

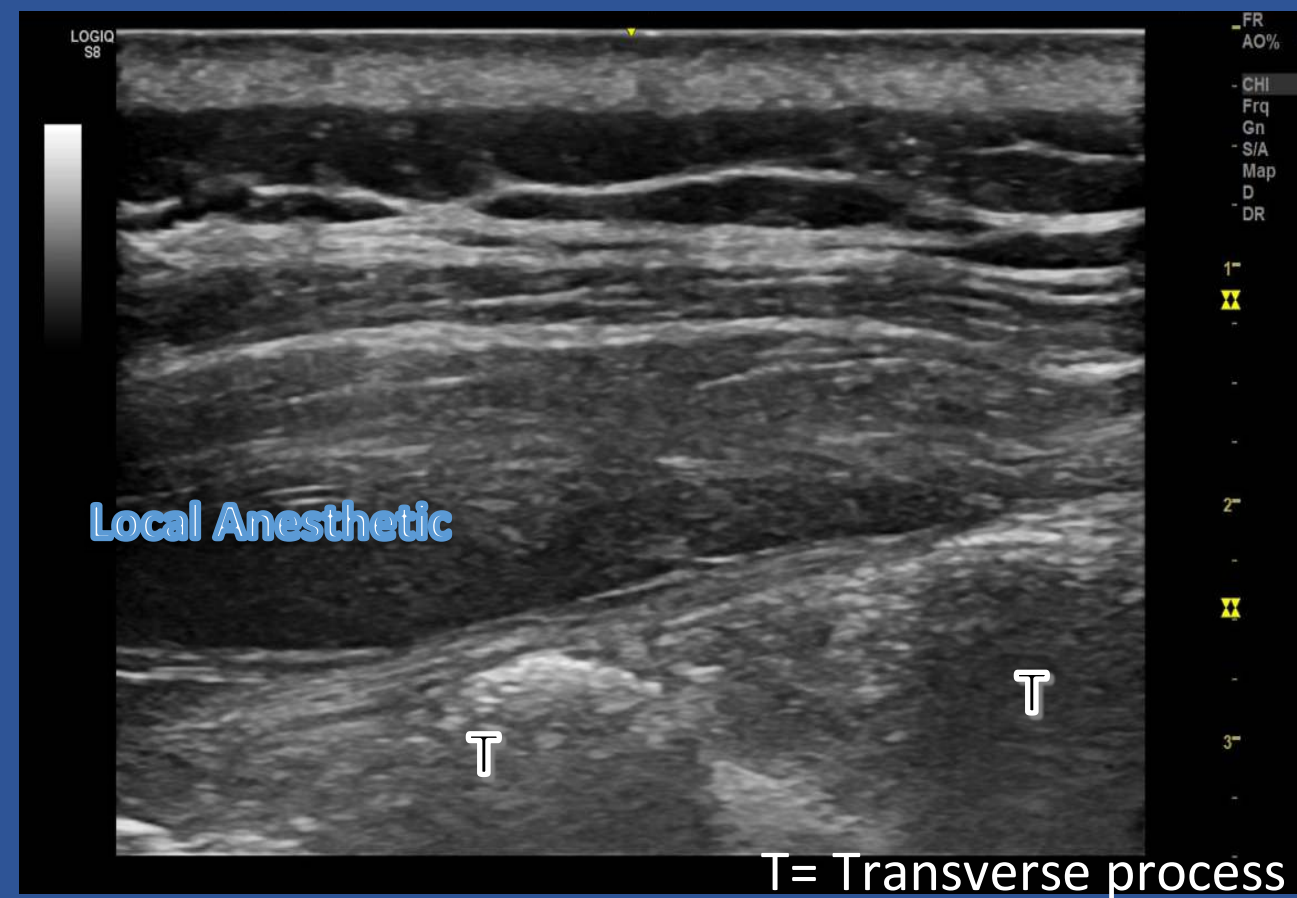
READY FOR PUMP TIME? PATIENTS UNDERGOING CORONARY ARTERY BYPASS GRAFTING UTILIZING ERRECTORSPINAE (ESP) BLOCK FOR ANALGESIA: A RETROSPECTIVE STUDY

J Boublik*, J Brodt*, JL Horn*, J Boyd**, Tsui BC*

*Department of Anesthesiology, Perioperative, and Pain Medicine, **Department of Cardiothoracic Surgery
Stanford University, Palo Alto, California, United States

Background:

The ESP block¹ has emerged as an alternative to the epidural and used with good success in thoracic surgery² and patients receiving antiplatelet therapy³. Its superficial interfascial nature and potential safety due to distance from major vascular structures, lung and neuraxis led us to introduce it to our patients undergoing on-pump coronary artery bypass grafting (CABG)⁴. The aim of this retrospective study was to investigate its utility in our study population.



Methods:

After IRB approved, all patients undergoing CABG receiving bilateral ESP catheters placed at T5 were reviewed. Catheters were injected with 15-20ml of 0.5% Ropivacaine preoperatively with an autobolus of 0.1% Ropivacaine of 10 ml q1hour and a PCA option of 5 ml q30 min postoperatively. Intraoperative analgesia consisted of Ketamine, Fentanyl and Dexmetomidine infusions, with a re-bolus option for Ropivacaine at the discretion of the OR team. Additional postoperative analgesia was at the discretion of the primary team.

Results :

To date, three cardiac patients undergoing coronary artery bypass grafting received ESP were reviewed. Intraoperatively, all received 100 mg of Ketamine in addition of 500 mcg of Fentanyl multimodal analgesia, mean postoperative opioid consumption was 158.33 mcg IV Fentanyl for POD 0-3 in addition to 10-15 mg of Roxycodone PO per day. Median first reported VAS score was 6.5, median scores on POD0 5.5, POD1 1, POD2 and POD3 0. One patient suffered mediastinal hemorrhage due to post-cardiopulmonary bypass coagulopathy requiring transfusion postoperatively, no coagulation and neurologic complications in any of the patients were noted despite perioperative anticoagulation.

Conclusion :

The erector spinae block represents analgesic adjunct option and is probably safe for patients undergoing CABG. We are in the process of developing a standardized protocol, namely, Regional Anesthesia Cardiothoracic Enhanced Recovery (RACER) to reduce intraoperative opioid use thus facilitating possible early extubation and providing excellent postoperative sternotomy pain control.

References:

1. Forero M, Adhikary SD, Lopez H, Tsui C, Chin KJ. Reg Anesth Pain Med. 2016 Sep-Oct;41(5):621-7
2. Luis-Navarro JC, Seda-Guzmán M, Luis-Moreno C, López-Romero JL. Rev EspAnesthesiol Reanim. 2018 Apr;65(4):204-208.
3. De Cassai A, Iepariello G, Ori C. Minerva Anesthesiol. 2018 Apr 10. doi:10.23736/S0375-9393.18.12815-X. [Epub ahead of print]
4. Tsui BCH, Navaratnam M, Boltz G, Maeda K, Caruso TJ. J Clin Anesth. 2018 Apr 19;48:9-10