

Trigger Point Injection Complicated By Retained Foreign Body: A Case Report



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INTRODUCTION

- Myofascial trigger points, defined as “hyperirritable points located in taut bands of skeletal muscle, which when compressed, produce a referred pain characteristic of that muscle and a pain that the subject recognizes,” [1] are common components of chronic multifactorial pain.
- Several common treatments for myofascial trigger points exist including vapocoolant spray, dry-needling, ischemic compression, deep-stroking massage, and injection. [2]
- Currently, there are no studies or guidelines on the most appropriate bevel type, needle length and needle gauge for trigger point injection.
- This case demonstrates a rare complication of trigger point injections.

CASE HISTORY

A 51-year-old male with a history of hypertension, hyperlipidemia, recent non-ST-elevated myocardial infarction (NSTEMI) on dual antiplatelet therapy presented for evaluation of chronic neck and low back pain. Physical exam was significant for lumbar paraspinal trigger points. Epidural steroid injection was deferred due to the blood thinners the patient had recently started following NSTEMI, and the patient elected for trigger point injection (TPI).

A 30 gauge, 0.5 inch hypodermic needle was utilized for the paraspinal TPI with 10 mL total 1% lidocaine injectate. As the needle was withdrawn from the right lower lumbar paraspinal musculature, the entire metal portion of the needle was noted to be missing. There was no fragment of the needle retained in the hub. An ultrasound was obtained which revealed the needle retained in the tissue. Fluoroscopy visualized the location and orientation of the retained body (Figure 1). An #11 scalpel was used to make a 1 cm incision over the site of the retained needle per recommendation from general surgery consultant immediately following lodging of the needle. After an initial unsuccessful attempt to retrieve the foreign body, general surgery was reconsulted to evaluate the patient in the fluoroscopy suite. The incision was enlarged but attempts to retrieve the needle in the fluoroscopy suite were unsuccessful.

MATERIALS AND METHODS

As the case report is devoid of patient identifiable information, it is exempt from Institutional Review Board (IRB) review requirements as per New York University IRB policy. Patient informed consent was obtained for submission of a case report.

RESULTS

Through joint decision-making with the patient, general surgery and pain management, the patient was brought to the operating room for surgical retrieval under monitored anesthesia care. Local anesthetic was infiltrated into the area. The incision was extended to approximately 3-4 cm, and the dissection was carried down to the level of the lumbar paraspinal muscles. Using intraoperative fluoroscopy, the needle was visualized and clips were applied to its vicinity. After confirmation of appropriate clip placement, a small amount of muscle was excised along with the retained needle. Fluoroscopy was used to ascertain the successful removal of the needle (*Figure 2*). The wound was closed, the patient was awakened from sedation and he was brought to the recovery area in stable condition. Postoperatively, the patient managed his pain with oxycodone 5 mg twice daily as needed and then transitioned to acetaminophen and ibuprofen as needed in addition to his home regimen of pain medications, duloxetine and gabapentin.

FIGURE 1: Pre-operative fluoroscopic image of posterior lumbar spine



FIGURE 2: Post-operative fluoroscopic image of posterior lumbar spine



DISCUSSION

- Retained foreign bodies are a relatively uncommon complication in pain management practice. Yet, broken needles are reported to have occurred in various interventional pain procedures including spinal procedures including breaking through stress. [3,4]
- Considering the depth of tissues is critical for choosing the best length of the needle. Using a needle with a length of 0.5 inches for TPI is not uncommon in pain management practice.
- Using ultrasound to identify depth of muscle fascicles prior to injection would assist with determining the appropriate length of needle.
- It is important to remember that the rarest complications of common procedures do happen.
- Although it would be unreasonable to detail all possible rare complications with patients during the informed consent process, timely and complete disclosure of complications to patients when these rises protects their autonomy.
- Consider a multidisciplinary approach, involving general surgery should this rare complication occur.

REFERENCES

1. Simons DG, Travell JG, Simons LS. Travell and Simons' myofascial pain and dysfunction: the trigger point manual. Vol.1 Upper half of the body. Baltimore: MD: Lippincott Williams & Wilkins; 1999
2. Tough EA, White AR, Richards S, et al. Variability of criteria used to diagnose myofascial trigger point pain syndrome--evidence from a review of the literature. Clin J Pain. 2007;23(3):278-286. doi:10.1097/AJP.0b013e31802fda7c
3. Alsharif TH, Alanazi AT, Deif A, et al. Successful Management of a Broken Spinal Needle During Difficult Spinal Anesthesia: A Case Report. Cureus. 2023;15(5):e38822. Published 2023 May 10. doi:10.7759/cureus.38822
4. Martinello C, Rubio R, Hurwitz E, et al. Broken spinal needle: case report and review of the literature. J Clin Anesth. 2014;26(4):321-324. doi:10.1016/j.jclinane.2014.01.008