

Ultrasound Evaluation of a Complex Ganglion Cyst Imitating Lateral Epicondylitis

Carter M. Newey, DO¹, Jeffrey A. Strakowski, MD^{1,2}, Paul A. Cook, MD²

1. Department of PM&R, The Ohio State University Wexner Medical Center
2. OhioHealth Riverside Methodist Hospital



THE OHIO STATE
UNIVERSITY
WEXNER MEDICAL CENTER

Case Diagnosis

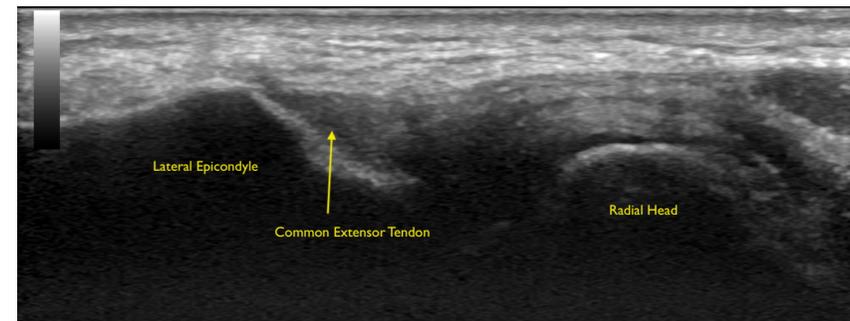
A complex multi-loculated ganglion cyst emanating from the radiocapitellar joint mimicking lateral epicondylitis

Case Description

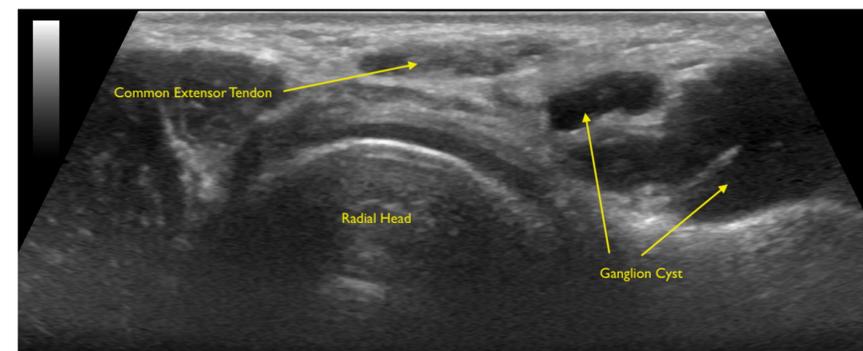
A 50-year-old active male presented with a five-month history of right lateral elbow pain of insidious non-traumatic onset, aggravated by throwing. The symptoms were relieved incompletely with non-steroidal anti-inflammatory medications but were otherwise refractory to relative rest, physical therapy, and lateral counterforce bracing. He had been previously evaluated with elbow x-rays that were unremarkable other than mild osteoarthritis. His examination revealed palpable tenderness over the common extensor tendon near, and somewhat distal to, the lateral epicondyle. Pain was elicited near the elbow with provocative maneuvers of resisted wrist and long digit extension. There was mild discomfort with full elbow extension. His neurologic examination was normal.

Soft-tissue imaging with high-frequency ultrasound was performed due to lack of improvement. The findings revealed a normal common extensor tendon and lateral epicondyle, but a lateral complex multi-loculated ganglion cyst emanating from the radiocapitellar joint. The cyst created mass effect on the common extensor tendon.

Ultrasound Images



Long-axis view of the common extensor tendon at the lateral epicondyle. Note the relatively preserved and unremarkable fibrillar appearance suggesting this is not the source of the elbow pain.



Short-axis view of the common extensor tendon at the level of the radial head. Note the proximity of the multi-loculated ganglion cyst with relative mass effect on the tendon at this level.

Discussion

Ganglion cysts of the radiocapitellar joint are relatively rare and, when present, are more commonly positioned in the anterior portion of the elbow. They are often not readily palpable on clinical examination. Radiocapitellar ganglion cysts are a known source of compression of the deep branch of the radial nerve, which also can present with symptoms similar to lateral epicondylitis. Reports of lateral protrusion from the radiocapitellar joint are exceedingly rare. The value of maintaining an adequate differential diagnosis, even with relatively common conditions such as lateral epicondylitis, is illustrated in this case. This can be readily demonstrated with high frequency ultrasound.

Conclusions

High frequency ultrasound is an effective modality for assessing soft-tissue pain around the elbow. Unusual presentations of radiocapitellar ganglion cysts can resemble the clinical picture of lateral epicondylitis and should be considered in refractory cases.

References

- 1) Lee SW, Kim SG, Oh-Park M. Ganglion cyst of radiocapitellar joint mimicking lateral epicondylitis: role of ultrasonography. *Am J Phys Med Rehabil.* 2013 May;92(5):459-60.
- 2) Peters T, Baker CL Jr. Lateral epicondylitis. *Clin Sports Med.* 2001 Jul;20(3):549-63.
- 3) Rodriguez Miralles J, Natera Cisneros L, Escolà A, Fallone JC, Cots M, Espiga X. Type A ganglion cysts of the radiocapitellar joint may involve compression of the superficial radial nerve. *Orthop Traumatol Surg Res.* 2016 Oct;102(6):791-4.

