Case 14342

Calcific Longus Colli Tendinitis
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Section: Head & neck imaging
Area of Interest: Head and neck
Procedure: eLearning
Procedure: Diagnostic procedure
Procedure: Contrast agent-intravenous
Imaging Technique: Image manipulation / Reconstruction
Imaging Technique: CT
Special Focus: Calcifications / Calculi Oedema Case
Type: Clinical Cases
Patient: 50 years, female

Clinical History:

A 50-year-old female presented to annual follow-up of breast cancer with acute onset of neck pain and stiffness. The annual follow-up study of breast cancer was completed with unenhanced cervical spine CT. The patient had a history of Her-2+ DIC pT1b/pN0/M0, undergoing conservative surgical treatment, chemo-radio-hormonotherapy, achieving complete remission of the disease.

Imaging Findings:

Unenhanced cervical spine CT showed the presence of amorphous calcification ventral to the bodies of C1 and C2, associated with a hypodense area in the retropharyngeal space, suggestive of a retropharyngeal effusion. The associated effusion extended inferiorly from C1 to C5-C6 (Fig. 1). When the patient was contacted by the Department of Radiology, marked clinical improvement with NSAIDS was reported. It was clinically assumed that the patient had Calcific Tendinitis of Longus Colli, however re-evaluation was planned 4 days later with contrast-enhanced cervical CT (CECCT) to definitively exclude a retropharyngeal abscess. CECCT showed almost complete resolution of the retropharyngeal effusion and no rim enhancement (Fig. 2).

Discussion:

Longus colli muscle is a prevertebral muscle of the neck and, similar to the adjacent paired longus capitis muscle, is considered a weak flexor of the cervical spine. It is subdivided into upper or anterior oblique, central or intermediate and lower or inferior oblique fibers, which have separate insertion sites [1].

Deposition of calcium hydroxyapatite crystals may cause an inflammatory response in the tendon of longus colli. Repetitive trauma, ischemia, necrosis and tendinous degeneration may be risk factors in the development of the disease [2]. Amorphous calcifications are normally seen in the upper portion, however intermediate and inferior oblique fibers may also be affected. Fever and mild leukocytosis are not uncommon and, due to its proximity to the esophagus, odynophagia may be present [3].

Male or female patients in their 3rd to 6th decade of life represent the typical demographic of acute calcific longus
Longus colli tendinitis, although younger and older patients have also been identified [1].
The definitive diagnosis of acute calcific longus colli tendinitis is established using CT and the true incidence of the
disease is considered to be higher than previously estimated [3]. Plain radiographs might completely miss the
presence of both calcification and effusion [1] and are therefore not considered useful in making the diagnosis. MRI
can show prevertebral oedema and corresponding fluid effusion, but it is difficult to recognise calcific deposits with
this imaging method [3]. Delayed bone scintigraphy can show a rounded focus of marked increased radionuclide
uptake, suggesting bone marrow involvement [7].

The presence of amorphous calcification near the insertion of the upper fibers of longus colli tendon, as well as the
presence of fluid in prevertebral space extending or not to retropharyngeal space are all findings consistent with
acute calcific longus colli tendinitis [4].

The clinical manifestations of acute calcific longus colli tendinitis is similar to those of a retropharyngeal abscess.
However, in contrast to the retropharyngeal abscess, no peripheral enhancement, nor supplicative changes are
observed [5].

First described in 1964 by Hartley, acute calcific longus colli tendinitis is a rare pathology that may be misdiagnosed.
Being a self-limited condition, treatment involves NSAIDs, rest and, occasionally, steroids. Surgical intervention is
contraindicated [6].

**Differential Diagnosis List:** Calcific Longus Colli Tendinitis, Retropharyngeal abscess, Retropharyngeal cellulitis,
Infectious spondylitis, Traumatic injury

**Final Diagnosis:** Calcific Longus Colli Tendinitis

**References:**

Offiah CE, Hall E. (2009) Acute calcific tendinitis of the longus colli muscle: spectrum of CT appearances and

(PMID:22917025)

case report and review of the literature. Eur Spine J May;22 Suppl 3:S434-8 (PMID:23179983)


Capps EF, Kinsella JJ, Gupta M, Bhatki AM, Opatowsky MJ. (2010) Emergency imaging assessment of acute,
nontraumatic conditions of the head and neck. Radiographics Sep;30(5):1335-52 (PMID:20833854)

Oct;31(10):1538.e1-2 (PMID:23932124)

Description: Axial unenhanced cervical spine CT on bone window shows an amorphous calcification ventral to the body of C1-C2. Origin: Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.
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**Description:** Sagittal reformatted image of cervical spine on soft tissue window shows a hypodense area in the retropharyngeal space, tapering inferiorly from level C1 to C5-C6. The retropharyngeal effusion narrows the airway in oropharinx. **Origin:** Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.

**d**

**Description:** Sagittal reformatted image of cervical spine on bone window shows an amorphous calcification ventral to the body of C1-C2. Inversion of the physiologic cervical lordosis. **Origin:** Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.
Description: Axial Contrast Enhanced Cervical Spine CT on soft tissue window demonstrates resolution of the hypodense area in the retropharyngeal space. No rimlike enhancement was observed. 

Description: Axial Contrast Enhanced Cervical Spine CT on bone window shows the previously observed amorphous calcification ventral to the body of C1-C2. Origin: Nerses Nersesyan. Department of Radiology, Hospital Clínic Universitario de Valencia, Valencia, Spain.
Description: Sagittal Contrast Enhanced Cervical Spine CT on soft tissue window demonstrates marked improvement and complete resolution of the hypodense area in the retropharyngeal space. No rimlike enhancement was observed. Origin: Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.
Description: Sagittal reformatted image of Contrast Enhanced Cervical Spine CT on bone window shows the previously observed amorphous calcification ventral to the body of C1-C2. Inversion of the physiologic cervical lordosis. Origin: Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.
Description: Amorphous calcification ventral to the body of C1-C2. Origin: Nerses Nersesyan. Department of Radiology, Hospital Clínico Universitario de Valencia, Valencia, Spain.
Description: Amorphous calcification ventral to the body of C1-C2 (blue arrow and circular shadowing).