

included in the review of a prognostic block with local anaesthetics (LA).

In conclusion we can say that RF is a safe, minimal-invasive, technique to treat chronic shoulder pain in middle-long term, but large-scale studies, and controlled comparative-effectiveness trials, are required to better assess efficacy and effectiveness of RF treatments for shoulder pain.

REFERENCES

- Linaker, C. H., & Walker-Bone, K. (2015). Shoulder disorders and occupation. *Best Practice & Research Clinical Rheumatology* 29(3), 405–423. <https://doi.org/10.1016/j.berh.2015.04.001>
- National Health Interview Survey (NHIS)_Adult sample, 2013, 2014, 2015, 2016. Available: <http://www.cdc.gov/nchs/nhis/data-questionnaires-documentation.htm>
- Virta L, Joranger P, Brox JI, Eriksson R. Costs of shoulder pain and resource use in primary health care: A cost-of-illness study in Sweden. *BMC Musculoskeletal Disord* 2012;13:17.
- Ammitzboell, M., Baram, A., Brorson, S., et al. (2019). Poor patient-reported outcome after shoulder replacement in young patients with cuff-tear arthropathy: A matched-pair analysis from the Danish Shoulder Arthroplasty Registry. *Acta Orthopaedica* 90(2), 119–122. <https://doi.org/10.1080/17453674.2018.1563855>
- Thomas, M., Bidwai, A., Rangan, A., et al. Glenohumeral osteoarthritis. *Shoulder & Elbow* 2016; 8(3), 203–214. <https://doi.org/10.1177/1758573216644183>
- Bone, M. E., Armstrong, A., Bashir, I., et al. Thermal radiofrequency denervation of the suprascapular nerve for chronic shoulder pain. *Shoulder Elb* 2013 5(4), 226–230. <https://doi.org/10.1111/sae.12026>
- Chua, N. H. L., Vissers, K. C., & Sluijter, M. E. Pulsed radiofrequency treatment in interventional pain management: Mechanisms and potential indications—A review. *Acta Neurochirurgica* 2011 153(4), 763–771. <https://doi.org/10.1007/s00701-010-0881-5>
- H. Pushparaj et al. A systematic review and meta-analysis of radiofrequency procedures on innervation to the shoulder joint for relieving chronic pain. *European Journal of Pain* 2021, DOI: 10.1002/ejp.1735
- Tran J, Peng P, Agur A, et al. Diagnostic block and radiofrequency ablation of the acromial branches of the lateral pectoral and suprascapular nerves for shoulder pain: a 3D cadaveric study. *Reg Anesth Pain Med* 2021;46:305–312.
- M. Eckmann et al. Putting our shoulder to the wheel: current understanding and gaps in nerve ablation for chronic shoulder pain. *Pain Medicine* 2021; 22(S1): S2–S8 doi: 10.1093/pm/pnab152
- H. Ergönenç et al. Effects of ultrasound-guided suprascapular nerve pulsed radiofrequency on chronic shoulder pain. *Med Ultrason* 2018; 20(4): 461–466. DOI: 10.11152/mu-1543
- Esparza-Miñana JM, Mazzinari G. Adaptation of an ultrasound-guided technique for pulsed radiofrequency on axillary and suprascapular nerves in the treatment of shoulder pain. *Pain Med* 2019;20(8):1547–1550. doi: 10.1093/pm/pny311. PMID: 30690499.
- Rita Diogo Torgal Pinto, Joana Manuela Tenreiro Pinto, Maria Céu Loureiro, Cristina Cardoso, José Pedro Assunção, Ultrasound-guided pulsed radiofrequency for chronic shoulder pain: a prospective study. *Brazilian Journal of Anesthesiology (English Edition)*, 2021, <https://doi.org/10.1016/j.bjane.2021.08.006>.
- Picelli A, Lobba D, Vendramin P, et al. A retrospective case series of ultrasound-guided suprascapular nerve pulsed radiofrequency treatment for hemiplegic shoulder pain in patients with chronic stroke. *J Pain Res*. 2018;11:1115–1120. doi: 10.2147/JPR.S160622. PMID: 29942146; PMCID: PMC6007197.
- Sinha P, Sarkar B, Goswami S, et al. Effectiveness of combination of ultrasonography-guided pulsed radiofrequency neuromodulation with steroid at the suprascapular nerve in chronic shoulder pain. *Pain Pract* 2020;20(1):16–23. doi: 10.1111/papr.12820. Epub 2019 Aug 24. PMID: 31310702.

SP28 ERECTOR SPINAE PLANE BLOCK (ESPB) FOR BREAST SURGERY

¹Y Gürkan, ²EY Açıklın. ¹Anesthesiology and Reanimation, Koç University Hospital, Istanbul, Turkey; ²Department of Anesthesiology and Reanimation, Koç University Hospital, Istanbul, Turkey

10.1136/rapm-2022-ESRA.30

Erector spinae plane block (ESPB) is a novel regional anesthesia technique that can be used for pain management for various thoracic and abdominal surgeries. In a recent paper by Hussain et al, ESPB is considered as clinically ineffective block for breast surgery, although effect is statistically significant⁴. In

various studies and our clinical experience ESPB is found effective in decreasing 24-hour opioid consumption^{1–3}. Gürkan et al.¹ report that ESPB at T4 level with 20mL of 0,25% bupivacaine can decrease 24-hour IV morphine consumption from 16.6±6.92 mg to 5.76±3.8 mg. In another study, Gürkan et al.² report that ESPB in similar technique decreased 24-hour IV morphine consumption from 14.92±7.44 mg to 5.6±3.43 mg. Aksu et al. used double injections at T2 and T4 with 10 ml of 0.25% bupivacaine each, total of 20 mL, it resulted as a decrease in 24-hour IV morphine consumption from 13.2±4.98 mg to 3.02±2.06 mg.

Significant reduction in opioid consumption is especially important, as recent trends in USA shows increasing opioid related death, most importantly synthetic opioid overdose is increasing⁵. At 2019, opioid overdose caused 49,860 deaths in USA, 36,359 of them involved synthetic opioids⁵. Using multimodal analgesia, including invasive procedures allow us to decrease opioid consumption and avoid long-term effects of opioids, including opioid use disorder. Hussain et al confirms that ESP succeeds in decreasing IV morphine consumption, while also decreasing the pain scores without decreasing patient comfort⁴.

ESPB has limited reported complications, most of them related to systemic toxicity of local anesthesia, which can be avoided by performing a careful technique and strictly adhering to the general safety rules of regional anesthesia. Therefore, ESPB is clinically effective yet at the same time very safe approach.

Secondary benefits of ESPB have not been proven yet because current studies focused mainly on postoperative opioid requirement. We think that if large case series or studies are performed, we will learn more about secondary benefits of ESPB for breast surgery. These include time to discharge, PONV incidence and the influence on chronic postsurgical pain following breast surgery.

In conclusion, ESPB is a valuable part of multimodal analgesia, it reduces opioid consumption with possible secondary benefits as well. Therefore, we conclude that it must be included in the arsenal of every anesthetist.

REFERENCES

- Gürkan Y, Aksu C, Kuş A, Yörükoğlu UH, Kılıç CT. Ultrasound guided erector spinae plane block reduces postoperative opioid consumption following breast surgery: A randomized controlled study. *Journal of Clinical Anesthesia*. 2018/11/01/2018;50:65–68.
- Gürkan Y, Aksu C, Kuş A, Yörükoğlu UH. Erector spinae plane block and thoracic paravertebral block for breast surgery compared to IV-morphine: A randomized controlled trial. *Journal of Clinical Anesthesia*. 2020/02/01/2020;59:84–88.
- Aksu C, Kuş A, Yörükoğlu HU, et al. Analgesic effect of the bi-level injection erector spinae plane block after breast surgery: A randomized controlled trial. *Agri* 2019;31(3):132–137.
- Hussain N, Brull R, Noble J, et al. Statistically significant but clinically unimportant: a systematic review and meta-analysis of the analgesic benefits of erector spinae plane block following breast cancer surgery. *Reg Anesth Pain Med* 2021;46(1):3–12.
- Mattson CL, Tanz LJ, Quinn K, et al. Trends and Geographic Patterns in Drug and Synthetic Opioid Overdose Deaths — United States, 2013–2019. *MMWR Morb Mortal Wkly Rep* 2021;70:202–207.

SP29 'LOCAL ANAESTHETICS AND TOXICITY: WHAT'S NEW?'

Stefan Heschl. Medical University of Graz, Austria

10.1136/rapm-2022-ESRA.31

Local anaesthetic systemic toxicity (LAST) is often considered a rare event especially with the increasing use of ultrasound