

Synovial Chondromatosis of the Ankle: About A Case

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Abstract

Case Report

We report a case of synovial osteochondromatosis of the ankle in a 37-year-old patient with clinical and radiological description as well as its surgical management by the removal of foreign intra-auricular bodies associated with synovectomy.

Keywords: synovial chondromatosis-ankle.

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INTRODUCTION

Synovial chondromatosis is a chronic, benign and rare progressive metaplasia characterized by cartilage formation in joint synovial membranes, tendon envelopes or serous bursae. The knee is the most affected joint, ankle involvement is rare. Non-specific clinical symptomatology hence the interest of imaging to make the diagnosis positive. We report a case of osteochondromatosis of the ankle diagnosed with standard X-rays and magnetic resonance imaging (MRI).

OBSERVATIONS

A 37-year-old man with no significant medical history who consults for mechanical ankle pain, clinical examination and standard biofilm are normal, standard radiographs of face and profile show presence of foreign bodies sitting in front of the tibioastragaliennne articulation evoking osteochondromas (figure1).

The treatment consisted of the resection of the anterior pouch of the ankle and the removal of foreign bodies by an anterior approach of the ankle (figure2et3). The anatomopathological study found a synovial sometimes fibrous, sometimes the seat of osteocartilaginous metaplasia without histological signs of malignancy. Postoperative follow-ups were simple. Control after two years shows no sign of recurrence.



Fig-1: Radiographie de la cheville de face et profil: corps étrangers, ovulaires, Partiellement calcifiés siégeant en avant de l'articulation tibio-astragaliennne



Fig-2 : Un abord antérieur de la cheville, montre une synoviale pathologique et de multiples corps étrangers

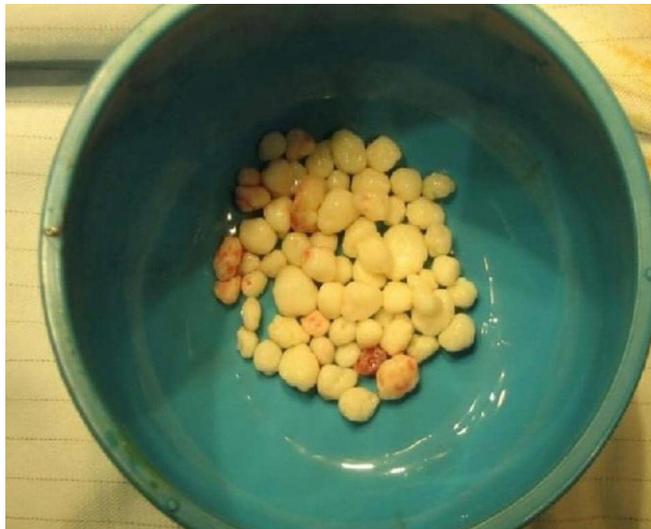


Fig-3: Ablation de corps étrangers (osteochondromes)

DISCUSSION

Synovial chondromatosis is a benign synovial metaplasia whose connective cells acquire a capacity for chondrogenesis. The cartilaginous foci can form pedicles that can be released (chondromatosis). These cartilaginous bodies can then calcify and ossify and become radiopaque (osteochondromatosis) [1]. Recent studies have shown that in this pathology, there is an increase in type II collagen [2] and a conversion of fibroblasts into chondrocytes, leading to metaplasia of synovial tissue with proliferation of cartilaginous nodules [3]. Milgram [4] described three successive phases of the disease:

- An active phase: sub-synovial proliferation of cartilage without intra-articular chondroma release;
- A transitional phase: active or inactive sub-synovial cartilaginous nodules with free intra-articular chondromes, sometimes calcified;
- An inactive, late phase (40% of cases): quiescent or discreetly inflammatory synovium with multiple free intra-articular osteochondromes.

Two forms must be distinguished: the primitive form, which is rare and occurs without obvious cause in a normal joint in the young adult between 20 and 40 years, most often male (the sex ratio of 2 to 1); as is the case with our observations and the secondary form that follows various conditions.

Mainly osteoarthritis

The clinical symptomatology varies according to the size and the number of foreign bodies, the articulation concerned and the primitive or secondary character.

Chondromatosis

The articular pains with stiffness, evolving most often since several years, are of the mechanical type. They are evocative when they occur in crises interspersed with free intervals, where the articulation is painless. This condition affects by order.

Frequency knee (40%), hip (15%), shoulder (5%). Ankle involvement is rare. In a series of 32 cases of synovial chondromatosis, Murphy *et al.* Reported a case of localization at the ankle [5, 6]. These foreign bodies can be intra- and extra-articular as reported by Tibrewal and Iossifidis [7]. Radiologically, the diagnosis is comfortable when osteochondromas can be observed that can be single or multiple, projecting into contact with a joint. They are typically rounded or oval, with a calcified peripheral shell and a clear center. They are more rarely ossified. Pure chondromes are not visible in standard radiography. Arthrography, which must be systematically coupled to a CT scan, makes it possible to detect spontaneously radiolucent foreign bodies. This CT arthrography allows the positive diagnosis and precise exact situation of these foreign bodies, which is essential before the surgical excision or arthroscopic. In MRI, intra-articular chondromes show a signal comparable to joint fluid. They appear as a hypo signal in T1-weighted sequence, in a T2-weighted signal, and do not enhance after gadolinium injection [8, 9].

Therapeutically, there is no known medical treatment for synovial osteochondromatosis. Its management is exclusively surgical by the surgical removal of foreign bodies and synovectomy. The recurrence rate varies between 3% and 23% of cases [10], it is usually related to incomplete resection and its frequency depends, in part, on the articulation and histological stage of Milgram.

CONCLUSION

Synovial chondromatosis is a rare benign metaplasia of the synovium that causes the formation of foreign bodies intra or extra-articular, ankle involvement is exceptional and the clinical symptomatology is nonspecific hence the interest of imaging for the positive diagnosis the lesional balance and the surgical approach.

Consent

The patient has given their informed consent for the case to be published.

Authors' contributions

All authors have read and agreed to the final version of this manuscript and have equally contributed to its content and to the management of the manuscript

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