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Iliopsoas Abscess Leading to Chronic Ilioinguinal Neuralgia: A Case Report and Discussion

George Bailey Walbridge, DO[1], Daniel Lopez, MD[2], and Ted Gingrich, MD[3]

Background: Psoas abscesses are infrequent yet significant conditions characterized by the localized accumulation of purulent material within the psoas muscle compartment, often resulting in debilitating pain localized to the hip, low back, or groin. Clinical symptoms typically include pain, fever, and potential progression to septic shock. Standard treatment generally involves a combination of antibiotics and drainage procedures.

Case Report: This case presents a 75-year-old man with a history of chronic low back pain, who sought treatment for right groin discomfort at a pain clinic. The patient had previously undergone interventional radiology drainage of an iliopsoas abscess 2 years earlier. Despite successful abscess resolution, he developed chronic ilioinguinal neuralgia. Ultrasound-guided ilioinguinal nerve block resulted in a notable 70% reduction in pain, suggesting efficacy in managing similar cases.

Conclusions: This case highlights that ultrasound-guided nerve blocks may be efficacious in treating chronic pain due to abscesses or ilioinguinal neuralgia.

Key words: Nerve block, Ilioinguinal neuralgia, Ilioinguinal abscess, neuralgia, abscess pain

BACKGROUND

Psoas abscesses represent rare occurrences characterized by the localized accumulation of purulent material within the psoas muscle compartment, typically presenting with discomfort in the hip, low back, or groin (1). Clinical presentation often includes nonspecific symptoms, such as pain and signs of systemic infection, including fever, chills, and fatigue (7). Staphylococcus aureus is a common causative pathogen, although other microorganisms, such as Streptococcus species, Escherichia coli, and Mycobacterium tuberculosis may also contribute. Psoas abscesses may arise as primary infections without a discernible source or secondary to complications from gastrointestinal or spinal pathologies, such as diverticulitis, Crohn's disease, or vertebral osteomyelitis (2). Computed tomography (CT) is the preferred diagnostic tool for assessing psoas abscesses, offering detailed visualization of the abscess and its relationship to surrounding structures. Treatment strategies generally involve a combination of broad-spectrum antibiotic therapy tailored to the likely causative organism and drainage procedures in cases of antibiotic resistance or large abscess size (3). Drainage techniques may involve percutaneous aspiration under image guidance by interventional radiology or surgical intervention, depending on abscess characteristics and patient stability. Resolution of the abscess typically correlates with alleviation of patient symptoms, although complications, such as persistent pain or secondary infections, may occur. Neuralgia typically manifests subsequent to nerve injury or entrapment. It manifests as burning, throbbing pain, or sensory abnormalities,

From: [1]Department of Emergency Medicine, Western Michigan Homer Stryker School of Medicine, Kalamazoo, MI; [2]Department of Anesthesiology, University of Florida College of Medicine, Gainesville, FL; [3]Department of Anesthesiology, University of Florida College of Medicine, VA Paine Medicine, Gainesville, FL

Corresponding Author: George Bailey Walbridge, DO, E-mail: george.walbridge@wmed.edu
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and can arise wherever nerves are susceptible to injury or compression. While abscesses can induce neuralgia, such neuralgia typically resolves spontaneously following treatment. Previous reports (4) have documented instances of neuralgia arising from intrapelvic processes, such as genitofemoral neuralgia characterized by pain, urinary symptoms, and systemic signs of infection. We describe a patient who presented with persistent neuralgia following treatment for an iliopsoas abscess, which was successfully managed with a nerve block, resulting in long-term pain relief.

CASE REPORT

A 75-year-old man with a history of chronic low back pain and benign prostatic hyperplasia presented to the emergency department with acute right lateral thigh, hip, and groin pain aggravated during physical exertion, specifically while starting a lawn mower. The patient described similar pain previously as sciatica but denied systemic infectious symptoms, such as fever, chills, or night sweats. Physical examination was largely unremarkable; however, given the patient's clinical presentation, a CT scan of the abdomen and pelvis was performed, revealing a large iliopsoas abscess measuring 3.7 x 2.6 x 7.5 cm seen in Fig. 1. The patient was promptly initiated on antibiotic therapy consisting of intravenous vancomycin, cefepime, and metronidazole, adjusted based on susceptibility testing results. Subsequently, percutaneous drainage of the abscess within the right psoas, iliacus, and iliopsoas muscles was performed under interventional radiology guidance, yielding approximately 45 mL of purulent fluid seen in Fig. 2. Follow-up imaging confirmed complete resolution of the abscess with no residual fluid collection or signs of ongoing infection. Despite successful treatment of the abscess, the patient developed chronic ilioinguinal neuralgia over the subsequent 2 years, characterized by persistent pain localized to the right groin superior to the hip joint, with severity ranging from 7 to 9. The pain worsened with ambulation, prolonged activity, nocturnal awakening, and lying on the right side, partially relieved by rest and over-the-counter analgesics. The pain was described as a dull ache. Importantly, this pain was absent prior to the development of the abscess. Conservative management failed to alleviate the patient's symptoms. An ultrasound-guided ilioinguinal nerve block using 1% lidocaine and methylprednisolone was administered with success seen in Fig. 3. Upon follow-up 3 months postintervention, the patient reported a significant 70% reduction in pain intensity, accompanied by marked improvements in sleep quality and overall well-being.

Recommendations were made for continued monitoring and as-needed pain management to optimize long-term outcomes.

Patient consent for publication: Consent for publication was obtained from the patient after ensuring anonymity.

Fig. 1. CT showing 3.7 x 2.6 x 7.5 cm abscess within the iliopsoas muscles.

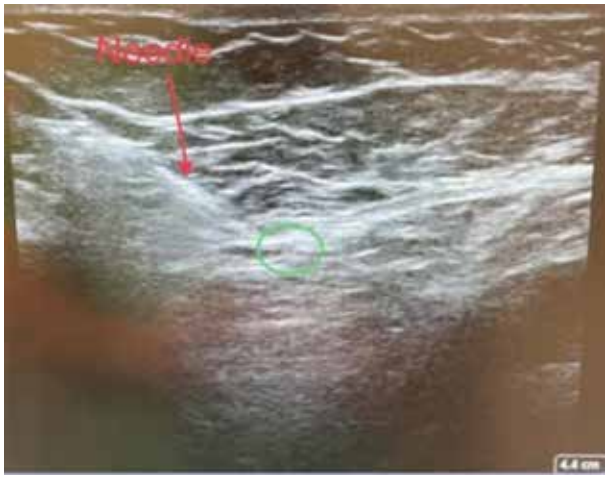

Fig. 2. Ultrasound image showing needle targeting the right ilioguinal nerve.

DISCUSSION

Ilioinguinal neuralgia is a relatively uncommon source of lower abdominal and upper thigh discomfort, often resulting from injury or entrapment of the ilioinguinal nerve originating from the T12 and L1 nerve roots. The ilioinguinal nerve courses near the border of the psoas muscle and extends inferiorly through the anterior abdominal wall, branching to supply sensory innervation to the anterior aspect of the upper thigh. Its anatomical location renders it susceptible to irritation by intraabdominal or pelvic lesions, including abscesses, tumors, or surgical scars (4). Symptoms of ilioinguinal neuralgia typically manifest as burning, throbbing pain, and potential sensory disturbances within the nerve's cutaneous distribution, affecting quality of life and functional ability. Various etiologies contribute to its development, including surgical procedures, such as inguinal hernia repair or orchiectomy, traumatic insults during laparoscopic surgery, and idiopathic nerve entrapment (5). While abscess-related pain often resolves following abscess resolution, this case highlights a unique instance where chronic ilioinguinal neuralgia persisted despite successful treatment of the underlying abscess. The initial treatment of ilioinguinal neuralgia is multimodal and includes pharmacotherapies, perineural injections, and neurectomies (7). If these therapies fail, dorsal root ganglion stimulation is another option if these modalities are limited or nonresponsive (6). The efficacy of ultrasound-guided nerve blocks in ameliorating the patient's symptoms suggests promise for managing chronic pain secondary to abscesses. However, further validation through prospective studies and long-term assessments is warranted to establish guidelines for optimal management and improve patient outcomes who present with ilioinguinal neuralgia.

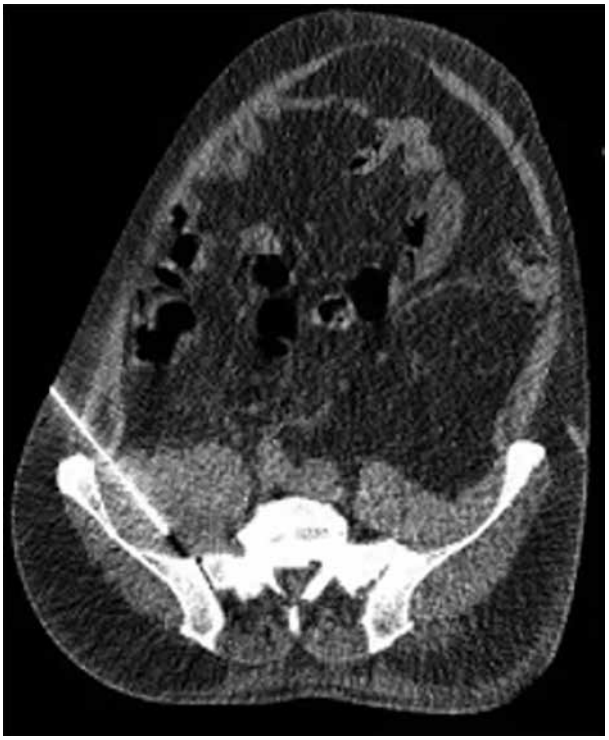

Fig. 3. Axial CT image showing percutaneous abscess draining via interventional radiology.

CONCLUSIONS

Abscess-related pain typically subsides upon abscess resolution; however, this case underscores the potential development of chronic ilioinguinal neuralgia, which warrants consideration in patients with a history of internal abscesses. The literature on chronic pain due to abscesses remains limited, highlighting the need for comprehensive evaluation and management strategies tailored to individual patient needs. Ultrasound-guided nerve blocks offer a promising approach in managing neuralgia secondary to abscesses, emphasizing the importance of multidisciplinary collaboration and ongoing research to optimize therapeutic treatment, procedure-based interventions, and enhance patient quality of life.

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