

Attrition Rupture of Ulnar Nerve in an Elbow of a Patient with Rheumatoid Arthritis

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Ulnar nerve neuropathy at the elbow is often seen in patients with rheumatoid arthritis (RA). Diagnosis of this neuropathy in patients with RA is often delayed, because palsy of this neuropathy is sometimes difficult to distinguish from functional impairment caused by RA in the hand¹.

A 68-year-old woman with a 47-year history of RA was referred to our clinic with ulnar nerve palsy around her elbow. She experienced numbness and sensory disturbance in the ulnar nerve region for more than 2 years, with severe pain on elbow flexion. A nerve conduction study indicated a delay in the ulnar nerve (10.8 m/s), and her elbow joint was severely damaged and unstable with cubitus valgus (Figure 1A). As she declined to undergo total elbow arthroplasty, anterior subcutaneous transposition was performed on her right ulnar nerve. The medial articular capsule was perforated, and the ulnar nerve was directly exposed up to the joint (Figure 1B). Her ulnar nerve was attrited and partially ruptured; two-thirds of the diameter of the ulnar nerve was defected for 2 cm in length (Figure 1C). This nerve injury seemed to be an attrition rupture as a result of friction between the nerve and the edge of the damaged joint. The numbness improved postoperatively.

Management of RA has significantly improved in this decade^{2,3}. Although attrition rupture of the ulnar nerve was a very rare condition even when the management was

poor^{4,5}, our case suggested that this condition could still be possible today, especially if the elbow is damaged with severe cubitus valgus. It is important to consider anterior transposition of the ulnar nerve with or without total elbow arthroplasty in patients with RA with this neuropathy.

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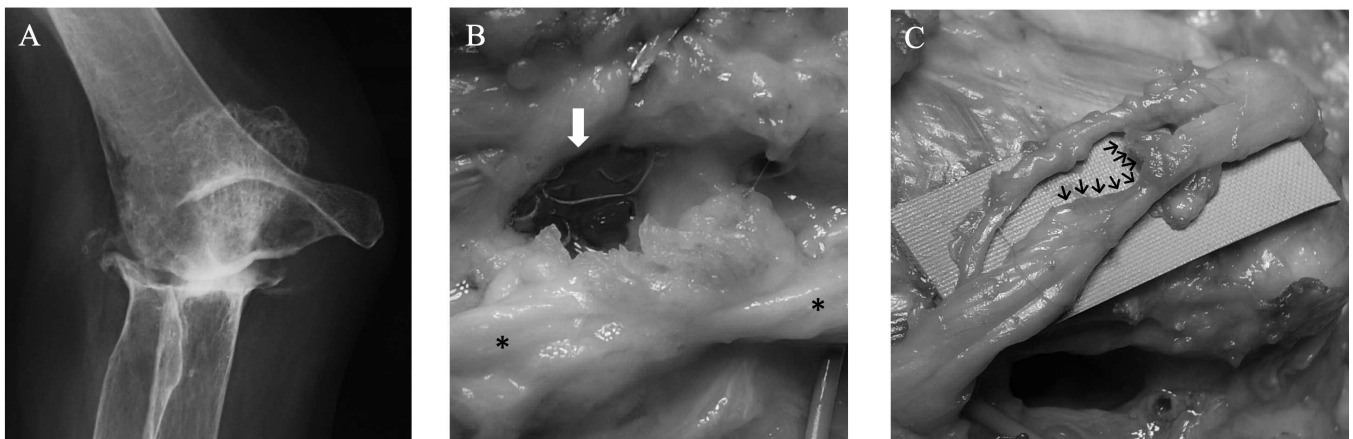


Figure 1. A. Radiograph of the patient's severely damaged, unstable elbow joint. B. Patient's medial articular capsule was perforated (arrow), and the ulnar nerve (star) was directly exposed up to the joint. C. Attrited and partially ruptured ulnar nerve; two-thirds of the diameter of the ulnar nerve was defected for 2 cm in length (arrows).