



Quadratus lumborum block provides long term pain relief for chronic abdominal wall pain due to ACNES

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Introduction

Anterior cutaneous nerve entrapment syndrome (ACNES) is a rare and often overlooked diagnosis of chronic abdominal wall pain (CAWP). Associated symptoms are caused by entrapment of thoracic intercostal nerve branches as they course between abdominal muscles, particularly as they pass through the anterior rectus muscle fascia. Prevalence has been difficult to discern, however one study indicated approximately 2% of patients seen in the emergency department for acute abdominal pain were attributed to ACNES (1). Symptoms are often debilitating and negatively impact patient’s quality of life (QOL), commonly due to prolonged time to diagnosis with associated implementation of a proper treatment plan.

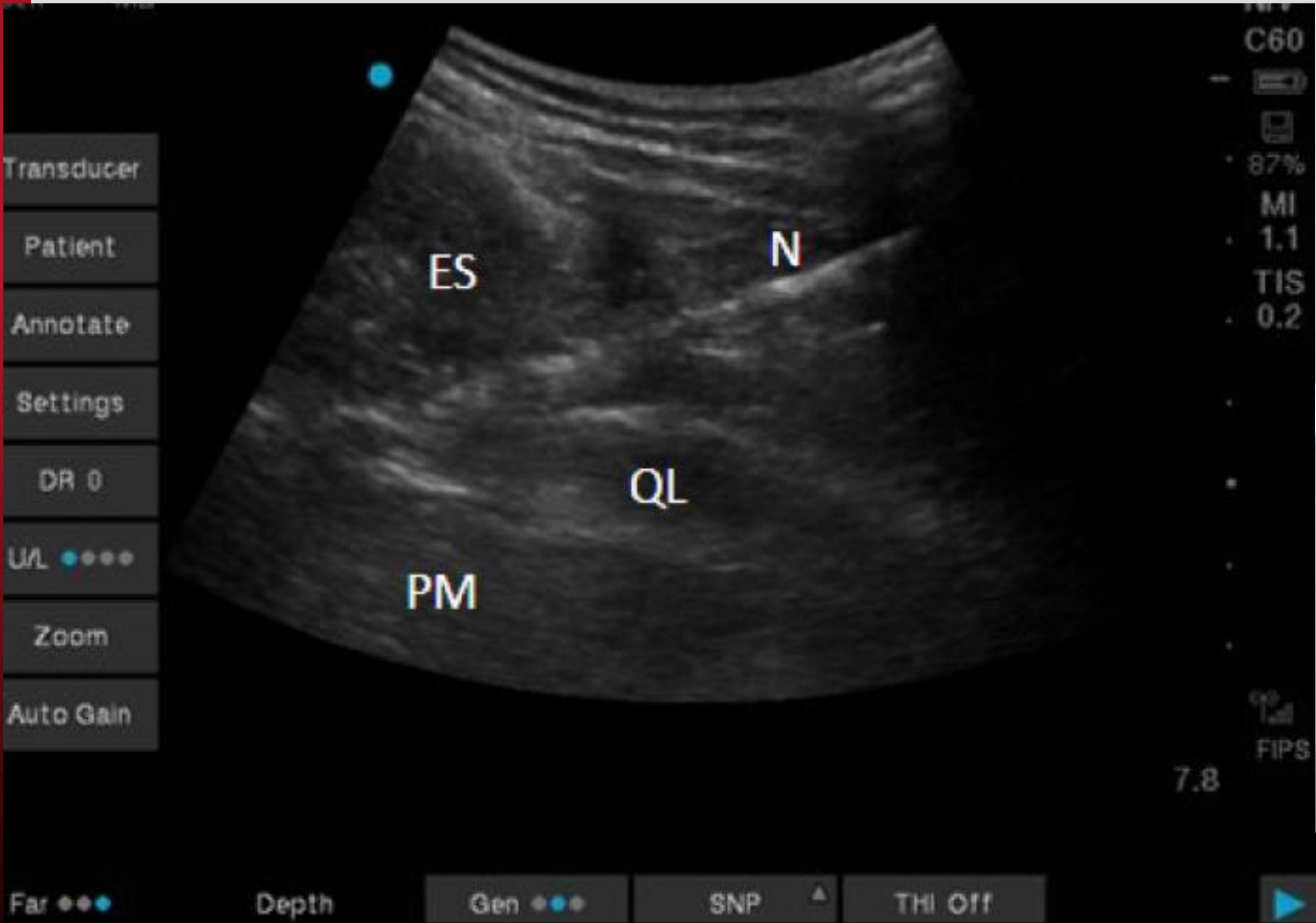
The case we present is unique due to the long-term pain relief with quadratus lumborum fascial plane block (QLB) for CAWP due to ACNES.

Methods

This case report contains no identifiable patient information, therefore is exempt from IRB review per current policy of the Department of Veterans Affairs Medical Center. Patient informed consent was obtained for submission of a case report.

Case Report

- 66-year-old male with past medical history of hypertension, anxiety, prostate cancer s/p prostatectomy, and multiple open abdominal surgeries.
- Presented to the pain clinic with approximately one year of abdominal pain following open cholecystectomy with revision surgery one month later for an incisional hernia with mesh repair. Patient reported sharp, right-sided, abdominal pain that was worse at the anterior subcostal surgical incision with radiating pain inferiorly to the groin and posteriorly around to the back. Pain was significantly worse with activity and negatively affected the patient’s QOL and ADLs.
- Required multiple ED visits for abdominal pain and nausea, GI and General Surgery evaluations without intraabdominal pathology including adhesional disease or metastases
- Physical Exam: tenderness to palpation of anterior subcostal surgical incision without signs of infection and/or inflammation. Positive Carnett’s sign.
- Medical management: amitriptyline, meloxicam, cannabidiol cream, and lidocaine patches without substantial benefit.
- Trial QLB to cover a wide dermatomal distribution and avoid subcostal and ventral mesh sites
- Procedural Description: With patient in the prone position, ultrasound guidance was utilized at the L3 level for optimal localization of posterior and lateral QLB target sites. Saline hydrodissection was performed to visualize the fascial planes prior to injection. 10 mL of injectate including 9.5 mL of 0.25 % bupivacaine and 20 mg triamcinolone were utilized at each injection site.
- Outcome: patient has undergone three right-sided QLB with 75% pain relief for 3 months, including improvement in QOL, ADLs, exercise tolerance, and weight management.



Discussion

The QLB was first described by Dr. R. Blanco in 2007 as a version of the transversus abdominis plane (TAP) block and is associated with wide sensory analgesia coverage from T4 to L1 dermatomes (2). When compared to the TAP block, the QLB involves injecting local anesthetic at a more posterior position to achieve cephalad and thoracic paravertebral spread (2). Studies vary in cephalad spread level of QLB, however it has consistently been shown to provide greater coverage when compared to the TAP block. Indications for QLB include perioperative analgesia for abdominal, obstetric/gynecologic, and urologic surgeries. Multiple techniques have been described for performing the QLB, with naming corresponding to the anatomical location of injectate with regards to the QLM (3):

- Anterior: between QLM and psoas major
- Lateral: lateral border of the QLM
- Posterior: between QLM and erector spinae

Chronic abdominal pain may have multiple etiologies, mostly related to visceral pathology. Abdominal wall pain etiology is usually missed in the differential diagnosis. ACNES can be considered when visceral abdominal pathology is ruled out with laboratory and imaging tests.

Kopell and Thompson stated that peripheral nerve entrapment occurs at anatomic sites where the nerve changes direction to enter a fibrous/osseofibrous tunnel or where the nerve passes over a fibrous or muscular band (4). Direct compression from muscle contraction and mechanical irritation causes localized swelling that may injure the nerve directly or compromise its blood supply (4).

While most of the studies describe good results of ACNES alleviation with trigger point injections and neurectomy, other studied treatment options include pulsed radiofrequency ablation and chemical (alcohol) ablation. We chose the QLB due to its extensive dermatomal analgesia coverage which includes possible entrapment of the lateral and anterior cutaneous branches (4). Additionally, our patient had two large mesh placements which would have made the TPIs riskier and possibly less successful.

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