

Letter to the Editor: Early Consequences of Pectus Excavatum Surgery on Self-Esteem and General Quality of Life

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We read with great interest the excellent report regarding self-esteem and general quality of life (QoL) in patients undergoing the Nuss procedure by Zuidema et al. We agree that successful pain management is necessary to prevent the pain cascade and the ill effects of pain on general health and emotional limitations in the first weeks postoperatively [1]. Opiate patient-controlled analgesia (PCA) and epidural analgesic techniques are predominantly utilized despite limitations including sedation, respiratory depression, urinary retention, headache, and delayed discharge, among others [2, 3]. Patients are frequently discharged on postoperative day (POD) 4 or 5 in order to achieve adequate pain control and transition effectively to oral analgesics. The erector spinae plane block (ESPB) is a recently described peripheral regional block with a wide variety of surgical applications successfully implemented at our institution [4, 5]. With patient assent and parental consent, we would like to share our experience of an adolescent boy with excellent postoperative pain control after Nuss bar placement.

A 15-year-old male with severe pectus excavatum defect (Haller index 3.59) presented for thoracoscopic Nuss bar placement. Preoperative pregabalin and celecoxib were administered. After induction of anesthesia, the patient was

placed in the lateral decubitus position and a catheter was placed deep to the erector spinae muscles bilaterally at the tip of the T7 transverse process using ultrasound (Fig. 1). After securement of catheters (Fig. 2), 15 mL of 0.2% ropivacaine was delivered to each catheter with appropriate spread of local anesthetic noted on ultrasound. The surgical course was uncomplicated and analgesics included fentanyl, hydromorphone, ketamine, and acetaminophen intraoperatively. Postoperatively, the patient reported pain scores of 0/10 at rest and 5/10 during movement. He was continued on bilateral, auto-intermittent boluses of 10 mL 0.15% ropivacaine hourly, in addition to intravenous PCA hydromorphone, gabapentin, acetaminophen, and ketorolac. PCA usage was minimal, and pain scores ranged from 0 to 2 for the next 24 h prior to catheter removal on POD 1. He was comfortable, ambulating, tolerating a regular diet, transitioned to oral oxycodone, and achieved discharge readiness by the evening on POD 1. However, at the family's request, he remained hospitalized until the next morning. On telephone follow-up, the patient was very satisfied and his pain remained well-controlled on oral medication, with only mild discomfort at the incision site by POD 4.

This is the first case to demonstrate that the ESPB can facilitate discharge readiness by POD 1 for patients with pectus excavatum undergoing the Nuss procedure. In fact, we use the ESPB routinely for this procedure and variety of others including thoracic, abdominal, spine, hip, and sternotomy [5] operations. Using an intermittent catheter bolus regimen for 24 h, the ESPB appears to provide long-lasting regional analgesia across multiple dermatomal levels without the risks associated with neuraxial blocks. This case presents the ESPB as an alternative pain-control method that may help enhance QoL and recovery after Nuss bar placement.

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T : Transverse Process

Fig. 1 Ultrasound image of the erector spinae muscle, transverse processes, the erector spinae plane beneath the muscle, and the catheter within the plane



Fig. 2 Bilateral ESP catheters placed and well-padded with foam dressing at the level of the T7 vertebra with catheters oriented cephalad

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