

FETAL SURGERY AND REGIONAL ANESTHESIA



SPINA BIFIDA

- Is a condition that occurs when the neural tube fails to close in the early stages of embryonic development, resulting in the exposure of neural elements.
- Most commonly affects the lumbosacral segments.
- The 3 most common types of spina bifida are:
Myelomeningocele - Meningocele - Spina Bifida Occulta

The incidence is approximately 1:1000 live births

Intrauterine surgery can be performed
★ either through ★
foscopic surgery or
with an open
surgical approach



General ± epidural for postoperative analgesia



Local or neuraxial ± sedation

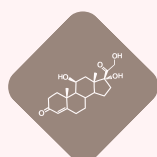
TYPES OF MATERNAL ANESTHESIA

The perioperative management of fetal surgery involves a multidisciplinary team, posing a challenge for anesthesiologists to maintain the homeostasis of both the mother and the fetus..

EPIDURAL PROS



Adequate postoperative analgesia helps reduce maternal stress, thereby decreasing the release of catecholamines, which can also promote uterine contractions



Tocolytic effects of epidural analgesia have been widely documented, as it effectively reduces the levels of uterine contraction-promoting hormones, including estradiol, cortisol, and dehydroandrosterone sulfate.

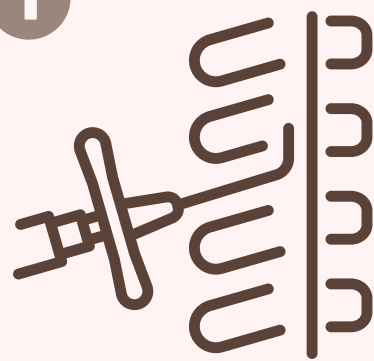


In fetal surgeries requiring intense tocolysis, epidural perfusion of local anesthetics is started at the end of the surgery and maintained during the first postoperative days.

ANESTHETIC TECHNIQUE

- ★ While the patient is in a seated position, the insertion of an epidural catheter is performed using a Tuohy 18G needle at the L3-L4 level.
- ★ To rule out accidental dural puncture or intravascular injection, a test dose of local anesthetic is administered.
- ★ The patient is positioned in the supine position, and noninvasive BP monitoring is initiated.
- ★ If the test dose yields negative results after 5 minutes, a progressive administration of bupivacaine 0.25% without adrenaline (4-8 ml) and 50 ug of fentanyl is performed until a bilateral sensory block is achieved at the level of T4 - T6
- ★ Additional doses are administered through the epidural catheter until the end of surgery.
- ★ Maternal general anesthesia is then performed.

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REMEMBER! →

EPIDURAL ANESTHESIA WITH THE DUAL **AT** OBJECTIVE

Adequate analgesia

Tocolysis to prevent premature delivery



OUR TEAM

Anesthesiologist: Ana María Suárez - Andrea Gómez
Maternal - Fetal Medicine: Camilo Hernández de Alba
Anesthesia Resident: Nathalia José Gamarra Ramírez

CHECK OUR REFERENCES



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