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Case Report

Not your common neck pain: Longus coli tendonitis ☆,☆☆

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ABSTRACT

Longus coli tendonitis is a rare etiology of neck pain, occurring so infrequently that a prevalence is difficult to determine. Typical symptoms include neck pain, neck stiffness and an elevation of inflammatory markers, raising a concern for an infectious etiology. Radiographic imaging is essential to establish a diagnosis and differentiate between life-threatening infectious pathologies, including meningitis and abscesses leading to airway compromise. We present a rare case of longus coli tendonitis, initially thought to be infectious. Our case highlights the importance of multimodal imaging for diagnosis and maintaining a broad differential when presented with concerning symptoms.

Introduction

Neck pain is a relatively common, nonspecific chief complaint, accounting for roughly 25.5 million annual job absences and $134.5 billion dollars in healthcare expenses [1]. Common etiologies range from psychological stressors, including stress and anxiety, to neuromuscular and autoimmune etiologies [1]. Infections secondary to streptococcus and staphylococcus species may also present with nonspecific symptoms. Risk factors include underlying immunocompromised states and drug use [2]. Due to the generalizability of common presenting symptoms, a broad differential is important when caring for these individuals.

Longus coli tendonitis (LCT) is a rare and often misdiagnosed etiology of severe neck pain. To date, prevalence remains unclear [3]. Boardman et al performed a retrospective cohort study over a 3-month period, analyzing roughly 8000 neck and cervical spine computed tomography (CT) radiographs, finding a frequency of 1.1 per 1000 examinations [3]. In addition, Horowitz et al performed a 3 year retrospective cohort study, finding an incidence of 0.5 cases per 100,000

Abbreviations: LCT, longus coli tendonitis; CT, computed tomography; ED, emergency department; WBC, white blood cell count; BMP, basic metabolic panel; IV, intravenous; NSAIDs, nonsteroidal anti-inflammatory medications.

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Fig. 1 – (Left) CT imaging at initial presentation demonstrating a fluid filled collection in the retropharyngeal space. (Middle) Calcification of the longus coli tendon near the C1-C2 region. (Right) Visible edema representing inflammation of the Longus coli muscle.

person-years [4]. One theory for the relative low incidence may be due to mis-diagnosis and/or underreporting of the condition [5]. Disease progression is thought to be secondary to deposition of hydroxyapatite crystals of the longus coli, superior oblique tendon, with inciting factors including muscle overuse, hyperextension and/or whiplash [4,6]. Often misdiagnosed, the differential typically includes infectious etiologies, including retropharyngeal abscesses and/or meningitis [6]. Typical presenting symptoms may include fever, chills, neck pain, neck soreness and/or neck stiffness [4]. Here, we present a rare case of acute LCT in a young, healthy male, initially thought to be secondary to an acute retropharyngeal abscess.

Case report

The patient is a 44-year-old male with a past medical history allergic rhinitis, asthma and gastroesophageal reflux disease who initially presented to the emergency department (ED) with endorsements of neck pain. Per the patient, he first developed neck pain roughly 1 week prior to his presentation with pain increasing significantly, including difficulty with neck movement, swallowing and radiation to his left face and ear. In the ED, white blood cell count (WBC) was 11×10^3/uL and within normal limits. Basic metabolic panel (BMP) was unremarkable and c-reactive protein was elevated to 16.6 mg/L. Blood cultures were drawn. CT brain was without acute process. CT soft tissue neck with intravenous (IV) contrast revealed evidence of fluid in the right retropharyngeal space, measuring 9 mm in thickness, extended from the C1-C5 levels without rim enhancement or loculation. Notable evidence of calcification of the left longus coli tendon likely consistent with LCT with reactive retropharyngeal effusion (Fig. 1). Retropharyngeal abscess was thought to be less likely based on imaging appearance. In the ED, the patient was given 1 dose of 3 gm IV Unasyn. Otolaryngology was consulted and recommended 8 mg dexamethasone every 8 hours and recommended against surgical intervention. Toradol 15 mg IV every 6 hours as needed, oxycodone 5 mg every 6 hours as needed, a lidocaine patch and Tylenol 650 mg every 4 hours was used as a pain regimen. A flexible laryngoscopy was performed, revealing moderate posterior pharyngeal wall edema without larynx obstruction. During his admission, the medicine service was notified regarding new-onset chest wall flushing and sweating. He remained vitally stable. This was thought to be secondary to Unasyn and the patient was switched to Ceftriaxone 2g every 24 hours and Flagyl 500 mg twice daily. Repeat CT soft tissue neck with IV contrast 2 days postadmission revealed a significant interval decrease in size of the retropharyngeal effusion, consistent with resolving longus coli tendinitis related to reactive changes (Fig. 2). The patient ultimately continued to improve and was discharged. He was seen in clinic 5 days postdischarge and continued to improve.

Discussion

LCT is an infrequent etiology of acute neck pain and can present with symptoms like other etiologies, including infectious, autoimmune and musculoskeletal etiologies [1]. The typical triad of presentation is thought to include neck stiffness, neck pain and painful swallowing with symptoms lasting from 1 day to 3 months in duration [5,6]. Shawky et al performed a retrospective control study, exploring common presenting symptoms from 1964 to 2015 [7]. Neck pain was found in 100% of cases, where neck stiffness leading to motion limitation was found in 98.3% of cases and difficulty swallowing in 83.72% of cases [7]. Our patient presented with similar symptoms, including neck pain, difficulty with movement and swallowing with significant improvement at his 5-day follow up appointment. Although nonspecific, these symptoms should be used in conjuncture with other clinical findings. Typical age range is 30-60 years old [8]. Our patient was 44 years old at presentation, consistent with these demograph-

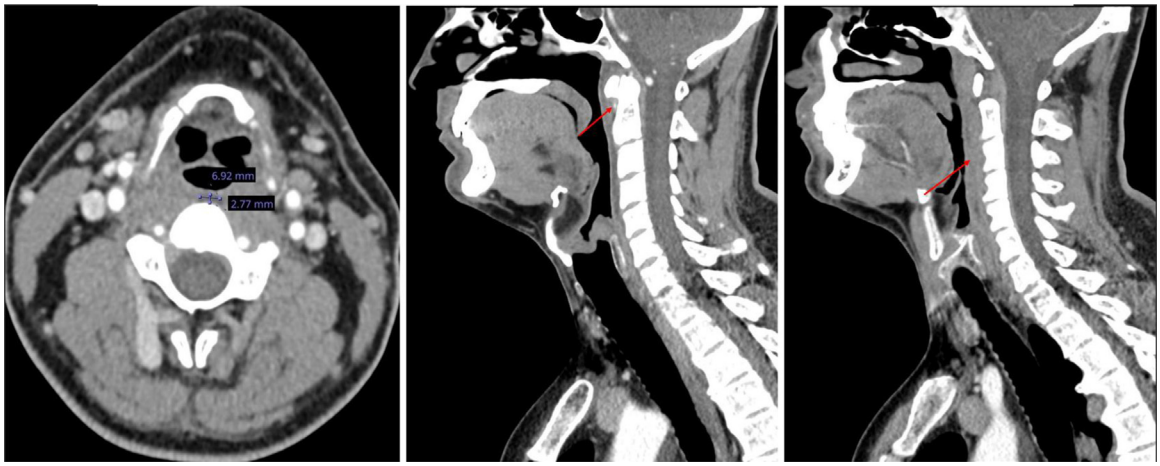

Fig. 2 – CT imaging demonstrating internal improvement of the fluid filled retropharyngeal space (left), calcific deposition of the longus coli tendon (middle) and edema of the longus coli muscle after symptomatic treatment with NSAIDs and steroids.

ics. Due to the aseptic inflammatory nature of the disease, associated laboratory findings include elevations in CRP and a leukocytosis, similar to our patient's laboratory findings [8].

Due the large symptomatology and laboratory workup overlap with other life-threatening conditions, radiographs are essential for diagnosis. Initially, pain radiographs were used for diagnosis, along with laboratory findings and history of presenting illness [7]. Currently, CT is the preferred imaging modality due to its high sensitivity for detecting small calcifications, compared to plain radiographs and magnetic resonance imaging (MRI) [9]. Findings typically included a prominent paravertebral soft tissue shadow and calcifications of the anterior C1-C3 soft tissue, with the upper oblique muscle fibers most commonly affected [7,9]. Imaging may reveal an extensive fluid collection spanning the vertebral region and increased signal in this region suggesting extensive edema or amorphous calcifications. Interestingly, in a retrospective cohort study performed by Shawky et al exploring literature from 1964 to 2015, calcifications were identified on imaging in 76.44% of cases and soft tissue edema in 78.51% of cases. These findings were consistent with our case, with evidence of ossification of the longus colli tendon and fluid collection in this vertebral region (Fig. 1). Treatment includes nonsteroidal anti-inflammatory medications (NSAIDs) for symptomatic management, whereas steroids are recommended for more severe cases [10]. Our patient received symptomatic treatment with IV Toradol and a course of 8 mg Dexamethasone. He was discharged with a 4 mg methylprednisolone dose pack over a 16-day course. He had rapid improvement in symptoms, consistent with other cases receiving steroid therapy [11]. Contrary to our case, antibiotics are not recommended for treatment of LCT [10].

Conclusion

Longus coli tendonitis (LCT), an aseptic inflammatory state, is a rare pathology leading to acute-onset neck pain, stiffness and difficulty swallowing. Antibiotics are often initiated, although not indicated, due to concerns of infectious etiology. Clinical examination, history, laboratory findings and imaging are essential for an accurate diagnosis of this rare pathology.

Patient consent

The patient consented to his medical course being used for a case report and educational purposes.

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