

Intratendinous Gouty Tophus Causing Middle Finger Flexion Deformity And Carpal Tunnel Syndrome: A Case Report

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INTRODUCTION:

Gouty tophus is a common association of advanced gout¹. Tendinopathy is one of the extra-articular gout manifestation. Although intratendinous flexor digitorum superficialis gouty tophus at the wrist level causing trigger finger and carpal tunnel syndrome has been mentioned in a few previous reports, to our knowledge, the number of the literature is still not many. Here we are going to share our experience treating patient with similar condition.

CASE REPORT:

A 39 years old man, with underlying gouty arthritis, presented with progressive inability to extend his right middle finger for the past 1 year along with a slow growing non-painful mass over volar aspect of his right wrist, with persistent numbness over median nerve distribution. There was a firm mass over the volar aspect, ulnar side of the wrist, just proximal to proximal wrist crease, measuring about 4 x 2cm. It was mobile at right angle and fixed to anatomical axis of the right forearm. The middle finger was in fixed flexion deformity. The thenar eminence was slightly wasted and sensation over median nerve distribution was reduced. X-ray of the right hand was done showing no abnormality (Figure 1). A clinical diagnosis of right wrist tophi was made. He later underwent a surgical exploration of the wrist with carpal tunnel release of right hand (Figure 2 and Figure 3). Intraoperatively, the middle finger was still unable to be extended passively. A 7 centimetre segment of FDS tendon just proximal to flexor retinaculum was severely infiltrated by whitish chalky material which was suggestive of monosodium urate crystals deposits. This FDS segment was excised. Postoperatively, the patient had a complete recovery of his right middle finger full range of motion with minimal residual right hand numbness.



Figure 1: The patient right hand x-ray showing no abnormality.

Figure 2: Surgical exploration at the level proximal to flexor retinaculum was performed to reveal an affected segment of the FDS tendon.

Figure 3: A seven centimetre segment of affected FDS tendon was excised.

DISCUSSIONS:

As the affected tendon size still small, it was still able to slide underneath the flexor retinaculum as the finger moved in flexion and extension. It slowly developed finger clicking as the tendon start to rub the inner surface of flexor retinaculum. Once the size reached certain point where the tendon is no longer able to freely move through the carpal tunnel, the body of the enlarged segment was entrapped proximal to flexor retinaculum. This had caused the patient to have fixed flexion deformity of the middle finger. Even though the affected FDS segment was situated outside the carpal tunnel, it was big enough to compress the median nerve against the surrounding structure and to disturb nerve function.

CONCLUSION:

Entrapped intratendinous gouty tophi in the wrist may significantly affect patient hand function and quality of life. Removing the tophaceous material, improving tendon gliding and releasing pressure on the median nerve should remain the main objective of the treatment.

REFERENCES:

1. Ashika Chhana et al (2015). *Curr Rheumatol Rep* 17: 19.
2. Kazufumi Sano et al (2009). *Hand (N Y)*. Mar; 4(1): 78-80.