

Title :

Acute Calcific Longus Colli Tendinitis: An Underdiagnosed Cause of Neck Pain and Dysphagia.

Swetha Ade MD, Ajay Tunguturi MD, Ann Mitchell MD.

Department of Neurology,

University of Massachusetts Medical Center.

Corresponding Author

Ajay Tunguturi

University of Massachusetts Medical Center,

55 Lake Ave N, Worcester, MA – 01655.

Email address: Ajay.tunguturi@umassmemorial.org

TEL: 508-334-2527

FAX: 774-442-3687

Abstract:

Introduction:

Etiologies for neck pain are multiple, but those associated with dysphagia remain largely limited to retropharyngeal abscess, soft tissue swellings, trauma, oro-pharyngeal neoplasms and Acute Calcific Longus Colli tendinitis. Often under diagnosed, Acute Calcific Longus Colli Tendinitis consists of inflammation of the tendon itself that can result in acute onset of neck pain and further lead to torticollis, dysphagia and/or odynophagia.

Here we present a 39 year old woman who presented with acute neck pain that progressed to dysphagia in just a few days' time. Multiple imaging studies were performed that eventually demonstrated the correct diagnosis of Acute Calcific Longus Colli Tendinitis. We would like to raise awareness of Acute Calcific Longus Colli Tendinitis among treating physicians as an often overlooked cause of acute neck pain.

Key words: Longus Colli tendinitis, dysphagia, retropharyngeal abscess, occipital headache, torticollis.

Case Report

The patient is a 39 year old woman with a history of migraine who works as a hair dresser and who had previously experienced periodic neck and proximal shoulder pain that was typically relieved by over the counter analgesics. She woke one morning with neck pain that seemed to be more intense than her usual pain. There was no known trauma, no unusual physical exertion or strain to the neck. She took over the counter analgesics to help her manage the pain so she could get through the day. She also developed intermittent headaches. However, the next day the pain continued to worsen, and she also noticed neck stiffness and mild restriction of her neck movements. She denied any fever, nausea or vomiting. Over the next two days the neck pain continued to worsen, and on day three of the neck pain, she developed dysphagia for both solids and liquids. She presented to the Neurology clinic, and her neurological evaluation revealed increased cervical muscle tone and bilateral tenderness all along the cervical spine. There were no visible signs of inflammation on routine oro-pharyngeal examination. There were no signs of meningismus. Laboratory tests revealed an elevated ESR of 75 and CRP of 16.6, suggesting acute inflammation. Comprehensive metabolic panel demonstrated a mild elevation of AST to 41 but ALT was within normal limits. CBC was within normal limits. The absence of fever, the absence of meningismus, and the normal CBC put the diagnosis of meningitis lower on the differential, although still possible. MRI of the neck was urgently performed to look for prevertebral or epidural abscess, but imaging instead revealed bilateral Longus Colli muscle edema with ill defined contrast enhancement. Prevertebral soft tissue swelling (Figure. 1) and non circumscribed fluid level was noted

extending from C1 to C4 level (Figure 2). Reversal of the cervical lordosis was noted. Prevertebral abscess was considered in the differential; but there were no other signs of acute infection. Before proceeding with any invasive procedures like fine needle aspiration cytology (FNAC), a CT scan of the neck was performed to confirm the presence of calcifications in the Longus Colli tendon. The CT neck imaging revealed changes consistent with thickening of the prevertebral soft tissues and the Longus Colli muscle from craniovertebral junction down to C5 level. Focal and ring like calcifications (Figure. 3) within the Longus Colli muscle/tendon were also noted. The constellation of the elevated ESR, the calcified deposits in the Longus Colli tendons on the neck CT scan and the absence of other signs and symptoms of infection supported the diagnosis of Acute Calcific Longus Colli Tendinitis. The patient was spared further invasive studies and exploratory procedures. The patient was treated with non-steroidal anti-inflammatory medication. The patient reported resolution of symptoms within two weeks of starting treatment.

Discussion

The Longus Colli muscle is situated in front of the vertebral column between the atlas and the third thoracic vertebrae. It helps primarily in the flexion of the head and neck. Longus Colli tendinitis was thought to be a rare (1, 2) disease. Recent epidemiological studies by Gilad Horowitz et al have shown that it is not a rare disease, has been under diagnosed, likely due to a lack of clinician awareness, (3). The condition typically

presents with neck pain that is then followed by neck muscle stiffness and odynophagia (4, 5), Patients might also experience pain that is referred to the occipital area. (1). A high degree of suspicion along with a careful physical examination and other investigations is required to rule out more sinister conditions such as meningitis or other CNS infections, including epidural abscess. In our case, the patient did not have any signs or symptoms of infection. In this condition, the laboratory studies are usually within normal limits with the exception of an elevated ESR and possibly a mild leukocytosis. (5, 6). As seen in our patient, the key radiographic findings of retropharyngeal calcific tendinitis include amorphous calcification anterior to C1–C2 and prevertebral soft tissue swelling. (7, 8, 9) The diffuse prevertebral soft tissue thickening typically extends from C1 to C4. [5]. The soft tissue thickening represents either a discrete effusion or diffuse edema, a distinction that can be differentiated on CT or MRI imaging [7, 10]. As in our case, the fluid can easily spread through the prevertebral space and localize within the muscle, thereby expanding the retropharyngeal space and sometimes confused as a collection in the retropharyngeal space. (9) The lack of enhancement surrounding the effusion is helpful in differentiating a reactive effusion from an abscess. (11) Retropharyngeal calcific tendinitis is a self-limiting (4, 6) condition and tends to resolve after 1–3 weeks. Treatment with a short course of non-steroidal anti-inflammatory medications and avoidance of aggravating neck movements help to alleviate symptoms. A short course of steroids might be considered for refractory cases. (6)

Acute Longus Coli tendinitis is a condition often overlooked as a cause of neck pain. Raising the awareness of this condition would result in more timely diagnosis and

appropriate treatment and the prevention of other unnecessary interventions. This case highlights the importance of a careful differential diagnosis of even common conditions like neck pain, so that the uncommon medical conditions might be identified, treated and patients potentially spared unnecessary and potentially life threatening interventions.

References:

1. Simon Harnier, MD; Jens Kuhn, MD; Andreas Harzheim, MD; et al;
Headache, 2008 Jan; 48(1):158-61.
2. A. H. Ibis; D. Giannis; K. N. Malizos; et al;
Eur Spine J (2013) 22 (Suppl 3):S434–S438
3. Gilad Horowitz, Oded Ben-Ari, Adi Brenner, et al;
Otolaryngology -- Head and Neck Surgery 2013 148: 955
4. Ring D, Vaccaro AR, Scuderi G, Pathria MN, Garfin SR.
J Bone Joint SurgAm. 1994; 76:1636-1642.
5. Fahlgren H. Retropharyngeal tendinitis.
Cephalalgia. 1986; 6:169-174.

6. Park R, Halpert DE, Baer A, Kunar D, Holt PA.
Semin Arthritis Rheum. 2010 Jun; 39(6):504-9.

7. Eastwood JD, Hudgins PA, Malone D.
CTandMRImaging.*AJNRAmJ Neuroradiol.* 1998; 19:1789- 1792.

8. Chung T, Rebello R, Gooden EA.
.Emerg Radiol. 2005; 11:375-380.

9. C E Offiah, BSc, FRCS, FRCR and E Hall, MB, ChB
The British Journal of Radiology, 82 (2009), e117–e121

10. Artenian DJ, Lipman JK, Scidmore GK, Brant-Zawadzki M.
Neuroradiology. 1989;31:166-169.

11. Hoang JK, Branstetter BF 4th, Eastwood JD, Glastonbury CM.
AJR Am J Roentgenol. 2011 Apr;196(4):W426-32.

FIGURES:

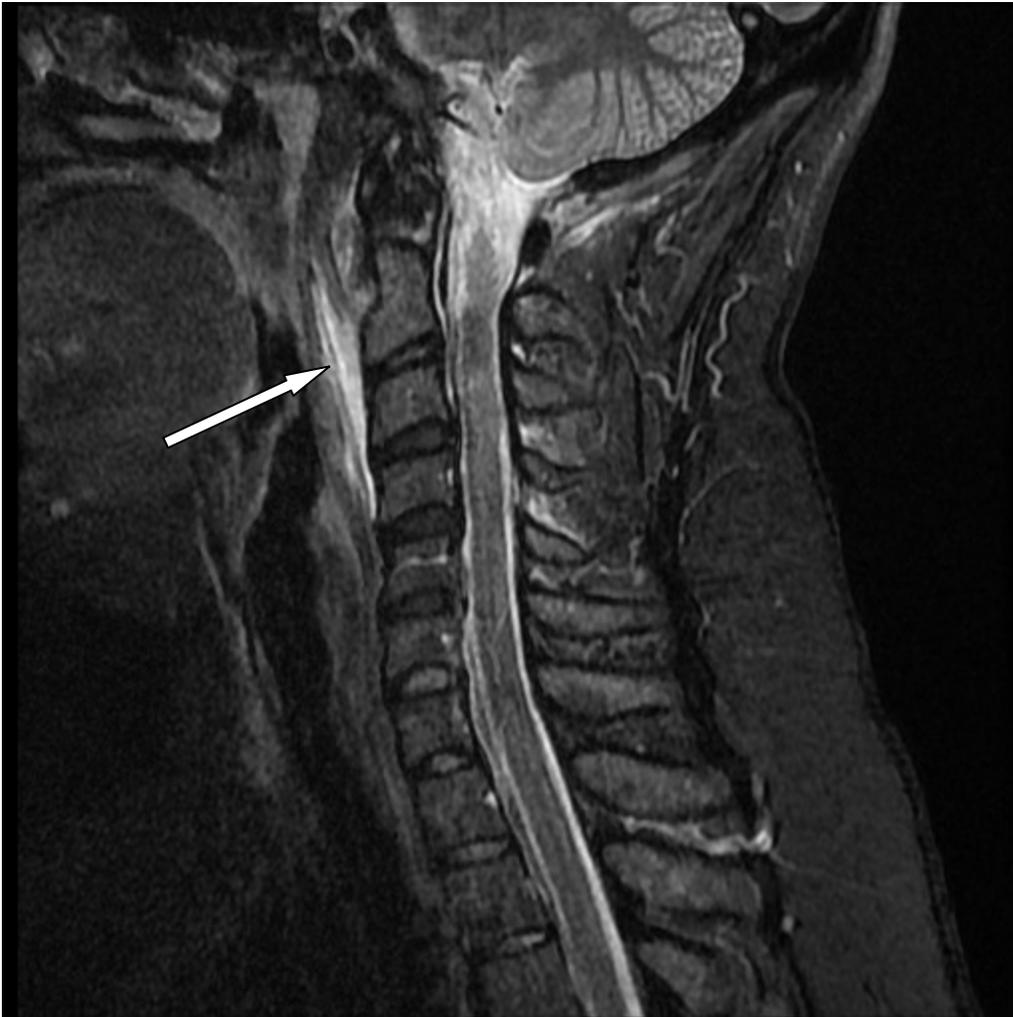


FIG 1. MRI neck Sagittal, short T1 inversion recovery (STIR) sequence image demonstrates inflammation of the Longus Colli tendon (arrow).



Figure2. MRI neck, Sagittal T2-weighted Fast Recovery Fast Spin Echo(FR FSE) sequence image demonstrates fluid collection (arrow) within the prevertebral soft tissues, with calcification (arrow head) in the proximal fibers of the Longus Colli tendon.

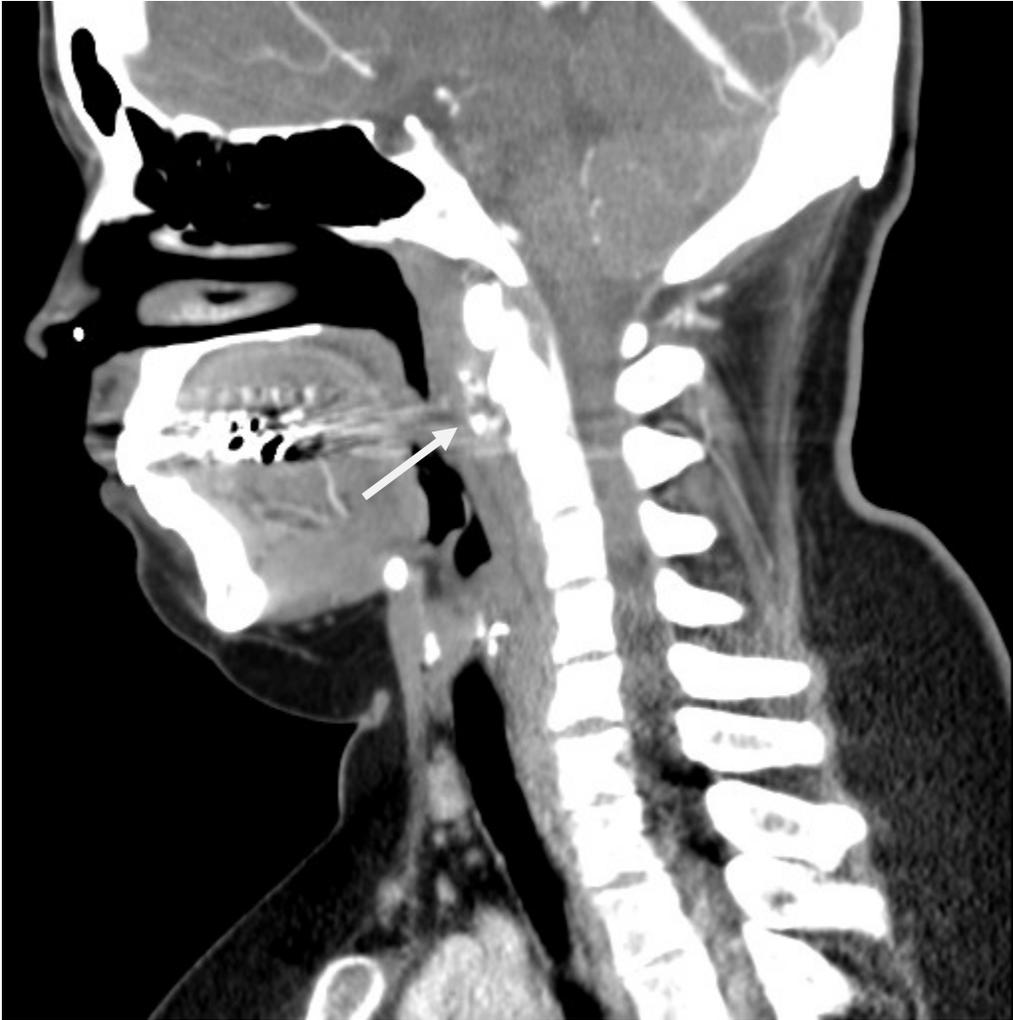


Figure 3. Sagittal CT neck demonstrates focal ring like calcifications (arrow) within the Longus colli muscle/Tendon.

Disclosure:

The authors disclose that there is no conflict of interest regarding the publication of this article.