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CASE IMAGE

More than skin-deep elbow pain in a psoriatic arthritis patient after phlebotomy

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Key Clinical Message

Bicipitoradial bursitis is an unusual cause of cubital fossa pain in PsA patients. Bedside Ultrasound is a valuable tool to correlate the source of pain in rheumatic and musculoskeletal diseases.

KEYWORDS

arthritis, bursitis, elbow, psoriasis, synovitis

We describe a 67-year-old female who presented for evaluation of right cubital fossa pain limiting movement and strength that started after repeated blood draws from the right side. She had a history of cutaneous psoriasis and PsA treated with apremilast and sulfasalazine. Other significant medical history included active multiple myeloma currently on dexamethasone-based chemotherapy. On physical examination, the patient had tenderness of the right antecubital fossa. She did not have a palpable swelling; motor and sensory functions in her hand were normal. Ultrasound (US) of the right elbow revealed hypoechoic and anechoic material within the biceps tendon

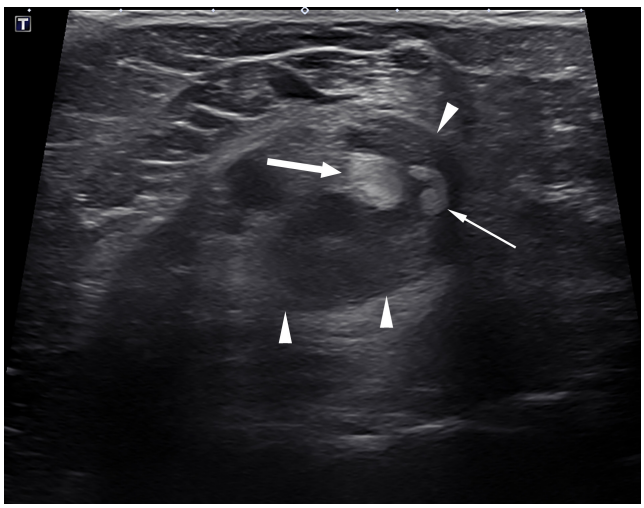

IMAGE 1 Ultrasound of right elbow (short axis): Bicipital bursa filled with fluid (anechoic) and hypoechoic synovial hypertrophy (thin white arrow). Thick white arrow, distal biceps tendon; arrowhead, tendon sheath; gray arrow, enthesophyte; Br. A, brachial artery; RT, radial tuberosity.

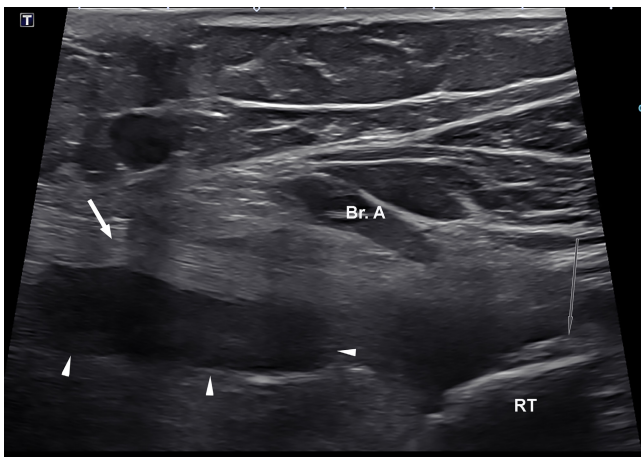

IMAGE 2 Ultrasound of right elbow (long axis): Bicipital bursa filled with fluid (anechoic) and hypoechoic synovial hypertrophy (thin white arrow). Thick white arrow, distal biceps tendon; arrowhead, tendon sheath; gray arrow, enthesophyte; Br. A, brachial artery; RT, radial tuberosity.

sheath distally (Images 1 and 2). There was also noted enthesophyte at the visible enthesis of the biceps tendon. The patient had a mild degree of bicipitoradial bursitis on the left side (Images 3 and 4). MRI scan correlated with the US and revealed a large bicipitoradial bursitis measuring approximately 5.6 × 2.6 × 2.2 cm containing numerous loose bodies which may have the appearance of rice bodies (Images 5–7). No tendon separation, tendon tear, joint synovitis, or impingement on the brachial artery and median nerve was identified in both scans.

Although the patient felt that the pain was from repeated phlebotomy, she actually had bicipitoradial bursitis which is an unusual cause of pain in an otherwise sedentary individual, that is, no repeated heavy use of arms. Furthermore, the biceps tendon dives deep to insert into the annular head of the radius and is unlikely to be accessed by simple phlebotomy. The presence of similar findings on the contralateral side and enthesophyte formation suggested that the bursitis was likely a part of her psoriatic disease which is a rare association. The case also highlights the importance of point-of-care US which can help correlate the source of pain. Although the MRI scan

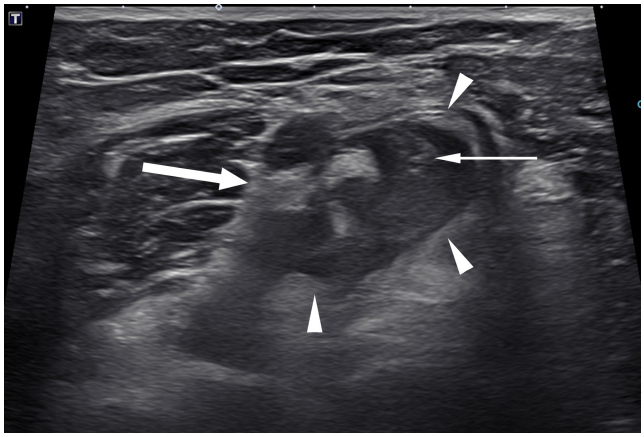

IMAGE 3 Ultrasound of left elbow (short axis): Bicipital bursa filled with fluid (anechoic) and hypoechoic synovial hypertrophy (thin white arrow). Thick white arrow, distal biceps tendon; arrowhead, tendon sheath; gray arrow, enthesophyte; Br. A, brachial artery; RT, radial tuberosity.

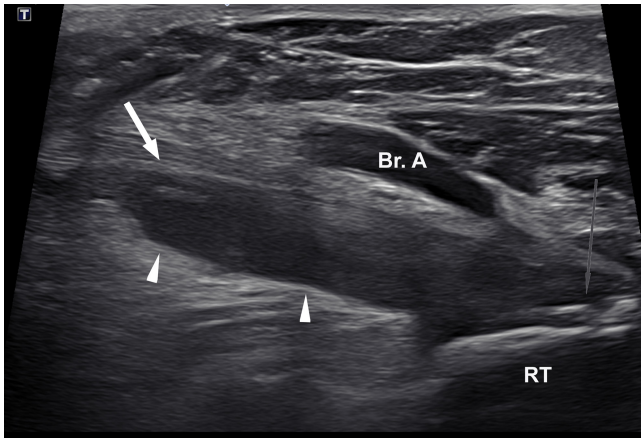

IMAGE 4 Ultrasound of left elbow (long axis): Bicipital bursa filled with fluid (anechoic) and hypoechoic synovial hypertrophy (thin white arrow). Thick white arrow, distal biceps tendon; arrowhead, tendon sheath; gray arrow, enthesophyte; Br. A, brachial artery; RT, radial tuberosity.

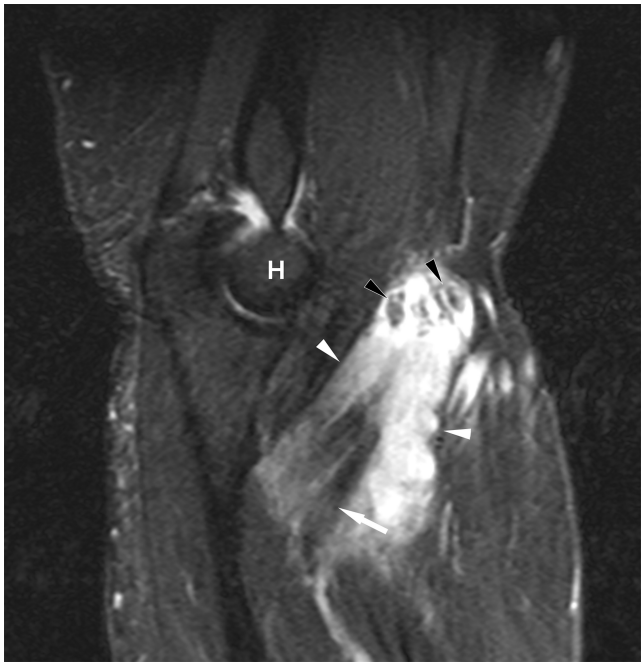

IMAGE 5 MRI scan of right elbow (SAG STIR): Large bicipital radial bursal fluid collection. H, humerus; white arrow, distal biceps tendon; white arrow head, tendon sheath; black arrow head, loose bodies/synovial hypertrophy.

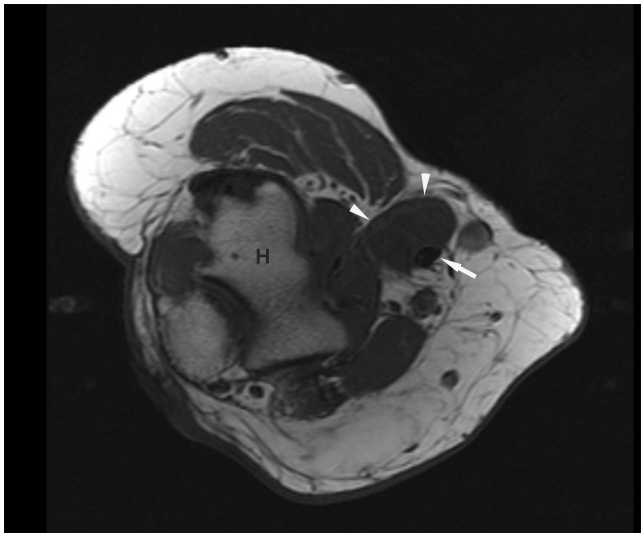

IMAGE 6 MRI scan of right elbow (AX T1 STIR): Large bicipital radial bursal fluid collection. H, humerus; white arrow, distal biceps tendon; white arrow head, tendon sheath; black arrow head, loose bodies/synovial hypertrophy.

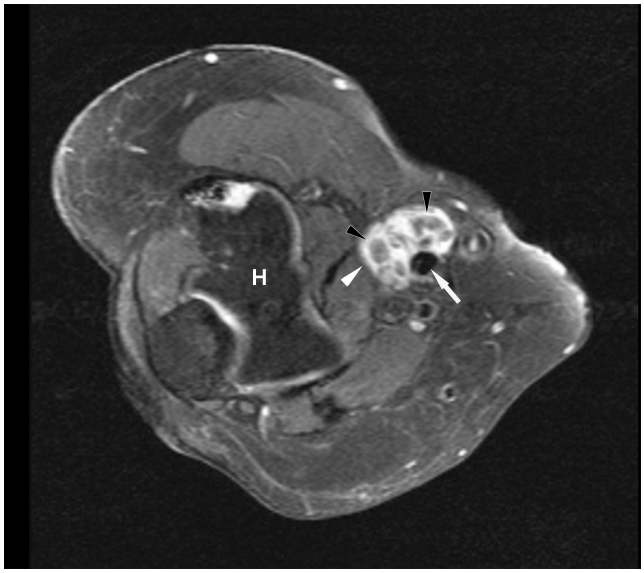

IMAGE 7 MRI scan of right elbow (PDFS TSE AX): Large bicipital radial bursal fluid collection. H, humerus; white arrow, distal biceps tendon; white arrow head, tendon sheath; black arrow head, loose bodies/synovial hypertrophy.

suggested rice bodies that are associated with PsA and rheumatoid arthritis, the diagnosis is often made intraoperatively and confirmed by histology.[1,2] The surgical risk was considered unfavorable in our patient given her comorbid conditions. The patient also preferred conservative methods which included treatment of underlying PsA and multiple myeloma. She is been followed up for over a year and has reported clinical improvement. Follow-up US imaging showed that the bursa size remained stable (Image 8). Despite being on high-dose corticosteroids for multiple myeloma, the bursitis has not worsened suggesting noninfectious etiology. In addition, the TB QuantiFERON test was negative. Other differentials include biceps tendon rupture from chronic inflammation, liposarcoma, and lipoma arborescens of bicipitoradial bursa. Imaging of the latter demonstrates a multilobulated fatty fronded mass outlined by fluid lying anterior to the proximal radius. Liposarcoma and lipoma arborescens can be distinguished based on histology.[3]

AUTHOR CONTRIBUTIONS

Ikwinder Preet Kaur: Writing – original draft; writing – review and editing. **Gurjit Kaeley:** Writing – original draft; writing – review and editing.

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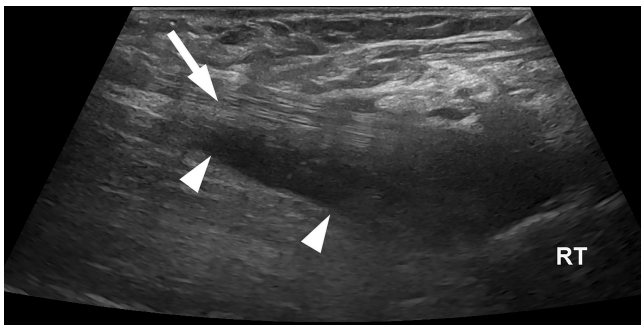

IMAGE 8 Follow-up image: Ultrasound of left elbow (long axis) showing stable appearance of bicipitoradial bursitis. Thick white arrow, distal biceps tendon; arrowhead, tendon sheath; RT, radial tuberosity.

CONFLICT OF INTEREST STATEMENT

There are no conflicts of interest related to this report.

DATA AVAILABILITY STATEMENT

Data sharing does not apply to this article as no datasets were generated or analyzed during the current study.

ETHICS STATEMENT

I confirm that the manuscript has been submitted solely to this journal and is not published, in press, or currently submitted elsewhere.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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