Symptomatic Bicipitoradial Bursitis in a Patient with Systemic Lupus Erythematosus

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Background

Bicipitoradial bursitis is a rare condition with few cases reported in the literature. Inflammation of this bursa is uncommon due to its anatomical location. When bursitis does occur, it typically arises secondary to repetitive mechanical trauma. Only a small number of cases have been identified in patients with systemic inflammatory conditions or rheumatic diseases. Our review of the literature indicates that bicipitoradial bursitis in a patient with systemic lupus erythematosus (SLE) has not been reported. We now describe bicipitoradial bursitis in a 48-year-old female with SLE.

Case Description

A 48-year-old female with SLE presented with swelling in the left antecubital fossa not associated with arm overuse. Her SLE treatment included an injection of belimumab once every 2 weeks. The area was initially nontender and caused no motor deficits. She was instructed to apply heat and ice to the area. Over the next two weeks she noted increasing antecubital tenderness and diffuse arthralgias consistent with her typical SLE flares. Ultrasound of the patient's left forearm demonstrated a complex collection measuring 5.5x2.3x1.3 cm. It contained a linear echogenic strand-like area with vascularity, suggesting a possible tendon tear. MRI of the left forearm was obtained for further characterization of the mass. It demonstrated a well-circumscribed 5.2x1.9x1.7 cm T1 hypointense, T2 hyperintense lesion at biceps tendon insertion with an area of thick distal wall enhancement. Differential diagnoses for these findings included bicipitoradial bursitis, ganglion cyst, or subacute hematoma but the distal wall enhancement also suggested a possible neoplasm. The patient presented for surgical evaluation 6 days later. She reported a subjective increase in size of the mass, diminished grip strength, and worsening pain with radiation to her shoulder and wrist. The patient decided to proceed with excision of the mass. It was decided to withhold one infusion of belimumab prior to surgery due to concerns for delayed wound healing. She underwent excision of the mass during which the bursa was identified just deep to the fascia and was dissected from the biceps tendon. The bursa contained thick, white and tan fibrous material 3.6x2.0x1.0 cm in size. Final pathologic diagnosis was synovial-lined fibroadipose tissue compatible with bursa, containing evidence of chronic inflammation. These findings confirmed the diagnosis of bicipitoradial bursitis.

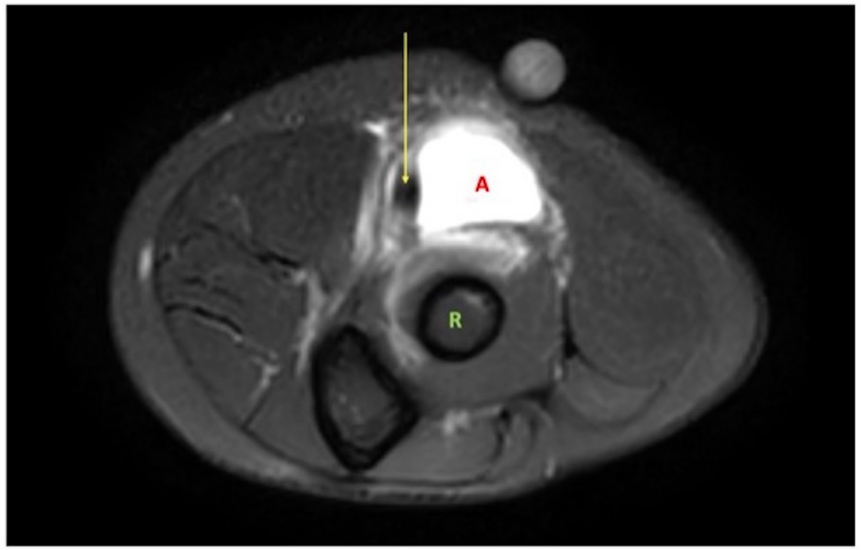

Fig. 1: Axial T2 image of the antecubital region demonstrating the hyperintense and enlarged bursa (A) located between the biceps tendon (yellow arrow) and the proximal radius (R). The lobulated, well-circumscribed lesion sits along the antecubital fossa at the insertion of the biceps tendon and measures 5.2 x 1.9 x 1.7 cm.

Conclusion

Bicipitoradial bursitis is exceedingly rare and presents a diagnostic challenge. Chronic inflammation is not a surprising pathologic finding in a bursitis specimen. However, inflammation due to repetitive microtrauma is not as common in bicipitoradial bursae. Owing to its anatomical location, this bursa does not experience the degree of tissue stress that other bursae do. In a patient who denies arm overuse or repetitive arm activity, other causes for the appearance of this rare condition, such as inflammation generated by a systemic disease, should be considered. Inflammation imposed on the musculoskeletal system by diseases such as SLE may lead to pathology that presents similarly to mechanical stress injuries or sport-related injuries. This case reinforces the need to consider bursitis as a diagnostic possibility in patients with chronic systemic inflammatory conditions.