ERECTOR SPINAE PLANE BLOCK AS PART OF AN OPIOID-SPARING ANAESTHETIC STRATEGY FOR BREAST QUADRANTECTOMY AND SENTINEL LYMPH-NODE EXCISION: A CASE-REPORT

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Background and aims

Breast surgery is an often painful intervention, frequently requiring opioid analgesia in the post-operative period when using classic pain control modalities. Opioid use in this context, despite effective, has been proven to be associated with treatment-resistant chronic pain syndromes¹. Opioid usage has furthermore been suggested as having immunomodulating and thus cancer-spreading potential², which is the underlying object of many such surgeries. Erector spinae block is a novel approach to thoracic and abdominal pain management which has previously been described as successfully implemented perioperatively in various breast interventions³.

Methods

Patient: 66-year old woman, 50kg

Irrelevant medical history

The surgery: Right-lower quadrantectomy of the right breast with sentinel lymph node excision.

Anesthetic plan:

- Combined general/ regional anaesthesia
- Induction: 100mcg fentanyl; 100mg propofol; 30mg rocuronium
- Sevoflurane maintenance (MAC-guided)
- Airway: Igel™ supraglottic device
- Standard ASA monitoring

- **The block:** erector spinae block- Injection of 20cc of 0,75% ropivacaine along the erector spinae fascial plane at the T5 spinal level was performed preoperatively under direct ecographic guidance, before induction. Aseptic technique was used, and direct visualization of the needle (80mm, 20G) was assured during craniocaudal insertion up to the transverse process as well as during erector spinae plane hydrodissection. Assessment of sensory level confirmed block efficacy.
- **Additional intravenous analgesia:** 1g of paracetamol + 30mg of ketorolac.

Results

Hemodynamic stability was noted throughout surgery, with no response to skin incision or tissue dissection. Post-operatively, the patient reported no significant pain upon waking, as well as upon discharge 24h afterwards. No rescue analgesia was needed during that period and skin numbness representing no significant discomfort subsided over the next day.

Conclusions

Previously described as part of a pain control strategy in multiple breast cancer surgeries, we present our experience in successfully implementing nearly opioid-free anaesthesia in a quadrantectomy patient by using the novel potential of the erector spinae block. We propose that this might be an invaluable safe and effective strategy, not only for pain control, but also as an opioid and anaesthetic sparing approach, plausibly increasingly useful in debilitated and physiologically fragile patients.

References:

1. A Comprehensive Review of Opioid-Induced Hyperalgesia. Silverman et al. Pain Physician. 2011 Mar-Apr;14(2):145-61.
2. Opioids and breast cancer recurrence. Cronin-Fenton et al. Current Opinion in Supportive and Palliative Care: June 2019 - Volume 13 - Issue 2 - p 88-93
3. Opioid-free mastectomy in combination with ultrasound-guided erector spinae block: A series of five cases. Nair, Abhijit S et al. Indian journal of anaesthesia vol. 62,8 (2018): 632-634. doi:10.4103/ija.IJA_314_18