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Short Communication

Giant Primitive Synovial Chondromatosis of the Metacarpophalangeal Joint

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Abstract

We report a 47 year old man with Giant Synovial Chondromatosis of the metacarpophalangeal joint. A 47-year-old man presented with an 8-month persistence of painless swelling of the second Metacarpophalangeal Joint (MCP) of his right hand. Plain X-rays and CT scan showed a circumferential erosive periarticular lesion of the second MCP.

Keywords: Metacarpophalangeal joint; Giant synovial chondromatosis; Chondrosarcoma

Introduction

Synovial chondromatosis is a mono-arthropathy characterized by the development of cartilaginous deposits, probably metaplastic, in the synovium. It is a condition of young adults (20 to 40 years old), more frequent in men. It occurs preferentially in large joints. Locations at the extremities are not frequent and malignant degeneration is rare. To our knowledge, only three cases have been reported in the interphalangeal joint. We report a 47 year old man with Giant Synovial Chondromatosis of the metacarpophalangeal joint.

Observation

A 47-year-old man presented with an 8-month persistence of painless swelling of the second Metacarpophalangeal Joint (MCP) of his right hand. Plain X-rays and CT scan showed a circumferential erosive periarticular lesion of the second MCP. Surgical procedure allowed excision of this process, considered osteochondromatous, through a dorsal approach. The patient was considered cured one year after surgery. Gross anatomopathological examination showed numerous cartilaginous nodules. Microscopic examination showed multiple hyaline cartilage nodules within the synovium. Rare atypia and mild areas of hypercellularity with nuclear hyperchromasia were observed as well as some rare binucleated cells, without myxoid transformation.

Discussion

The overall incidence of this disease is probably underestimated in the world's population; it most often affects the large joints and few cases of hand and finger involvement have been published [1]. Milgram [2] distinguishes three phases in the ostechondromatosis cycle: Phase 1: intrasynovial disease without free foreign bodies; Phase 2: active synovial proliferation with free foreign bodies; Phase 3: multiple free osteochondromatous bodies without intrasynovial disease.

There are two forms of ostechondromatosis, the primary form, which is rare, and the more frequent secondary form, which is usually caused by osteoarthritis. Other conditions such as epiphyseal dysplasia, Legg-Perthes Calve disease, aseptic osteonecrosis, rheumatoid arthritis, diabetes, and chondrocalcinosis have been cited as possible causes [3]. In the case of our patient, the primary form was retained as no other etiology was diagnosed.

The treatment of ostechondromatosis differs according to its primary or secondary form. In the primary form, a synovectomy with removal of foreign bodies is recommended, but recurrences are frequent. In the secondary forms, the evolution is usually slow and the treatment is etiological by treatment of pre-existing arthropathy and removal of foreign bodies [4] (Figures 1 and 2).

The review of the literature shows that these lesions most often evolve benignly and the prognosis can be considered benign in ostechondromatosis of the hand since no case of malignant transformation has ever been described. Even though hypercellularity is observed on microscopic examination, their rapid multiplication is due to the activity of the growing cartilage cells [5]. In giant forms of synovial chondromatosis, a small degree of atypia is sometimes observed and does not systematically imply malignancy. Synovial invasion is important to look for because it is practically pathognomonic of this pathology and excludes differential diagnoses of chondrome or chondrosarcoma. [6] (Figures 3 and 4).

Conclusion

Primary synovial chondromatosis of the hand is rare, usually presenting as a lesion with non-specific clinical features. Surgical removal and histopathological examination are therefore required for diagnosis. Management consists of complete excision and removal of loose bodies. Complete synovectomy is recommended; however, recurrence is still common. Further evidence is needed to improve diagnosis and management.

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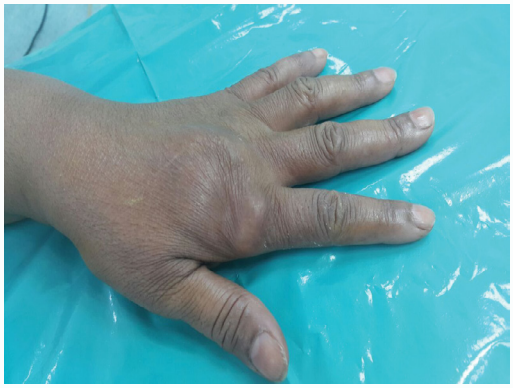

Figure 1: Metacarpo phalangeal joint tumefaction.

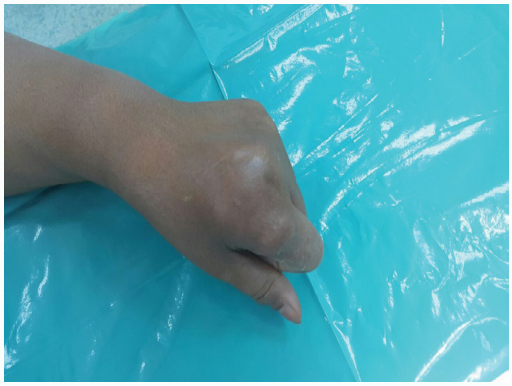

Figure 2: Metacarpo phalangeal joint tumefaction.

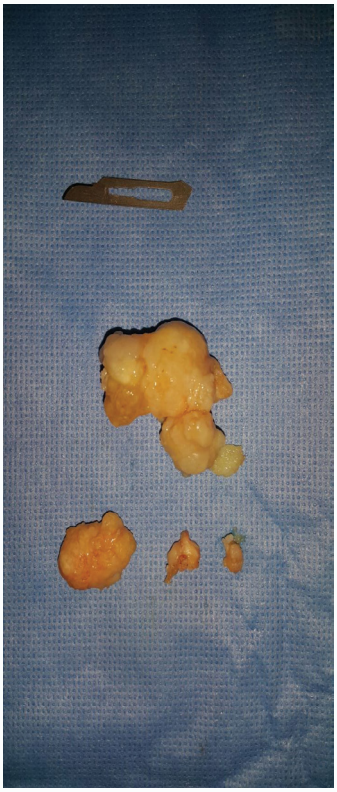

Figure 3: Multiple formations of small rounded masses of cartilge tissue achieving the cauliflower appearance.

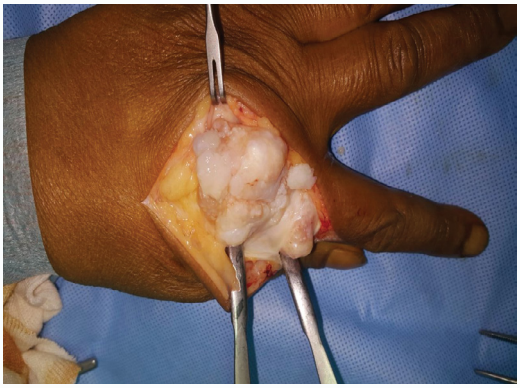

Figure 4: Multiple formations of small rounded masses of cartilge tissue achieving the cauliflower appearance.

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