ANALGESIA IN THORACIC ANAESTHESIA BEYOND EPIDURAL

Juan J. Fibla
Hospital Universitari Del Sagrat Cor. Barcelona (Spain)

Acute pain after thoracic surgery (thoracotomy or VATS), is considered one of the most intense postoperative pains. It is a nociceptive pain that is localized in the thoracotomy/port area, and may radiate to front or back following the corresponding dermatomal trajectory.
Long-term post-thoracotomy pain (in different degrees) is reported to be higher than 50%. A relationship between the severity of acute postoperative pain and the development of chronic pain has been demonstrated, for this reason pain after thoracic surgery must be managed very carefully as a bad control decreases pulmonary function and increases the risk of atelectasis, respiratory infections and cardiovascular alterations (specially in the frail patient)
There are mainly two types of analgesia in thoracic surgery:

a) Systemic analgesia: Opioids are the most popular. They have different ways of administration: endovenous, intramuscular, transdermal, PCA (pain control analgesia) pump. They are very effective however their secondary effects limit their use: nausea, vomiting, constipation and respiratory depression. NSAIDs (NonSteroidal Anti-Inflammatory Drugs) Their main use is as adjuvant analgesics. They reduce the need of opioids. Their secondary effects are gastrointestinal bleeding, altered platelet function and kidney failure.

b) Loco-regional analgesia: Epidural thoracic block, performed by the anesthesiologist, it is still the “gold standard”. Paravertebral block, performed by the surgeon, it is increasing its popularity. Other blocks: Spinae erector, intercostal, retrolaminar block.

Thoracic epidural analgesia carries the risk of dural puncture, epidural hematoma, epidural abscess, and side effects such as hypotension, bradycardia, and urinary retention. The use of paravertebral analgesia for thoracic procedures is well accepted. Results are comparable to epidural block and it is performed by the surgeon under direct vision. Both in open surgery or by thoracoscopic-assisted positioning, the paravertebral block is technically simple and allows direct visualization of correct delivery of local anesthetic. Pain scores have been comparable to those published with epidural block with no side effects.

In summary there are multiple analgesic options to treat postoperative thoracic surgery pain. Multimodal analgesia gets the best results. It is very important to perform the surgical procedure carefully and meticulously avoiding any unnecessary tissue and neural damage. In our experience paravertebral block performed by the surgeon combined with NSAIDs (avoiding opiois) and adding complementary pain treatments (as preemptive gabapentine or TENS) is the optimal policy.