Awake breast surgery combines the reduction of hospitalization, postoperative stress, and postoperative lymphoedema, furthermore local anaesthesia and peripheral nerve block provide better analgesia during glandular displacement techniques, as during oncoplastic and axillary surgery. COVID-19 outbreak determined a strong effect on clinical practice worldwide and novel approach as awake breast surgery could combine fast track surgery and cross-infection reduction with an optimization of resources and resource optimization in terms of spaces and economic savings with shorter hospital stays.

Fast track awake breast surgery provides a reduction of operative room time length of stay and potentially surgical treatment for a wider number of oncological patients.

Costa et al proposed, to perform regional anaesthesia for breast procedures, a combination of three techniques: Pecs II block to cover muscles, axilla and lateral cutaneous branches of intercostal nerves (reliably from T2 to T4), erector spinae block block to cover lateral cutaneous branches from T4 to T7 and paraesternal block or transversus thoracic muscle plane block to cover anterior cutaneous branches.

The introduction of erector spinae block in breast surgery, represents an alternative to general anaesthesia and locoregional conventional techniques, like epidural anaesthesia or paravertebral block in oncological breast surgery, especially in high-risk patients.

Santonastaso et al wonder if the secret to obtaining perfect anaesthesia/analgesia for radical mastectomy procedures associated with sentinel lymph node biopsy, when we need to avoid general anaesthesia, could be the association of multiple techniques between Pecs, Serratus Anterior Block and Erector Spinae Block. More randomized trials are required to provide a certain answer to this question.

REFERENCES

One of the main causes of postoperative complications is general anaesthesia (GA), which is frequently used for sedation and is associated with nausea and vomiting in 50% of the cases.

Alternatives to GA, such as preoperative medications, neuromodulatory analgesia and local or regional anaesthesia have been explored to reduce postoperative complications and increase perioperative pain control.

Regional anaesthesia is best indicated in patients with a history of chronic neuropathy who present with high opioid consumption before surgery or in patients with significant comorbidity factors in whom reduction of general anaesthetics may be beneficial for their cardiorespiratory function and cerebral function.

Klein et al conducted a randomized prospective study that showed TPVB provided improved analgesia, when compared to GA alone; a decreased vomiting and nausea scores and a decreased opioid consumption registered in the TPVB group.

Other techniques are under investigation as alternatives to or in combination with TPVB. Intra-operative opioid requirements were documented to be lower when a Pecs block was performed, which also reduced postoperative pain scores and opioid consumption. Cali et al believe that the combination of TPVB and peripheral nerve block may result in additional benefits for the patients, especially in terms of reduction of postoperative pain, as opioids consumption and length of hospital stays. Although TPVB cannot reduce the occurrence of relative risk of chronic pain, it can reduce the intensity of chronic pain compared to GA.

According to PROSPECT guideline from 2020, in major breast surgery, a regional anaesthetic technique such as TPVB or Pecs block and/or local anaesthetic wound infiltration may be considered for additional pain relief.

Some studies also suggest that the use of regional anaesthesia/analgesia could attenuate perioperative immunosuppression and minimize metastases in breast cancer patients.
The Pecs II targets the interfacial plane between the pectoralis major muscle and the pectoralis minor muscle as does the Pecs I but also targets the interfascial plane between the pectoralis minor muscle and the serratus anterior muscle, aiming to block intercostal nerves 3 to 6, intercostobrachial and the long thoracic nerves, all of which are necessary for axillary node dissection. A recent meta-analysis included 14 different randomized trials looking at Pecs II block versus paravertebral blocks. They found that Pectoralis-II reduces pain intensity and morphine consumption during the first 24 h postoperatively when compared with systemic analgesia alone; and it also offers analgesic benefits non inferior to those of paravertebral block after breast cancer surgery.

Serratus Anterior Plane Block and Pecs II fascial plane blocks are equally efficacious in post-thoracotomy pain management compared with intercostal nerve block, but they have the additional benefit of being longer lasting and are as easily performed as the traditional intercostal nerve block.

In open heart surgery, parasternal block provided longer block duration with lower postoperative pain and sedation scores than the PECS II block, with lower cumulative morphine consumption.

Dexamethasone 8 mg when added to ropivacaine 0.2% for PECS II block in unilateral radical mastectomy was not found to reduce total opioid consumption over 72 postoperative hours or to prolong duration of analgesia as compared to pure ropivacaine 0.2%. Neshith Govil et al demonstrated that instillation of lignocaine to block the pectoral nerves allows better postoperative analgesia compared to other patients without regional anaesthesia and decreases the secretion of angiogenesis markers, which contributes to tumor generalization.

REFERENCES