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Case Report

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Acute calcific tendinitis of the longus colli muscle presenting with dysphagia: A case report

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Abstract

Acute calcific tendinitis of the longus colli (ACTLC) is an uncommon, self-limiting inflammatory condition caused by calcium hydroxyapatite crystal deposition. Its presentation frequently mimics potentially life-threatening infectious conditions, potentially leading to unnecessary diagnostic investigations or interventions. A 35-year-old male patient presented with acute neck pain, dysphagia, and neck stiffness. Magnetic resonance imaging demonstrated a retropharyngeal effusion, while computed tomography revealed a characteristic prevertebral calcification along the vertical fibers of the longus colli muscle at the C4-C5 level, an uncommon location for this entity. The patient was treated conservatively with non-steroidal anti-inflammatory drugs. Pain decreased from 8/10 to 2/10 in the Numeric Rating Scale within 48 h, accompanied by subjective improvement in dysphagia. Complete symptom resolution was documented at one-month follow-up and maintained at 12 months. In conclusion, recognition of atypical calcification locations on computed tomography is essential for establishing an accurate diagnosis and preventing unnecessary interventions.

Keywords: Acute calcific tendinitis of the longus colli, calcinosis, computed tomography, deglutition disorders, neck pain.

Acute calcific tendinitis of the longus colli muscle (ACTLC), also known as retropharyngeal calcific tendinitis, is a self-limited aseptic inflammatory condition caused by calcium hydroxyapatite crystal deposition in the longus colli tendon.[1,2] It typically affects adults in the third to sixth decades of life and presents with a clinical triad of acute neck pain, neck stiffness, and odynophagia or dysphagia which closely mimics potentially life-threatening conditions such as retropharyngeal abscess, meningitis, and cervical spondylodiscitis.[3,4] A literature review of 116 reported cases found that 6.9% of cases underwent unnecessary invasive treatment due to misdiagnosis.[4]

In this article, we report a rare case of ACTLC presenting with neck pain, dysphagia and calcification at C4-C5, highlighting the importance of reviewing the lower cervical prevertebral region and the diagnostic contribution of computed tomography (CT), when magnetic resonance imaging (MRI) reveals non-specific retropharyngeal fluid.

CASE REPORT

A 35-year-old male patient with an unremarkable medical history presented with a five-day history of excruciating left-sided posterior neck pain, dysphagia for both solids and liquids, and neck

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stiffness. At the time of presentation, pain intensity was 8/10 on the Numeric Rating Scale (NRS), and the Eating Assessment Tool-10 (EAT-10) score was 10/40.[5] The patient denied fever, nausea, vomiting, recent infection, or trauma. Physical examination revealed markedly decreased cervical range of motion in flexion and extension, and bilateral soft tissue tenderness on palpation. Oropharyngeal examination revealed no abnormalities, including no signs of inflammation, infection, or tonsillar pathology. The Gugging Swallowing Screen (GUSS) score was 19/20, with slower swallowing during the solid trial.[6] Neurological examination findings were normal. Laboratory analysis showed no leukocytosis and a normal C-reactive protein (CRP) level. Magnetic resonance imaging of the cervical spine revealed a retropharyngeal effusion extending from C3 to C6, measuring 5 mm in anteroposterior diameter, mildly indenting the posterior wall of the oropharynx and hypopharynx (Figure 1). To further characterize these findings, a cervical CT scan was obtained, demonstrating a left parasagittal prevertebral calcification at the C4-C5 level along the vertical fibers of the longus colli muscle, accompanied by the previously identified effusion (Figure 2). There was no ring-enhancing fluid collection, cervical lymphadenopathy, or bone destruction to suggest retropharyngeal abscess.[3] Treatment was initiated with ibuprofen 600 mg twice daily for five days, with reported adherence and no documented adverse effects. During a telephone reassessment approximately 48 h after treatment initiation, the patient reported a reduction in pain intensity from NRS 8/10 to 2/10, accompanied by subjective improvement in dysphagia. At one-month follow-up in the outpatient setting, the patient was completely asymptomatic, with NRS 0/10, EAT-10 0/40, and GUSS 20/20. These findings remained unchanged at the 12-month follow-up assessment. A written informed consent was obtained from the patient for publication of this case report.

Figure 1. Sagittal T2-weighted magnetic resonance image of the cervical spine demonstrating retropharyngeal fluid collection extending from C3 to C6.

DISCUSSION

Acute calcific tendinitis of the longus colli results from a foreign-body type inflammatory reaction triggered by the degradation and resorption of calcium hydroxyapatite deposits within the longus colli tendon.[2,7] The longus colli is a deep cervical flexor attaching to the anterior aspects of the C1-T3 vertebrae; its superior oblique portion, connecting the anterior tubercle of the atlas to the transverse processes of C3-C5, is the most commonly affected site.[1] The condition is

Figure 2. Axial computed tomography image demonstrating a left parasagittal prevertebral calcification at the C4-C5 level, consistent with acute calcific tendinitis of the longus colli muscle.

histopathologically analogous to calcific tendinitis of the rotator cuff.[1] In a comprehensive review of 72 cases, the most common presenting symptoms were neck pain (94%), limited range of motion (45%), odynophagia (45%), neck stiffness (42%), and dysphagia (27%).[3] Dysphagia results from inflammatory edema in the retropharyngeal space affecting the adjacent pharyngeal constrictor muscles involved in bolus propulsion.[3] Mild leukocytosis and slightly elevated inflammatory markers may be present but are typically modest; in a comparative study, CRP, and white blood cell counts were significantly lower in ACTLC than in retropharyngeal abscess.[4]

Computed tomography is the gold standard for diagnosis, demonstrating the pathognomonic combination of amorphous prevertebral calcification, most commonly anterior to C1-C2, and prevertebral soft-tissue edema without a ring-enhancing collection.[1,3,8] In the largest imaging cohort to date (n=30), calcifications at C1-C2 were present in 97% of cases.[9] Of note, MRI is valuable for excluding abscess and other pathology, but is less sensitive for detecting calcification.[1,8] Notably, the calcification in our patient was located at C4-C5 along the vertical fibers rather than at the typical C1-C2 level, representing an uncommon anatomical variant. This atypical location highlights the importance of examining the lower cervical prevertebral region, particularly, when MRI reveals non-specific retropharyngeal effusion. In the present case, CT established the diagnosis and supported conservative management.

First-line treatment consists of non-steroidal anti-inflammatory drugs (NSAIDs), with most patients experiencing symptom resolution within one to two weeks.[1,3] Immobilization with a soft cervical collar may also be considered.[1] Corticosteroids may be added in refractory cases, with reported symptom relief within 48 h.[7] In a seminal case series, all five patients were initially misdiagnosed, receiving unnecessary hospitalization, parenteral antibiotics, and in one case open biopsy for suspected neoplasm, before retrospective review established the correct diagnosis.[10] Although ACTLC is benign and self-limited, it has been known to recur, although the recurrence rate remains unknown.[1]

Clinical improvement was documented using NRS, EAT-10, and GUSS, although instrumental swallowing assessment was not performed given the established diagnosis and favorable clinical evolution. Similarly, repeat imaging was not considered clinically indicated after sustained symptom resolution. Nevertheless, the absence of instrumental swallowing assessment and follow-up imaging limits confirmation of swallowing physiology and radiological resolution, respectively.

In conclusion, ACTLC should be considered in patients presenting with acute neck pain, cervical stiffness, and dysphagia or odynophagia, even when calcification is located below the typical C1-C2 level. Computed tomography recognition of prevertebral calcification associated with non-enhancing retropharyngeal effusion allows prompt diagnosis and differentiation from potentially serious infectious conditions. Increased clinical awareness may prevent unnecessary antibiotic treatment, hospitalization, biopsy, or surgical intervention.

Declaration of Conflicting Interests

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Author Contributions

D.D.A.S.: Conceptualization, investigation, literature review, writing-original draft; A.B.P., R.S.A.: Clinical supervision, manuscript review; J.P.C.: Conceptualization, clinical supervision, manuscript revision. All authors reviewed and approved the final manuscript.

Data Availability

Data sharing is not applicable to this article as no datasets were generated or analysed during the current study.

AI Disclosure

The authors declare that artificial intelligence (AI) tools were not used, or were used solely for language editing, and had no role in data analysis, interpretation, or the formulation of conclusions. All scientific content, data interpretation, and conclusions are the sole responsibility of the authors. The authors further confirm that AI tools were not used to generate, fabricate, or 'hallucinate' references, and that all references have been carefully verified for accuracy.

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