Spina bifida occulta: a challenge for obstetric anaesthesia?

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Introduction

Spina bifida occulta (SBO) is part of a spectrum of congenital abnormalities resulting from failed closure of the neural tube. It's incidence, between 10-25% of the population, has decreased over the past years.

It is frequently diagnosed by chance, on radiologic tests performed for other reasons. Neuraxial anesthesia might be challenging in these patients, due to changes in sacrolumbar anatomy and the increased risk of dural puncture when performing epidurals.

Case Report

33 year-old women, 1.63m and 80kg, ASA II, GIP0

admitted for Caesarean section at 40w due to fetal pelvic position.

Past medical history: diagnosed 3 years ago with **SBO**, at the **L5-S1** level, with sporadic episodes of lumbar pain, treated with NSAIDS.

- ASA standard monitorization, regional anaesthesia was the approach of choice.
- **Combined spinal-epidural technique.**
- **Sitting position, at the L3-L4 level**, 18G Tuohy and 27G Quinck needles for catheter placement and spinal anaesthesia, respectively.
- **7,5mg of levobupivacaine + 2,5 mcg sufentanil** was administered, reaching sensitive blockage at the T4 level after 15 minutes.
- There was an **episode of hypotension treated with 200 mcg of phenylephrine**, and remain otherwise stable throughout the entire procedure.
- **No neurological complications reported.**
- No need for dose adjustment.
- No complications reported in the postpartum period.

Effective analgesia was achieved through epidural boluses of 16mg ropivacaine 0,2% + 1mg morphine every 8h. NRS 0 at rest and 2 with movements. The catheter was removed after 48h, uneventfully.

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Discussion

There are very few cases in literature describing the anaesthetic approach of obstetric patients with SBO. Although they might present as a challenge for the anaesthesiologist, **a spinal approach is not contraindicated in these patients**, keeping in mind that they frequently have associated **spinal deformities**, altered **dural permeability** and **reduced epidural spaces**, which makes local anaesthetic spread unpredictable.

Spina bifida is also associated with **difficult intubation** and **restrictive respiratory disease**, so general anaesthesia should be avoided in these patients whenever possible. Finally, anaesthesiologists should keep in mind that spina bifida patients might have an increased risk of latex allergy, so a latex free environment is preferable in these cases.

Learning Points / Take Home Messages

- Spina bifida occulta is a congenital spinal column defect, usually diagnosed by chance.
- Very few reports of anaesthetic management of these patients.
- Regional anaesthesia is the approach of choice.
- Changes in the sacrolumbar anatomy, increased dural puncture risk and unpredictable anaesthetic spread are its main challenges.

References:

- 1) Griffiths S, Durbridge J A. Anaesthetic implications of neurological disease in pregnancy. CEACCP 2011
- 2) Wood G G, Jacka M S. Spinal hematoma following spinal anesthesia in a patient with Spina Bifida Occulta. Anesthesiology 1997; 87: 983-4
- 3) Davies P R F, Loach A B. Spinal Anaesthesia and Spina Bifida Occulta. Anaesthesia 1996; vol 51: 1160-1161