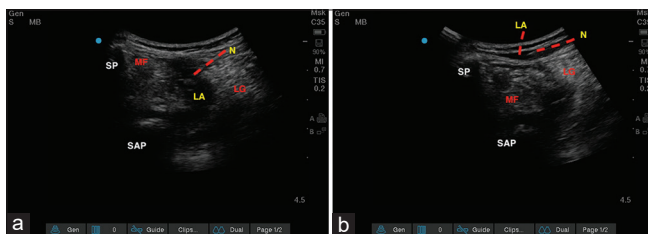


## Thoracolumbar interfascial plane block, way forward for awake endoscopic laminectomies

Sir,

Thoracolumbar interfascial plane (TLIP) block has been in vogue since 2015 when Hand *et al.*<sup>[1]</sup> speculated that TLIP block may provide adequate analgesia for minimally invasive spine surgery (MISS). We evaluated eight patients between the age group of 30 to 50 years to receive only TLIP block for single-level endoscopic lumbar discectomies for peri and post-operative analgesia. After informed consents, the patients were shifted to the operation theatre (OT) and Standard American Society of Anaesthesiology (ASA) monitors were applied and the patients placed in the prone position. The third lumbar vertebra was identified and marked with the help of ultrasound and confirmed with the C-arm. A curved low-frequency probe was placed transversely at the level of the third lumbar vertebrae and moved laterally on the side of the procedure to identify the plane between the longissimus (LG) and multifidus (MF) muscle. About 20 mL of 0.5% ropivacaine was injected using a 100 mm insulated needle in the plane. A second injection was done superficially to the paraspinal muscles with 5 mL of 0.5% ropivacaine [Figure 1]. All the patients received injection midazolam 2 mg for light sedation. Surgery was started 25 min after giving the block. The extent of the sensory loss was from T12 – L5 dermatomes. A single 2 cm port was placed 3 cm lateral to the midline on the side of the lesion for the transforaminal approach. None of the patients required additional analgesia during the surgery. The patients were comfortable for 24 h post-operatively and discharged after 1 day of hospital stay.

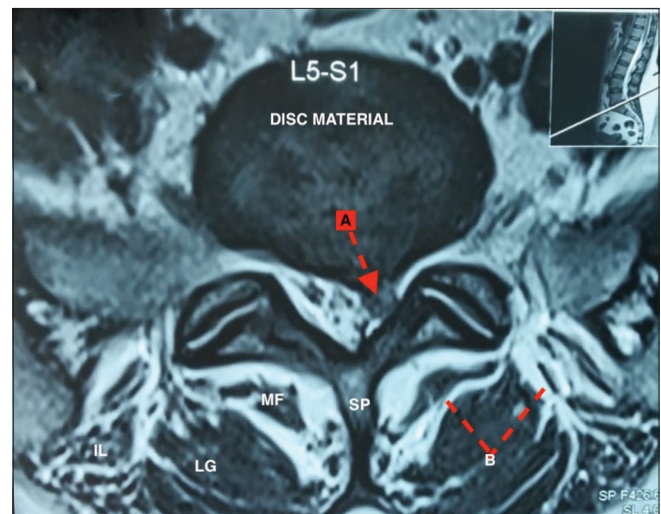


**Figure 1:** (a) Injection between the multifidus (MF) and longissimus (LG). SP-Spinous process. SAP- Superior articular process. LA-Local Anesthetic. N-Insulated needle. (b) Injection superficial to paraspinal muscles. MF-multifidus. LG-Longissimus.SP-Spinous process. SAP-Superior articular process.LA-Local Anaesthetic.N-Insulated needle

TLIP block is a very simple and effective technique which blocks the dorsal rami of the spinal nerve as they pass through the paraspinal musculature. From medial-to-lateral, the multifidus, longissimus and iliocostalis muscles constitute three muscle group in the paraspinal area [Figure 2]. The basis of the TLIP block is to inject local anaesthetic in the plane between LG and MF that would spread proximally to the branch point of dorsal rami thus, anaesthetising all the nerves and muscles of the lumbar area. The second injection superior to the posterior thoracolumbar fascia is to ensure further subcutaneous blockade.

In this era of enhanced recovery after surgery, this block could be very beneficial. None of the eight patients required any additional opioids which negated the side effects of sedation, nausea and vomiting. This is one of the few reports in which awake surgery was done. In a randomised clinical trial done by Ammar *et al.*, 102 patients were studied for the efficacy of TLIP block after administering general anaesthesia (GA) for lumbar discectomy with comparable results.<sup>[2]</sup> We injected 20 mL of 0.5% ropivacaine on the side of the surgery which gave adequate analgesia for 24 h (visual analogue score of 2) similar to the study done by Ueshima *et al.* where lower pain scores were reported after 24 h in patients who received GA with TLIP block as compared to patients who received GA only for lumbar laminoplasty.<sup>[3]</sup>

Therefore, we suggest that TLIP is an effective, relatively simple block which provides good analgesia for endoscopic lumbar laminectomies.



**Figure 2:** Magnetic Resonance Imaging: Axial view. A-Extruded disc pressing on the left root. B-Fat filled spaces between MF and LG containing branches of dorsal rami.SP-Spinous process.MF-Multifidus. LG-Longissimus. IL-Iliocostalis

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**Conflicts of interest**

There are no conflicts of interest.

**Somita Christopher, T V S Gopal, Vishnu Vardhan<sup>1</sup>**

Departments of Anesthesia and <sup>1</sup>Neurosurgery, Care Hospital, Hyderabad, Telangana, India

**Address for correspondence:**

Dr. Somita Christopher,  
Flat No. 504 B, Amsri Central Court, Near Lancer Lines,  
Secunderabad - 500 026, Telangana, India.  
E-mail: somitachristopher@yahoo.com

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