



Multifidus cervicis plane block is effective for cervical spine surgery

Yuichi Ohgoshi, MD · Hitoshi Izawa, MD, PhD · Shoichi Kori, MD, PhD ·
Masakazu Matsukawa, MD, PhD

Received: 27 September 2016 / Accepted: 21 October 2016 / Published online: 3 November 2016
© Canadian Anesthesiologists' Society 2016

To the Editor,

We read with interest the article by Hand *et al.* regarding thoracolumbar interfascial plane (TLIP) block.¹ TLIP block is administered by injecting a local anesthetic into the fascial plane between the multifidus and longissimus muscles to block the dorsal rami of the lumbar spinal nerve. Previous reports suggest that the TLIP block provides effective analgesia for lumbar spine surgery.^{2,3} It is unknown whether peripheral nerve blocks such as the TLIP block are effective for cervical spine surgery. Here, we describe a case in which a novel multifidus cervicis plane (MCP) block was performed for perioperative analgesia of cervical laminoplasty.

Consent for this report was obtained from a 66-yr-old woman (height 166 cm, weight 66 kg) who underwent posterior cervical laminoplasty (C3-6) for ossification of the posterior longitudinal ligament. We performed bilateral MCP blocks after general anesthesia. The MCP blocks were administered by injecting 20 mL of 0.375% ropivacaine (40

mL total) between the fascial plane of the multifidus cervicis and semispinalis cervicis muscles, bilaterally, at approximately the level of C5 (Figure). General anesthesia was maintained with propofol $2.4 \mu\text{g}\cdot\text{mL}^{-1}$ and remifentanyl $0.1 \mu\text{g}\cdot\text{kg}^{-1}\cdot\text{min}^{-1}$ without use of muscle relaxants. We injected 1000 mg of acetaminophen intravenously for pain caused by three-point head fixation at the end of the operation. No longer-acting opioids were used during surgery. The patient's postoperative course was uneventful, and no additional analgesic was required except for routine administration of loxoprofen sodium.

We have now performed the MCP block in more than 20 patients undergoing cervical laminoplasty, obtaining a good analgesic effect, similar to that achieved in this case. Our experience suggests that MCP block may provide effective perioperative analgesia following cervical spine surgery. Dermatomal spread of local anesthetic and the duration of action remain unknown, suggesting avenues for future research.

Y. Ohgoshi, MD (✉) · S. Kori, MD, PhD ·
M. Matsukawa, MD, PhD
Department of Anesthesiology, International University of
Health and Welfare Mita Hospital, Tokyo, Japan
e-mail: ohgoshi22@gmail.com

H. Izawa, MD, PhD
Department of Anesthesiology, Tokyo General Hospital, Tokyo,
Japan

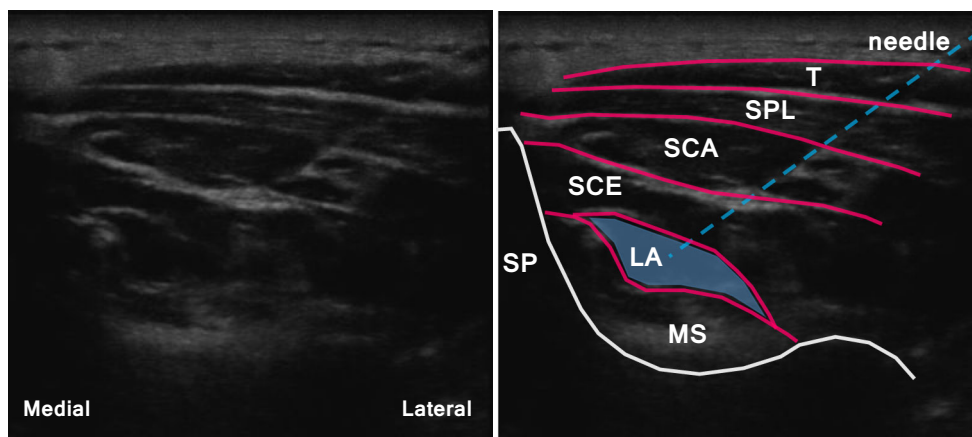


Figure Ultrasonography transversal view of multifidus cervicis plane block visualized at the level of the fifth cervical vertebra. A local anesthetic was injected into the fascial plane between the multifidus cervicis and semispinalis cervicis muscles. LA = local anesthetic;

MS = multifidus cervicis muscle; SCA = semispinalis capitis muscle; SCE = semispinalis cervicis muscle; SP = spinous process; SPL = splenius capitis muscle; T = trapezius muscle

Conflict of interest None declared.

Editorial responsibility This submission was handled by Dr. Gregory L. Bryson, Deputy Editor-in-Chief, *Canadian Journal of Anesthesia*.

Funding None.

References

1. Hand WR, Taylor JM, Harvey NR, et al. Thoracolumbar interfascial plane (TLIP) block: a pilot study in volunteers. *Can J Anesth* 2015; 62: 1196-200.

2. Ueshima H, Sakai R, Otake H. Clinical experiences of ultrasound-guided thoracolumbar interfascial plane block: a clinical experience. *J Clin Anesth* 2016; 33: 499.
3. Ueshima H, Otake H. Clinical efficacy of modified thoracolumbar interfascial plane block. *J Clin Anesth* 2016; 30: 74-5.