Ultrasound-guided superficial cervical plexus blockade for acute spasmodic torticollis in the ED

Case Report

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The ultrasound-guided superficial cervical plexus nerve block is a simple procedure that provides anesthesia to the anterior neck. It has been recently described for several indications in the emergency department including central line placement, clavicle fracture, and abscess drainage. We describe the first case in the literature of its use for acute spasmodic torticollis. We believe that this is a potentially effective intervention that warrants further study.

Ultrasound guidance has become increasingly used for myriad procedures in the emergency department (ED) [1-3]. Compared to landmark techniques, ultrasound guidance in regional anesthesia improves success and reduces the number of needlesticks, complications, and anesthetic volumes [4,5]. The superficial cervical plexus nerve block (SCPNB) is well established in anesthesia literature for surgical procedures on the neck [6]. It provides anesthesia over the region delineated in Fig. 1 and is achieved by instillation of local anesthetic into the fascial plane deep to the midpoint of the posterior sternocleidomastoid (SCM) [7,8]. Recently, Herring et al [9] described use of the SCPNB for clavicular fractures in the ED. They also postulated its use in the ED for painful procedures on the neck, mandibular abscesses, and auricular lacerations. Here, we present the first case in the literature of SCPNB application for acute spasmodic torticollis.

A 66-year-old man presented to the ED with several hours of severe, painful muscle spasms in the left anterolateral neck. He had no fever, difficulty breathing, history of trauma, antidopaminergic medication use, or neurologic deficits. On examination, he was in intermittent severe, painful distress with his head rotated to the right and tilted to the left. Examination of the neck showed a tense left sternocleidomastoid and strap muscles consistent with spasmodic torticollis. Initially, diazepam 10 mg intravenous (IV), ketorolac 30 mg IV, and acetaminophen 1000 mg orally provided some relief, but the spasms quickly returned. Next, he received ketamine 0.3 mg/kg IV bolus with 0.15 mg/kg per hour and IV drip and morphine 4 mg IV with minimal relief. A computed tomography angiogram of the neck was negative for dissection, abscess, or fracture. He was consented for an SCPNB which was performed as described (Figs. 2 and 3). Within 1 minute of the SCPNB placement, he had near-total relief of his symptoms and was discharged with oral pain medication. One-week and 4-week follow-up telephone calls were conducted, and the patient reported an initial symptom-free 24 hours with occasional subsequent minor spasms well controlled with oral medication. He had no return to an ED and stated that were the problem to recur, he would want the SCPNB as his first treatment.

We describe the first reported use of the SCPNB in the treatment of acute spasmodic torticollis in the ED. We believe that this is a potentially effective treatment that breaks the cycle of pain and muscle spasms in the acute setting and may be used as a bridge to outpatient therapy with oral medications. This nerve block would be limited to muscle spasms in the anatomical area described above. Unlikely side effects of the SCPNB include temporary phrenic nerve paralysis, temporary Horner syndrome, local anesthetic systemic toxicity, injection site infection, and brachial plexus anesthesia [7]. Phrenic nerve involvement is avoidable with the use of ultrasound and accurate needle placement and is usually not clinically significant if it does occur [10,11]. Caution should be taken in performing the SCPNB in patients with significantly reduced cardiopulmonary reserve or active dyspnea. Other side effects such as Horner syndrome and inadvertent brachial plexus blockade are temporary, lasting the duration of the block [12]. Based on this experience and the well-established safety and efficacy of the SCPNB for other applications, we believe that further study is warranted to delineate its role in the treatment of spasmodic torticollis.
Fig. 2. The patient was placed right lateral decubitus, facing away from the proceduralist with probe position and needle orientation demonstrated above. His neck was cleaned with chlorhexidine, a sterile cover placed on a high-frequency linear probe (Zonare Zone ultrasound system, Mountain View, CA).

Fig. 3. Relevant anatomy was identified at the mid-SCM. A 27-G needle (circled) was inserted just lateral to the border of the SCM. With the carotid artery in view (CA) and using in-plane visualization, 8 mL of 0.25% bupivacaine was infused into the fascial plane deep to the SCM (star).

References


