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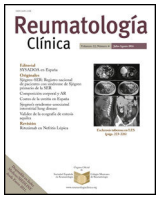

Case Report

Beekeeper' arthropathy☆

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ABSTRACT

An acute inflammatory arthritis of unknown cause has been described in beekeepers in relation to their work with the hives. We present the case of a beekeeper who, after a bee sting, developed arthritis of the interphalangeal joint of the first finger of his left hand. Although the subacute clinical course and the magnetic resonance imaging findings required the differential diagnosis with an infectious process, the rest of the laboratory tests. Other imaging studies and the course, together with a history of a similar episode a few years earlier on a finger of the other hand after a bee sting, enabled us to diagnosis this condition.

Artropatía del apicultor

Palabras clave:
Artritis aguda
Apicultor
Picadura de abeja

RESUMEN

En los apicultores se ha descrito una artropatía inflamatoria de etiología desconocida pero relacionada con su actividad profesional. Se expone el caso de un apicultor que tras la picadura de abeja presentó una artritis de la articulación interfalángica del primer dedo de la mano izquierda. Aunque el curso clínico subagudo y los hallazgos de la RMN obligaban a plantear el diagnóstico diferencial con un proceso infeccioso, el resto de pruebas analíticas, de imagen y la evolución, junto al antecedente de episodio similar unos años antes en un dedo de otra mano tras la picadura de abeja, permitió el diagnóstico de esta entidad.

Introduction

A joint syndrome has been described in beekeepers which consists of a recurrent, non infectious arthritis, of the small joints of the hand after exposure to bee stings. We present the case of a beekeeper who was referred to us for examination and treatment for acute arthritis in the interphalangeal joint of the thumb of his left hand.

Clinical case

A 58-year-old beekeeper, with no history of interest presented at the surgery after a bee sting due to swelling and erythema in the interphalangeal joint (IP) of the thumb of his left hand, of 3-week onset (Fig. 1A). He did not present with a fever at any time. During anamnesis he also referred to the fact that after an insect (bee) sting 4 years ago he had also suffered from a similar previous inflammation of one finger of his right hand, for a month. In the plain X-ray the increases of soft tissue was apparent, as was juxta articular osteopenia and IP narrowing of the joint space of the thumb (Fig. 1B). NMR showed an increase in the soft tissue due to oedema of the subcutaneous fatty tissue, bone oedema in the area closest to the IP joint (corresponding to the juxta articular osteopenia in the plain X-ray) and enhanced post contrasts of the oedematous regions (Fig. 1C). Due to the possibility of infectious

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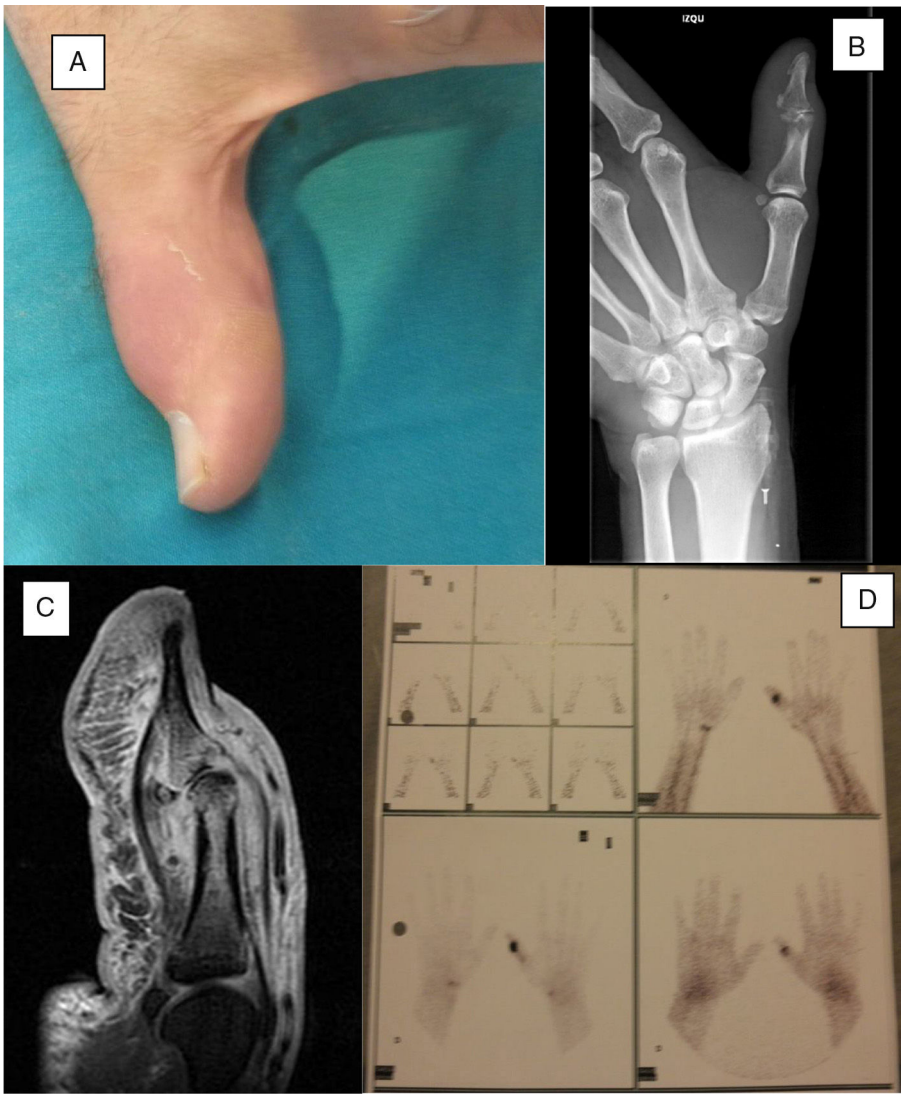

Fig. 1. (A) Swelling and erythema of the interphalangeal joint of the thumb. (B) Plain X-ray. (C) Sagittal sequence of the first finger enhanced in T2 in the RMN. (D) Gallium 67 scan.

arthritis, we decided to admit the patient for study and treatment. No synovial fluid was obtained in the arthrocentesis. A general analysis was made where the normality of the acute phase reactants and the absence of leukocytosis and neutrophilia were notable. The immunological study was also negative (RF, Anti-CCP, ANA), as were blood cultures. Due to the possibility of septic arthritis, treatment was initiated with empirical endovenous antibiotic therapy (cloxacilin and ceftriaxone), with no type of obvious improvement. A gallium 67 scan was requested which ruled out an infectious process (Fig. 1D), and it was decided to suspend the antibiotic treatment and continue symptomatic treatment with NSAIDS, whereby the pain disappeared but slight swelling persisted.

Discussion

In beekeepers the appearance of episodes of arthritis in their work in hives has been described. The first case of the so-called "beekeeper's arthropathy" was published in Spain in 1989,[1] after which broader series have been published like, for example, a descriptive clinical study in beekeepers in "The Siberian Extremadura".[2] It has been estimated that this condition may affect up to 32%–43% of them.[3] The episodes consist of acute or subacute asymmetrical arthropathy, which affect one or several joints of the hands and occasionally the wrists.[3] On occasions it evolves into chronic arthropathy which may lead to ankylosis and disability.[3] Analysis usually results as normal, although there may be a slight increase in ESR and serum alkaline phosphatase and discreet eosinophilia.[2–4] the most common radiologic lesions are: narrowing of the joint space, sclerosis and the presence of subchondral cysts.[2–4] the pathogeny is unknown, but there should be a background of a bee sting in the joint or near it, which is what enables diagnosis to be made after ruling out other causes. Several aetiological factors have been considered: bee poison, foreign body synovitis, infection, repetition and insecticide microtraumas.[3–5] There is no specific treatment. NSAIDS, cycles of systemic and intrarticular corticosteroids and antibiotics have been used, but the results are unclear.[3–5]

Conclusion

When faced with an acute or subacute episode of arthritis which affects the hands of a patient who works as a beekeeper we should bear in mind that this entity during differential diagnosis and question them about the background of the bee sting and whether they have suffered from any previous similar episodes.

Conflict of interests

The authors have no conflict of interests to declare.

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