Sole epidural anaesthesia for cesarean delivery of a parturient with severe mitral stenosis with embolic stroke with hemiparesis.

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Abstract

Rheumatic mitral stenosis (MS) is the commonest type of valvular lesion in pregnant women. (1) Pregnancy is prohibited in severe MS due to both maternal and foetal risks. Severe MS can further be complicated by heart failure and arrhythmias. Medical management includes management of heart rate, arrhythmia, heart failure and thromboembolic phenomenon prevention/management. We here present a case of successful management of patient with embolic stroke due to severe MS under sole epidural anaesthesia.

Pre-operative

35-years-old female
G5P4L3 at 33 weeks of gestation
Healthy with no known comorbidities
Previous deliveries at home and uneventful
Presented with right-sided hemiparesis for 1 week
MRI: Left basal ganglia ischemic stroke
ECG: Sinus rhythm with rate of 85 bmp Regular
Echo : Severe MS with MVA 1 cm^2
Baseline Vitals: stable
Decreased foetal moment with severe oligohydramnios (FHR = 135bpm)
Plan: Emergency Cesarean delivery (CD)

Intra- and Post-operative Events

Monitoring: ASA I and II with invasive line, clinical monitoring
Anaesthesia: graded sole epidural anaesthesia (EA)
Medications: 2% lidocaine, adrenaline (5mcg/ml) and fentanyl (5mcg/ml) – Total= 16 ml
Blood pressure and other vitals parameters were maintained in targeted range.
Outcome: A single female child of birth weight 1.5 kg ; APGAR score of 6/10 and 7/10 at 0 and 5 minutes respectively.
Oxytocin 1U (Diluted in 10 ml) IV slowly then infusion 1U/hr.
Morphine 2.5 mg after delivery through Epidural catheter.
Epidural catheter removed after 1 hour of CD.
There were no major problems in the immediate postpartum period.
Postoperatively, the mother received low-molecular weight heparin, aspirin, antibiotics and analgesics
On day 6, she developed heart failure, which
was managed with oxygen, BiPAP and frusemide.
Rest other courses were uneventful
Discharged home on day 12 with stable vitals parameters and improved neurological status.
On 30 days follow-up, the mother's neurological status was improving and the baby was doing fine.

Conclusion

Concerns in our patient: 1. Pregnancy 2. Severe MS 3. Thromboembolic stroke with hemiplegia.
Advantage of graded epidural anaesthesia in our case

- Haemodynamic stability: Better tolerated than any other technique of anaesthesia. (2)
- Clinical monitoring of stroke
- Safe for both mother and foetus.

Conduction of regional anaesthesia is debatable in patients with pre-existing neurological deficits; however, with proper documentation, precaution, and informed consent, regional anaesthesia can be conducted. (3)

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