Letter to the Editor

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Corresponding author:

Luis A. Verduzco, M.D.
Department of Anesthesiology, Denver Health
Medical Center, MC-0218; 777 Bannock
Street, Denver, CO 80204, USA
Tel: +1-303-602-5945
Fax: +1-303-436-6548
Email: luis.verduzco@dhha.org
ORCID: <https://orcid.org/0000-0001-7799-622X>

Low thoracic erector spinae plane block for perioperative analgesia in transfeminine bottom surgery

Luis A. Verduzco^{1,2}

Department of Anesthesiology, ¹Denver Health Medical Center, Denver, ²University of Colorado School of Medicine, Aurora, CO, USA

Approximately 1 million people in the United States are transgender [1]. Transfeminine bottom surgery (TBS) transforms the male genitalia into that of a female; however, the optimal perioperative anesthetic plan remains undetermined. The ultrasound-guided erector spinae plane block (ESP) is an interfascial plane block used primarily for post-operative analgesia [2,3]. It is effective in lumbo-sacral surgery [4], thus suggesting a possible role in TBS. We report the use of an ultrasound-guided ESP block as part of a multi-modal analgesic technique to avoid intra-operative opioids and minimize post-operative opioids. The patient provided informed consent to publish the case.

A 32-year-old woman weighing 70 kg (male by sex) with a history of asthma and gender dysphoria was scheduled to undergo orchiectomy, penectomy, clitoroplasty, labiaplasty, and vaginoplasty. In the preoperative area, she received 1000 mg of oral acetaminophen, 600 mg of oral gabapentin, and a scopolamine patch. Upon entering the operating room, she was given 2 mg of intravenous (IV) midazolam for anxiolysis, and she was sat up. Standard monitors were attached, and her back was sterilely prepped; using a low-frequency curvilinear transducer in parasagittal orientation (rC60xi, SonoSite SII, FUJIFILM SonoSite Inc., USA), the right-sided ribs were counted, starting rostrally at the neck until T11 was located. The probe was moved medially to locate the transverse process (TP). Under ultrasound guidance, a 21 g nerve block needle (SonoPlex STIM, Pajunk Medical Systems L.P., USA) was inserted in-plane rostral to caudal until the TP was contacted (Fig. 1A); after aspiration demonstrated no blood return, a bolus of 35 ml of 0.25% plain bupivacaine mixed with 1 : 200,000 epinephrine was injected through the needle. This was repeated on the left side. The ultrasound was then used to demonstrate lung sliding bilaterally (Fig. 1B), confirming no pneumothorax after the nerve block. The patient was laid back and induced with 70 mg IV lidocaine and 100 mg IV propofol followed by 50 mg IV rocuronium; mask ventilation and intubation proceeded uneventfully. During the 4-hour surgery, she was maintained on a propofol drip at 75 µg/kg/min and sevoflurane at an end-tidal concentration of 1%; as part of a multi-modal regimen, she received dexamethasone 8 mg IV, ketamine 50 mg IV, dexmedetomidine at 0.3 µg/kg/h (total 71 µg), and esmolol at 35–50 µg/kg/min. No opioids were administered, nor additional local anesthetic injected by the surgeon, and 2200 µg of phenylephrine were required to maintain systolic blood pressures in the high 90s of mmHg 116/77 mmHg.

Extubation was uneventful, and the patient complained of minimal pain, specifically, she stated that she had more “gas pain, than surgical pain,” requiring only 50 µg fentanyl, 30 mg ketorolac, and 5 mg oxycodone in the post anesthesia care unit. Her post-operative pain regimen included acetaminophen 1000 mg orally every 6 hours and ibuprofen 600 mg orally every 6 hours with breakthrough oxycodone (5–10 mg every 3–4 hours when necessary); on postoperative day (POD) 0, she tolerated food and requested 10 mg oxy-

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Fig. 1. Ultrasound view of the patients. (A) The ultrasound image demonstrates the nerve block needle contacting the transverse process, (B) The “sea-shore” sign is present in M-mode, confirming no pneumothorax.

codone in addition to simethicone for gas pain. Unfortunately, the patient developed bleeding from her surgical site and required a return to the operating room early on POD 1 for an exam under general anesthesia, during which she received 2 mg IV midazolam, 50 µg IV fentanyl, and 50 mg IV ketamine. No source was found, and she was re-packed and transferred to the floor. Her consequent hospital course was unremarkable, with the patient repeatedly stating her pain was well controlled. She required only 70 mg oxycodone over the next 2.5 days, after which she was discharged home.

TBS involves sensitive anatomy, and beyond a single published abstract suggesting the use of pudendal nerve blocks for post-operative pain control, guidance relies on opinion [5]. There are no previously published cases demonstrating the efficacy of the ESP block for genital surgery, possibly because the innervation involves sacral nerve roots. We used a high volume of local anesthetic to ensure spread; indeed, the ESP block facilitated the minimization of opioids during hospital stay while still affording excellent pain control.

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Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

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