

CASE REPORTS

Retropharyngeal tendinitis: Hydroxyapatite deposition driven headache and nuchal rigidity resolves with prednisone

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ABSTRACT

We present a case of a 42-year-old woman who presented with sudden onset severe headache, neck pain, and nuchal rigidity associated with dysphagia. The initial differential in this patient included meningitis or retropharyngeal abscess, and an extracranial neck CT showed an ill-defined hypo-attenuated lesion within the retropharyngeal space. However, the neck pain and dysphagia were unresponsive to empirical antibiotic treatment and pain management. Further CT with contrast identified acute calcific tendonitis of the longus colli tendon, also known as retropharyngeal tendonitis (RCT). Although RCT is already known as a rare, self-limiting inflammatory condition, we present a new case of RCT, with the uncommon features of headache and nuchal rigidity in an aseptic patient, while providing a diagnostic flow chart to guide the clinical work-up of similar presentations to also include RCT.

Key Words: Acute calcific tendinitis of the longus colli, Retropharyngeal tendinitis, Nuchal rigidity, Headache, Neck, Dysphagia

1. INTRODUCTION

Acute calcific tendonitis of the longus colli tendon, or retropharyngeal calcific tendonitis (RCT), is a rare, self-limiting inflammatory condition characterized by a triad of severe neck pain, neck stiffness and dysphagia. While it can be often clinically misdiagnosed, RCT is identified by pre-vertebral soft tissue swelling with an almost pathognomonic deposition of calcium hydroxyapatite crystals at the C1–C3 vertebral level. We present a new case of RCT, with the uncommon features of headache and nuchal rigidity in an aseptic patient. Since making the diagnosis of calcific tendonitis prevents unnecessary interventions, and its treatment

regimens include the use of NSAIDs and in refractory cases corticosteroids, it is crucial to differentiate this diagnosis early. To this end, we provide a diagnostic flow chart that can guide the work-up of a patient with headache and nuchal rigidity to also include RCT.

2. CASE PRESENTATION

We present a 42-year-old female from Panama with a past medical history of a pulmonary embolism and antiphospholipid syndrome treated with coumadin. The patient presented complaining of sudden onset of severe headache and neck pain for 24 hours. Pain was characterized as a deep ache,

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constant, debilitating, 10/10 on the pain scale, located on the posterior neck and radiating throughout her head, exacerbated by movement and associated with dysphagia. She denied malaise, fever, chills, nausea, vomiting, photophobia, dizziness, or any trauma. Vital signs were within normal range. On physical exam, the patient was in significant distress due to pain, with nuchal rigidity and positive Kernig's

and Brudzinski's signs. Laboratory tests showed a complete blood count, comprehensive metabolic panel, parathyroid hormone, and angiotensin converting enzyme level within normal range. Her prothrombin time was 20.8 seconds, international normalized ratio 2.0, and C-reactive protein 65.72 mg/L. She had a tuberculin skin-test of 0 mm.



Figure 1. Extracranial CTA Neck shows hypoattenuation at C2.

Ill-defined hypoattenuation in the retropharyngeal space extending from the level of the C2 vertebral body to the cricoid cartilage. Findings suggestive of retropharyngeal abscess/phlegmon or longus coli calcific tendonitis. (Follow up of CT with contrast showed no rim fluid collection or evidence of abscess)

CT neck showed an ill-defined hypo-attenuated lesion within the retropharyngeal space at the level of C2 (see Figure 1). She was empirically treated with IV vancomycin and piperacillin-tazobactam for meningitis versus retropharyngeal abscess, however she continued to complain of neck pain and dysphagia. Suspecting retropharyngeal abscess, a CT neck with contrast was conducted, showing calcifications anterior to the C2 vertebral body in the absence of rim enhancing fluid collection or cervical lymphadenopathy. Since this ruled out abscess, her antibiotics were discontinued and the patient received ketorolac IM 30 mg every 8 hours for 24 hours, followed by naproxen 500 mg every 12 hours for 24 hours. With modest improvement, the patient's anti-inflammatory therapy was escalated to prednisone 40 mg daily. This treatment rapidly alleviated her symptoms and she continued to improve with normalization of her CRP.

3. DISCUSSION

Headache and neck stiffness can be signs that associate with many conditions, including meningitis, subarachnoid hemorrhage, retropharyngeal abscess, infectious spondylitis, cervical artery dissection, and traumatic injury. While retropharyngeal tendinitis is a rare condition with neck stiffness, headache, and can include dysphagia as well,^[1,2] its self-limiting disease course and rapid resolution with only NSAIDs and sometimes low dose corticosteroids make it a crucial diagnosis to differentiate from other more severe conditions.^[3] When conducting a head CT, already necessary to evaluate for meningitis, subarachnoid hemorrhage, or retropharyngeal abscess, one should consider the possibility that a patient may have calcinosis of the longus colli tendon. If meningitis and subarachnoid hemorrhage are able to be ruled out, then a neck CT with contrast can be diagnostic

for RCT and rules out an abscess or phlegmon.^[4] Treatment for RCT can have both, immediate analgesic effects for patients and can accelerate the healing process.^[5] Fig-

ure 2 provides a clinical workup for headache and nuchal rigidity that also includes RCT that can be utilized to guide diagnostic approaches in similar cases to the one presented.

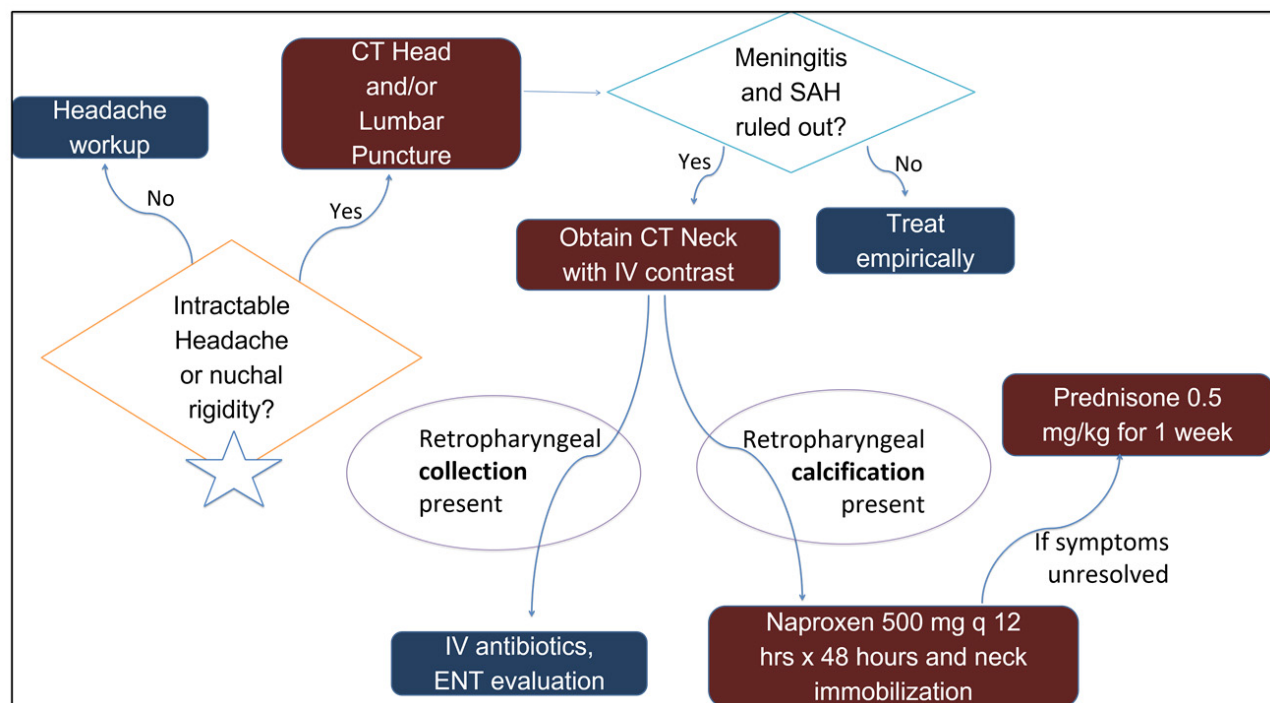


Figure 2. Clinical workup for patient with neck stiffness.

Given the patient's presentation in this case report, the above diagnostic flow chart can guide the work-up of a patient with headache and nuchal rigidity to also include retropharyngeal calcific tendonitis.

Park et al. reviewed 71 cases of retropharyngeal calcific tendonitis from 1964 to 2008 and indicated that the most common symptoms of RCT at presentation were neck pain (94%), limited range of motion (45%), odynophagia (45%), neck stiffness (42%), and dysphagia (27%).^[1] Nearly all patients were asymptomatic by 14 days with any of the most commonly utilized treatment methods: NSAIDs, steroids, or opiate analgesics. Although none of the cases evaluated here included headache, there have been other cases of RCT identified with this symptom^[2,6] that complicates the initial consideration of RCT in patients.

Overall, we hope that the presented case and the accompany-

ing clinical workup make clear a way for early determination of whether acute calcific tendonitis of the longus colli tendon, although rare, is driving a patient's symptoms.

CONFLICTS OF INTEREST DISCLOSURE

The authors have declared no conflicts of interest.

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