Acute Calcific Tendinitis of the Longus Colli Muscle

Clinical History:
A 44 year-old woman presented with a 4-day history of acute posterior cervical pain. She reported severe pain that exacerbates when turning the head or when swallowing. Boddy temperature was 37.2 °C, acute phase proteins were elevated. She presented with neck stiffness, no palpable lymphadenopathy.

Imaging Findings:
Lateral view of the cervical radiography showed prevertebral soft-tissue swelling from C1 to C6. Focal calcification was noted inferior to the C1 arch (Figure 1). Computed tomography of the neck showed a calcific density (Figure 2b-d) at the superior tendons of the longus colli at the C1-C2 level. A retropharyngeal soft-tissue fluid collection extended from C1-C6 (Figure 2a, c, d). Magnetic resonance imaging demonstrated diffuse retropharyngeal contrast enhancement without evidence of wall enhancement, high SI on T2w images, and no diffusion restriction (Figure 3, 4).

Discussion:
Background:
Calcific tendinitis of the longus colli muscles is an inflammation or acute granulomatous response to the deposit of hydroxyapatite crystals, which clinically can be confused with other more serious pathologies, such as a retropharyngeal abscess. [1, 2, 3, 4].

Clinical Perspective:
Symptoms are acute and nonspecific and the patient may present with dysphagia, odynophagia, cervical pain, fever and elevation of acute phase reactants. It occurs more frequently in middle-aged (20-50 years of age) patients with a slight female predilection.[2, 3, 4].

Imaging Perspective:
Computed tomography is the imaging modality of choice for the diagnosis of retropharyngeal tendinitis, since it can
detect both prevertebral edema and calcium deposition in longus colli tendons with high sensitivity; in contrast, magnetic resonance imaging (MRI) is very sensitive for prevertebral edema and fluid effusion but the sensitivity for calcium is moderate. In our patient, subtle calcification and retropharyngeal soft tissue swelling was found on plain x-ray. However, in some cases the amorphous calcific deposit may only be detected with CT and the only finding on radiography may be soft tissue swelling. CT with IV contrast can readily detect small amount of calcium anterior to the body of C2, oedema in the retropharyngeal space and exclude abscess formation (no ring-like enhancement). MRI findings are similar with high SI on T2-w and low SI on T1-w iages, whereas large calcifications have very low SI on all sequences, without evidence of peripheral enhancement or restriction in diffusion-weighted imaging (DWI) [5]. In addition, soft tissue edema is seen in the surrounding structures. A liquid collection with marked surrounding enhancement and restriction in DWI should favour the diagnosis of retropharyngeal abscess. [2, 3, 4, 5]. The differentiation of these two entities is important for the treatment decision. Other differential diagnoses are: retropharyngeal space edema due to jugular vein thrombosis or following radiotherapy; perivertebral space infection, which is associated with vertebral body endplate erosions and presents with a median raphe within the fluids and flattened configuration[1, 2, 3, 4].

The treatment is conservative with non-steroidal anti-inflammatory to relieve the symptoms and usually resolves in 1 or 2 weeks.[3, 4, 5].

Written informed patient consent for publication has been obtained

**Differential Diagnosis List:** Acute Calcific Tendinitis of the Longus Colli Muscle, Retropharyngeal Space Edema, Retropharyngeal Space Abscess, Perivertebral Space Infection, Traumatic injury

**Final Diagnosis:** Acute Calcific Tendinitis of the Longus Colli Muscle

**References:**


Kerlie Estimable, MD, Cynthia Rizk, MD, and George G. A. Pujalte, MD (2015) A Rare Case of Neck Pain: Acute Longus Colli Calcific Tendinitis in a Possibly Immunocompromised Individual. J Am Board Fam Medvol. 28 no. 1 146-150


Description: 2a. CT scan of the neck without contrast demonstrating a retropharyngeal fluid collection extending from C2 to C6. Origin: Department of Radiology, Hospital Universitario de Valladolid, Valladolid, Spain.
Description: 2b. Axial computed tomography scan shows an amorphous calcification anterior to the C1–C2 level. Origin: Department of Radiology, Hospital Universitario de Valladolid, Valladolid, Spain.
Description: 2c. Sagittal computed tomography scan shows a retropharyngeal soft-tissue fluid collection extends from C2–C6. Origin: Department of Radiology, Hospital Universitario de Valladolid, Valladolid, Spain.
Description: 2d. Sagittal computed tomography scan shows an amorphous calcification (arrow) anterior to the C1–C2 level. The disk space and heights were maintained. A retropharyngeal soft-tissue fluid collection extends from C2–C6. Origin: Department of Radiology, Hospital Universitario de Valladolid, Valladolid, Spain.
Description: 1a. Lateral view of the cervical plain radiograph showed a large area of prevertebral soft-tissue swelling from C1 to C6. Focal calcification was noted inferior to the C1 arch (arrows). Origin: Department of Radiology, Hospitak Universitario de Valladolid, Vienna, Spain.
Figure 3

Description: DW (4a)-ADC (4b) W. Moderate increase of prevertebral soft tissues extending from C1 to C4 (maximum thickness 8mm) without evidence of defined collections or restriction in diffusion (ADC 2.4). Origin: Department of Radiology, Hospital Universitario Rio Hortega, Valladolid, Spain.
Description: DW (4a)-ADC (4b) W. Moderate increase of prevertebral soft tissues extending from C1 to C4 (maximum thickness 8mm) without evidence of defined collections or restriction in diffusion (ADC 2.4). Origin: Department of Radiology, Hospital Universitario Rio Hortega, Valladolid, Spain.
Description: 3a. A retropharyngeal soft-tissue fluid collection extends from C2–C6. Origin: Department of Radiology, Hospital Universitario Rio Hortega Valladolid, Spain.
**Description:** 3b. A retropharyngeal soft-tissue fluid collection extends from C2–C6. **Origin:** Department of Radiology, Hospital Universitario Rio Hortega Valladolid, Spain.
Description: 3d. Sagittal C+ MR scan shows a retropharyngeal soft-tissue fluid collection extends from C2–C6. Origin: Department of Radiology, Hospital Universitario Rio Hortega Valladolid, Spain.