

## Will ESP block be the gold standard for breast surgery? We are not sure

Postoperative pain following breast surgery is complex in its origin, severe, long-lasting and it is complicated by a high incidence of chronic postoperative pain (25–60%).<sup>[1]</sup>

Many strategies for pain relief have been proposed (such as paravertebral block, epidural as a single or continuous infusion, PECS block) but the best method is still to be determined.<sup>[2,3]</sup>

An article published in this issue of the Saudi Journal of Anesthesia explored the efficacy of erector spinae plane block (ESP) for postoperative analgesia in total mastectomy and axillary clearance.<sup>[4]</sup>

The main result of the study is a significant reduction in morphine consumption and postoperative pain up to 24 h in the ESP block group compared to the general anesthesia one.

Postoperative pain after breast surgery arises from two major contributors: intercostal nerves (T2–T6) and brachial plexus (medial pectoral nerve, lateral pectoral nerve, long thoracic nerve, and thoracodorsal nerve). Although brachial plexus provides mainly motor fibers to the breast area, it should not be neglected. Nerves arising from such plexus are involved both in acute pain (e.g., muscle contraction) and in chronic pain (e.g., chronic pain following long thoracic nerve resection).

ESP block is able to provide analgesia to both districts: as Forero *et al.* clearly showed, an ESP block performed at T2–T3 level with a sufficient volume of injectate can easily spread upward until C3, covering brachial plexus origins and potentially the plexus itself; furthermore, ESP block action on intercostal nerves is widely demonstrated both in anatomical and in radiological studies.<sup>[5,6]</sup>

For this reason, this study sheds new light on the management of pain relief following breast surgery. ESP block is, indeed, an easy to learn and to perform technique being the target a bone structure at a depth of 3–4 cm at thoracic level; moreover, this block has few side effects and it is possible to perform it also in patients with suboptimal coagulation.<sup>[7]</sup> Although this is not the first study comparing ESP block and general

anesthesia, their similar results strengthen the evidence of each other.<sup>[8]</sup> On the contrary, the comparison between ESP block and other routinary locoregional techniques for breast surgery is still anecdotal.

It appears too early than to come to conclusions on any supremacy: even the most enthusiasts are aware that the evidence on ESP block for both acute and chronic pain following breast surgery is too little to provide high-grade recommendations. The results of studies as the aforementioned in this issue of the Saudi Journal of Anesthesia are nonetheless encouraging. Interest in this novel technique is indeed growing and evidence with it: a quick search on Clinicaltrials.gov reveals that several studies comparing ESP block with both locoregional techniques are ongoing or planned.

Is a future in which ESP block will be part of daily practice foreseeable?

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**Submitted:** 12-Dec-2019, **Accepted:** 16-Dec-2019,

**Published:** 05-Mar-2020

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<b>DOI:</b> 10.4103/sja.SJA_776_19	

**How to cite this article:** Cassai AD, Andreatta G. Will ESP block be the gold standard for breast surgery? We are not sure. *Saudi J Anaesth* 2020;14:291-2.