Nitrous oxide as a bridge to epidural labor analgesia in a patient with Cerebral Palsy.

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Background

Pain relief during labor has significant impact on the experience and perception of the birth moment. The 50/50 blend of oxygen and nitrous oxide (O₂/N₂O) has long been used to control labor pain, reaching rates of use as great as 70% in some countries.¹⁻³ In this clinical report we describe the use of nitrous oxide as a bridge to epidural labor analgesia in a patient with Cerebral Palsy.

Case Report

- 29 year-old full term pregnant in active labor;
- Diagnosis of Dyskinetic Cerebral Palsy: neurosensory deafness, cognitive impairment, some difficulties in communication, involuntary movements aggravated by anxiety;
- Purposed to 50/50 blend of O₂/N₂O in order to perform epidural analgesia;
- Informed consent was signed.

After full explanation, she was able to hold the facemask and inalete the 50/50 blend of O₂/N₂O. There was pain relief and it was possible to achieve relaxation, good positioning and thus avoid involuntary movements.

An epidural catheter was then placed without interurrences. Pain relief was achieved with epidural Ropivacaine 0,2 % (16 mg) and Sufentanil 10 mcg.

Discussion

Although less efficient than epidural analgesia in pain control³, N₂O has intense analgesic and anxiolytic properties, showing a good safety profile, which makes it a very good agent to control labor pain or as a bridge drug to help positioning for an epidural catheter placement.³

The pain and anxiety control introduced by N₂O facilitates correct and stable positioning, valuable factors that improve the success of any epidural technique, especially in situations where unintended movement can compromise safety and produce associated complications.

Learning Points

N₂O has important analgesic and anxiolytic properties, which makes it an interesting drug to use as a bridge to more efficient forms of labor pain control. Future studies should be done to test if the association of an inhaled analgesic technique during the epidural catheter placement leads to significant reduction in the complication rate (p. ex. accidental dural puncture) in agitated patients and potentiates maternal satisfaction with the procedure.

References

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