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Images in Clinical Rheumatology

Carpal Tunnel Syndrome Due to a Tophus: Low-field Magnetic Resonance Image[☆]



Síndrome del túnel del carpo por tofo: imagen de resonancia magnética de bajo campo

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Introduction

Carpal tunnel syndrome (CTS) is a common condition in rheumatology due to inflammatory diseases, microtraumas, and metabolic, or more frequently idiopathic, processes.¹ Nuclear magnetic resonance is a supplementary technique in inflammatory diseases of the locomotor system, which detects subclinical inflammatory changes.² Gouty arthritis may lead to CTS due to: synovial hypertrophy, tenosynovitis, tophaceous nodules and crystal deposits in nerves, muscles or tendons. Their appearance in the flexor sheath for the tendons is extremely rare, and may compress the median nerve leading to CTS.³ Suspected CTS by tophaceous

compression may be diagnosed in those patients with poorly controlled gout and atypical symptoms of CTS.^{4–6}

The rate of CTS by tophus is .6%.⁷ We present a case where NMR identified a tophus in the carpal tunnel as the cause of CTS.

A 62 year-old male, by profession a butcher. He had a history of gout which was poorly controlled by sporadic treatment. He presented at the rheumatology department with “tingling” in the fingers of both hands which was more acute in the left hand (right-handed patient) and a loss of fine motor skills. An electroneurogram was performed with showed severe compression of the sensitive fibers of the bilateral median nerve, more acute in the left. Due to suspicion of a tophus being the cause of the CTS, NMR was

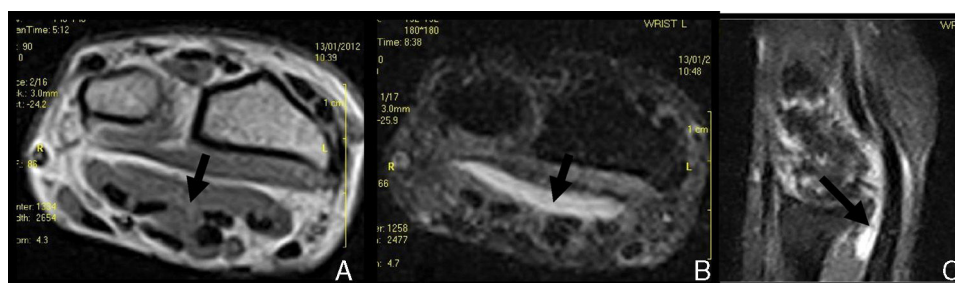


Fig. 1. (A) Axial T1; (B) Axial STIR; (C) Sagittal STIR. Arrows: T1 hypointense material with increased signal in STIR, within the sheath of the carpal flexor tendon level.

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performed. Findings (Fig. 1) were as follows: tophus inside the sheath of the flexor tendons at carpal level. The patient underwent surgery and the surgeon confirmed the existence of the tophus. The patient is currently receiving hypouricaemic therapy and there are no clinical signs of left CTS.

Conclusion

CTS caused by gouty tophus is extremely rare. Its determination by NMR is diagnostic. In selected cases where there is high clinical suspicion, atypical CTS symptomatology, in patients with poorly controlled gout, it may be a supplementary test requested as diagnostic support and for the planning of treatment.

Ethical Disclosures

Protection of human and animal subjects. The authors declare that for this research no experimentation has been carried out on human beings or animals.

Confidentiality of data. The authors declare that they have adhered to their center of work on the publication of patient data.

Right to privacy and informed consent. The authors declare that they have obtained the informed consent of the patients and/or

subjects referred to in this article. This document is held by the corresponding author.

Conflict of Interests

The authors have no conflicts of interests to declare.

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