

Acute Calcific Tendonitis of the Longus Colli Muscle: A Case Series and Review of the Literature

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BACKGROUND

Acute calcific tendonitis of the longus colli muscle (ACTLC) is a non-infectious inflammatory process that is largely self-limited but can clinically and radiologically mimic deep neck space infections, leading to unnecessary antibiotic use, hospital admission, and even surgical treatment¹⁻⁵. With the existing literature regarding this entity limited to individual case reports and a few case series, our study presents a new series of five ACTLC cases and reports a comprehensive literature review, analyzing the clinical/radiologic features and treatment of ACTLC, to better define this disease process and facilitate its diagnosis and treatment.

METHODS

A retrospective chart review was performed on five patients with ACTLC seen at Madigan Army Medical Center and Walter Reed National Military Medical Center between October 2019 and May 2025. Demographic information, presenting symptoms, physical exam findings, laboratory results, imaging findings, management, and outcomes were recorded.

A literature review was performed. To identify studies for inclusion, PubMed, OVID, and Web of Science were searched from inception through June 15th, 2025. Keywords and phrases searched included “prevertebral tendinitis,” “retropharyngeal tendinitis,” and “longus colli tendinitis.” Title and abstract screening were first performed, followed by full-text review and data extraction. All steps of the review were performed in duplicate with disputes settled by a third reviewer. The data recorded from the historical cases of the literature review regarding demographic information, presenting symptoms, exam findings, lab values, imaging findings, and management were the same as those recorded for the case series, as detailed above.

RESULTS

The literature review yielded 77 case reports and 7 case series with a total of 107 patients. The pooled data from historical cases closely mirrored that of our series. This data is compiled and detailed in Figure 2. Nearly all patients presented with acute neck pain, restricted range of motion, and odynophagia, and more than two-thirds also demonstrated elevation of inflammatory markers. Leukocytosis and fever were also present in a minority of patients. Furthermore, CT imaging revealed evidence of prevertebral calcification and retropharyngeal effusion in nearly all patients – these characteristic imaging findings are illustrated in Figure 1. Treatment of ACTLC consisted primarily of NSAIDs and rest, occasionally with the use of a soft collar for immobilization.

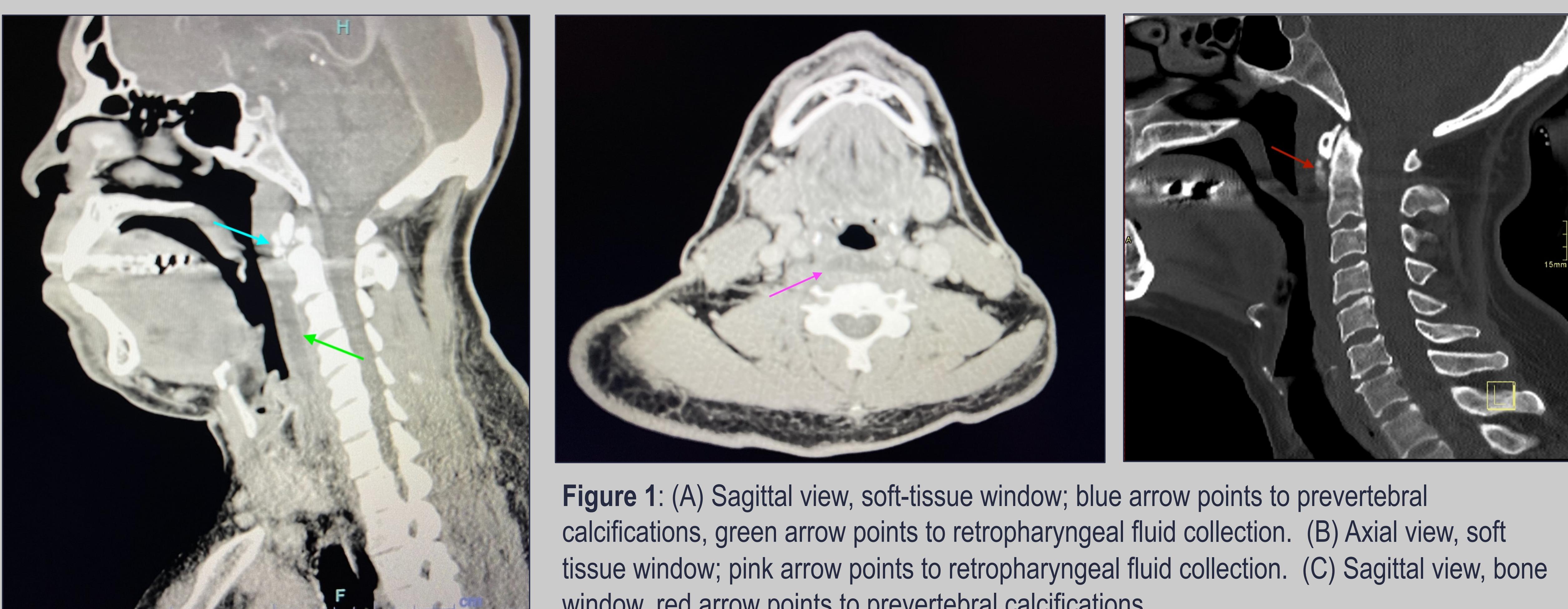


Figure 1: (A) Sagittal view, soft-tissue window; blue arrow points to prevertebral calcifications, green arrow points to retropharyngeal fluid collection. (B) Axial view, soft tissue window; pink arrow points to retropharyngeal fluid collection. (C) Sagittal view, bone window, red arrow points to prevertebral calcifications

	Case Series	Literature Review Data
Age (mean +/- SD)	48.0 +/- 16 (n=5)	46.1 +/- 11.4 (n=107)
Sex (M:F)	3:2 (n=5)	52:55 (n=107)
Neck Pain (%)	100% (5/5)	99.0% (106/107)
Odynophagia (%)	80% (4/5)	86.7% (91/105)
Limited Neck ROM (%)	100% (5/5)	88.1% (89/101)
Pharyngeal Edema (%)	25% (1/4)	27.3% (23/84)
Fever (%)	20% (1/5)	17.7% (17/96)
Temperature (mean +/- SD)	98.5 +/- 1.5 (n=5)	99.6 +/- 1.61 (n=16)
Leukocytosis (%)	20% (1/5)	45.7% (42/92)
WBC (mean +/- SD)	8.70 +/- 3.34 (n=5)	10.9 +/- 2.93 (n=39)
ESR Elevation (%)	67% (2/3)	71.8% (28/39)
ESR (mean +/- SD)	44.3 +/- 51.4 (n=3)	32.5 +/- 16.4 (n=24)
Time to Resolution (mean +/- SD)	3.8 days +/- 2.39	7.25 days +/- 4.63

Figure 2: Case series and literature review data regarding demographic information, presenting symptoms, physical exam findings, laboratory results, imaging findings, management, and outcomes

	Case Series	Literature Review Data
CRP Elevation (%)	100% (2/2)	67.0% (57/85)
CRP (mean +/- SD)	9.29 +/- 6.34 (n=2)	31.1 +/- 26.2 (n=37)
CT Performed (%)	100% (5/5)	99.1% (106/107)
MRI Performed (%)	20% (1/5)	47.2% (50/106)
Prevertebral Calcification (%)	100% (5/5)	94.3 (99/105)
Retropharyngeal Effusion (%)	80% (4/5)	89.3% (92/103)
Otolaryngology Consult (%)	80% (4/5)	67.1% (45/67)
NSAIDs (%)	80% (4/5)	87.3% (89/102)
Corticosteroids (%)	60% (3/5)	31.3% (31/99)
Antibiotics (%)	80% (4/5)	31.3% (31/99)
Surgical Intervention (%)	0% (0/5)	4.04% (4/99)
Time to Resolution (mean +/- SD)	3.8 days +/- 2.39	7.25 days +/- 4.63

Figure 2 continued

CONCLUSION

ACTLC typically presents in patients aged 30-60 with acute neck pain, limited neck ROM, and odynophagia with retropharyngeal effusion and edema seen on CT in the majority of patients; elevated inflammatory markers are also commonly seen. These findings can mimic deep neck space infections; however, the characteristic imaging finding of prevertebral calcifications can differentiate the two and prevent unnecessary interventions, as ACTLC is self-limited and typically resolves within a matter of days with NSAIDs in most patients.

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DISCLOSURE

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