Labour analgesia challenge – when epidural is not possible, what can we do?

Pedro Godinho¹, Joana Lavado¹, Lúcia Gonçalves¹, Isabel Macedo², Telma Carlos², Elisabete Valente^{2,3}

1 – Anaesthetic Resident; 2 – Anaesthetic Assistant; 3 – Head of Department

Department of Anesthesiology - Centro Hospitalar de Leiria, EPE - Portugal

BACKGROUND

- ✓ Epidural analgesia remains the gold standard for labour pain management. However, there are some conditions where it cannot be used and an alternative method has to be considered.

CASE REPORT

Pregnant woman | 31 year-old | 60kg | 1.63m

Past Medical History: severe scoliosis, submitted to posterior arthrodesis from cervical to sacral vertebrae (Fig.1).

Fig. 1 – X-ray images

Orthopaedic & Obstetric evaluation: eligible for vaginal delivery.

LABOUR ANALGESIA

- ✓ Abdominal and back irruptive pain, with a numeric pain rating scale score of 10/10.

PCA-analgesia

➡ Remifentanil-bolus:

- ✓ Concentration: 20 µg/mL
- ✓ Lockout: 2 minutes
- ✓ Bolus doses: 15 - 40µg (in increasing doses)

Labour analgesia records

- ✓ O2 per nasal cannula: 2L/min
- ✓ Labour duration: 6 hours
- ✓ Total bolus requests: 120
- ✓ Total bolus administrations: 90 (2407 µg)
- ✓ Complications: vomiting
(single episode – resolution after ondansetron 4mg iv)

PAIN SCORE DECREASED TO 2/10

- ✓ After total cervix dilation, **caesarean** was performed under general anaesthesia, due to foetus-pelvic incompatibility.

Caesarean anaesthesia records

- ✓ No complications were verified during the procedure
- ✓ Newborn Apgar: 10/10/10
- ✓ Postoperative analgesia: Paracetamol 1g + Ecoguided Transversus Abdominis Plane block (TAP)

TAP block ➡ ropivacaine 0,375%, 20ml each side

SUCCESSFUL PAIN CONTROL

DISCUSSION

Labour Pain

- ✓ Spontaneous vaginal delivery is considered one of the most painful experiences in a woman's life.
- ✓ Pain intensity depends highly on physical and psychological factors of the mother.
- ✓ Severe pain adversely affects the parturient and foetus.

Remifentanil

- ✓ Remifentanil is a potent short-acting opioid, broken down by non-specific plasma and tissue esterases.
 - Onset: 30 – 60 seconds
 - Peak effect: 2-3 minutes
 - Elimination half life: 3-10 minutes
- ✓ Rapidly metabolized by the mother and foetus.
- ✓ Clearance and distribution are independent of duration and strength of infusion.

SUITABLE PHARMACOLOGICAL PROFILE FOR LABOUR ANALGESIA

Risk of respiratory depression

- ➡ Continuous oximetry
- ➡ 1 : 1 nursing
- ➡ Availability of anaesthetic support

TAP block

- ✓ By delivering local anaesthetic into the transversus abdominis plane, it is possible to block the sensory nerves of the anterior abdominal wall (below T10).
- ✓ TAP block, in the setting of a multimodal analgesic regimen, improve postoperative lower abdominal pain, reducing opioid consumption.

LEARNING POINTS

- ✓ Remifentanil can be a safe and effective alternative to epidural in labour analgesia, when this technique is not possible.
- ✓ Careful monitoring to prevent complications is essential.
- ✓ TAP block could be safely and efficiently used for postoperative caesarean pain control.

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