

# Monoarthritis of the Elbow Caused by Intraarticular Osteoid Osteoma

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A 26-year-old man complained of continuous left elbow pain with a 2 year history. No swelling, tenderness, or local heat were noted around the elbow. Range of arc of the elbow was restricted from 10° to 100°. Plain radiographs of the left elbow appeared normal (Figure 1). Blood examination showed normal inflammatory markers. The remainder of the clinical examination was unremarkable.

T2 weighted magnetic resonance images (MRI) disclosed a small, rounded, high intensity area surrounded by a low intensity ring in the coronoid process (Figure 2). There was effusion in the elbow joint, with marked bone edema at the adjacent proximal ulna. Computed tomography (CT) scan also confirmed a 5 mm lucent area in the coronoid process (Figure 3). The tumor was surgically removed. The final pathology report confirmed the diagnosis. After followup of 2 years, he is free of elbow pain.

Intraarticular osteoid osteoma often leads to a mistaken diagnosis since it tends to cause monoarthritis<sup>1,2</sup>. Sendroi, *et al* reported that the interval from symptom onset to correct diagnosis was 26.6 months in patients with intraarticular osteoid osteoma (8.5 mo in patients with extraarticular osteoid osteoma)<sup>3</sup>. In our case, it took 24 months to reach an accurate diagnosis.



Figure 1. Plain radiograph (lateral view) of the left elbow. No abnormal findings were noted (normal appearance).

The tumor at the site also made diagnosis difficult for anatomical reasons (overlapping views of bone; humerus and ulna in anteroposterior view, radial head and ulna in lateral view).

The diagnosis of osteoid osteoma can be difficult when the tumor is located in an articular region, especially in the bone-overlapping area, as in our case. A high index of suspicion and more sensitive imaging methods (CT and MRI) may be required for the diagnosis of osteoid osteoma.

## REFERENCES

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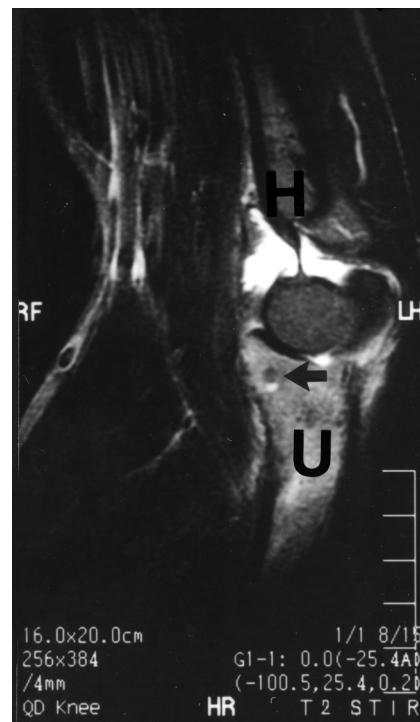


Figure 2. T2 weighted MRI (short inversion time recovery) of the left elbow (sagittal view). The tumor is located at the coronoid process (arrow). Marked edema was noted at the adjacent proximal ulna, with joint fluid collection, suggesting concomitant arthritis. U: ulna, H: humerus.

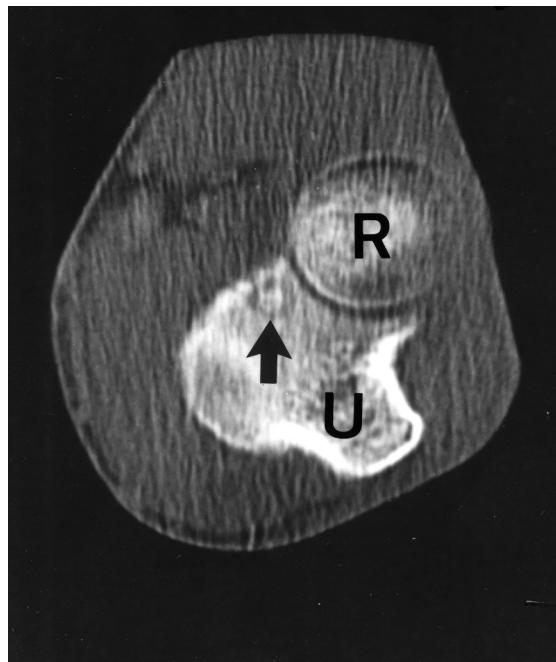


Figure 3. CT of the left elbow (axial view). A 5 mm lucent area suggesting the tumor nidus (arrow) is located at the coronoid process. U: ulna, R: radial head.