postoperative analgesia was given through epidural catheter. After 48 hours, epidural catheter removed.

### **III. Discussion**

Complete heart block is an abnormality of conduction system in the heart. Heart block can be congenital or acquired. Acquired heart block can be secondary to cardiac surgery involving closure of ventricular septal defect. Patients are asymptomatic but can present with sudden bradycardia, syncope, hypotension, cardiac arrest for which there are no predictors [2]. In our case patient had symptom of syncope so cardiologist inserted permanent pacemaker.

Evaluation of patient before anaesthesia is very important with detailed history and thorough physical examination. Cardiologist opinion should be sought for the status of permanent pacemaker before surgery. Pacemakers are sensitive to electromagnetic interference[3]. Electrocautery, mechanical ventilator, orthopedic saw can affect pacemaker. Fatal arrhythmias and even death reported with use of electrocautery leading to failure of pacemaker. According to recent guidelines bipolar cautery is preferred as it causes less electromagnetic interference. Fasciculation with scoline and shivering can disturb the pacemaker so precautions should be taken to avoid such factors during anaesthesia. To prevent disturbance of conduction system and pacemaker, the technique that interfere least with heart rate and conduction system is advocated [4]. Haemodynamic instability observed with spinal anaesthesia. It is also difficult to control level of block in spinal anaesthesia. Drugs used in general anaesthesia cause myocardial depression.

So considering all these factors, epidural anaesthesia was administered to patient [5]. We gave 2% lignocaine because bupivacaine is known for its cardiac toxicity.

In Conclusion epidural anaesthesia can be safely given to pregnant patient with complete heart block with permanent pacemaker.

### **References**

- [1]. W. Tietge And M.Daniels, A case an acquired high degree A-V block in pregnant patient *North Heart J.* 2008 Dec16(12)419-421
- [2]. Christian Balmer MD And Urs Bauersfeld MD Do all children with congenital heart block require permanent pacing *Indian Pacing Electrophysiology J.* 2003 July-Sept,3(3);178-183 2003 July 1
- [3]. Okan Erdogan MD Electromagnetic Interference on pacemaker *Indian Pacing Electrophysiology J.* 2002 July-Sept;2(3):74-78 2002 July 1
- [4]. Dr. Manisha P. Modi ,etall Anaesthetic management of an unusual case of complete heart block for LSCS *Indian J. Of Anaesthesia.* 2006;50(1):43-44
- [5]. A Majeed, R Alexander. Management of parturient with a permanent pacemaker for cesarean section. *The Internet Journal Of Anaesthesiology*, 2006 Volume13 Numbell.