Epidural Analgesia in Patients With Spinal Bifida

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Background: Spina bifida is a birth defect of the spinal column caused by the incomplete closure or failure of one or more vertebral arches of the spine, resulting in the spinal membranes and spinal cord to protrude through the absence of vertebral arches. This defect contributes to serious developmental disabilities as it is associated with other congenital anomalies.

Classification: There are three types: spina bifida occulta, spina bifida cystica myelomeningocele and spina bifida cystica meningocele, also classified as mild, moderate and severe depending on the extent of the types of tissue herniated.

Epidural anaesthesia has been accepted as the preferred form of anaesthetic technique for pain relief in labour. In patients with this condition, neuraxial blockade is both potentially difficult and hazardous since the bony and ligamentous structures in the spine may be absent or abnormal and the underlying neural structures are highly anatomically variable.

We performed a retrospective study to determine the outcomes for obstetric patients presenting to our hospital. After Ethical approval we reviewed the charts of 14 patients with a history of spina bifida that had been referred to the anaesthetic assessment clinic.

Results: Severity of Illness: Spina Bifida Occulta (SBO) was more common than Spina Bifida Cystica (SBC) and was the established diagnosis in 9/14 cases. Of the 9 patients with SBO, 2 were not considered suitable for neuraxial blockade because of unrelated back problems (previous spinal surgery with existing neurological deficit, disc prolapse with neurology). We advised the remaining 7 patients that epidural analgesia was not contraindicated. 3 patients requested and received epidural blockade for labour without any complications. Of the 5 patients with SBC, 3 had elective caesarean sections under general anaesthesia, 1 patient had fentanyl infusion for labour pain and the last patient who had had repair of hydrocephalus and spinal bifida had epidural with no complication.

Conclusions: Spina bifida is an extremely variable condition that ranges from asymptomatic, often incidentally detected sacral lesions to overt myelomeningocele with neurological deficits. Individualized assessment of each patient is required to determine safe methods of analgesia. Regional anesthesia is feasible in selected patients.

Reference

Additional File: