Chondromatoses the of the large joints (A Report of 8 cases)

Corresponding Author:
Dr. Najib Alidrissi,
MD, University Mohammed V - Souissi, 10000 - Morocco - Morocco

Submitting Author:
Dr. Najib Alidrissi,
Orthopedic and trauma surgeon, University Mohammed V - Souissi, 10000 - Morocco

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Chondromatoses the of the large joints (A Report of 8 cases)

Author(s): Alidrissi N, Bassir R, Kharmaz M, Lamrani M, Elbardouni A, Mahfoud M, Berrada M, Elyaacoubi M

Abstract

We report eight cases of chondromatosis of the knee treated surgically. The aim of our work is to attract the attention of clinicians on the importance of early detection of disease to prevent progression of osteoarthritis. The therapeutic decision was facilitated by the use of the classification of Milgram. We observed superiority of arthroscopy compared to open surgery.

Introduction

Synovial chondromatosis is an arthropathy that is characterized by compromised mono-articular most often, and by benign in their evolution. (1, 2) However it can occasionally be aggressive, but this is exceptional.

Case Report(s)

The aim of our work is to attract the attention of clinicians on the importance of early detection of disease to prevent progression of osteoarthritis. Our series consists of 8 patients (6 men and 2 women). Age between 20 and 60. The affected joint is the knee in 8 cas. The most common symptoms include:

1. Notion of a history of trauma in 3 cases.
2. The mechanical pain in 8 cases.
3. Joint blocks in 6 cases.
4. Joint effusion in 6 cases.
5. Joint stiffness in 2 cases.

Medical imaging:

1. Standard radiographs of anteroposterior and lateral in charge for all patients.
2. CT was performed in 4 patients.
3. Arthrography is performed in a single patient.
4. MRI is performed in only one patient.

Surgical treatment is based on the removal of foreign bodies by arthroscopy with articular lavage in 6 patients and by open surgery in 2 patients with excision of the pathologic synovial

Results

Evolution is good for 6 cases by regression of pain with loss of blocking. In 2 cases the evolution is characterized by osteoarthritis of the knee. Classification by MILGRAM can distinguished three stages:

Stage 1: cartilaginous metaplasia intra synovial.
Stage 2: inflammation and proliferation intra-synovial of cartilage and release of foreign bodies cartilaginous.
Stage 3: release of foreign bodies cartilaginous.

In our experience, it seems that the classification of Milgram can ask the therapeutic indications:

Stage 1: Surgical synovectomy or arthroscopic synovectomy with washing and removal of foreign bodies.

Discussion

Metaplasia of the synovial membrane is rare and is responsible for the formation of cartilaginous bodies (chondroma) which may ossified (osteochondromas). (3, 4) It is primitive or reaction to the incorporation of synovial cartilage fragments released from the joint. (5) The nodules, first enshrined in the synovial, and will pédiculisent then are released into the joint cavity. They are often multiple, of substantially identical shape and small (rice grain). (6) When all chondromas had been released, the synovial becomes normal. (7) The chondromas can remain free and increase in size by feeding by soaking in the synovial fluid, merge together to form a large pile, or reattach to the synovium where they are absorbed or continuing to grow. (8) This synovial metaplasia affects the knee in more than half the cases, followed in order of decreasing frequency, elbow, hip, shoulder and ankle. (9) The attainment of a tendon sheath or bursary is much rarer. (10) Synovial chondromatosis essentially affects adults, middle-aged two to four times more often man. It can be revealed by mechanical pain, blockages, a joint effusion, palpable foreign bodies in case of localized superficial, rarely by the compression of an adjacent nerve. (11) Symptoms are often
insidious and the disease progresses slowly. Malignant degeneration (synovial chondrosarcoma) is exceptional. (2, 12, 13) Standard radiography showed multiple rounded or oval formations, size and shape substantially identical, encircled by a cortex. However, their presence may be suspected in cases of bone erosions secondary to their pressure. A diastasis of the joint space secondary to their knee interposition is rare. (14, 15, 16) Arthrography: Do not inject a contrast too dense, which interferes with a detailed study of intraarticular content. on the initial radiographs filling, reveal synovial irregular, distorted by multiple lacunar small groups rounded or oblong. (14, 15) When chondromas are still included in the synovial membrane, the appearance arthrographic and arthro-CT is similar to pigmented villonodular synovitis. When chondromas are free, they are molded by the contrast product allows the differentiation between these two entities. (14, 15, 16) The CT arthrography is used to specify their exact location and the existence of chondrolysis associated. (14, 15, 16) MRI: MRI appearance of this disease depends on the relative importance of synovial proliferation and the release of chondromas. (14, 15, 16, 17) Ultrasoundography can show the synovial thickening. Chondromas are hyperechogenic and are accompanied by a posterior acoustic interruption, when ossified. (14, 15, 16, 17) Differential Diagnosis: Secondary osteochondromatosis: any condition that may damage the articular surface osteochondral Grains of rice: present in the chronic effusions or bursitis, including arthritis. (1, 3, 7, 8) The treatment is not standardized and depends on the evolutionary stage, the functional impact and location. (5, 6) Therapeutic abstention is the rule in the absence of symptoms. Surgical treatment (arthroscopic or open surgery) involves the removal of foreign bodies, either alone or combined with synovectomy when synovitis is active. (6, 8, 9, 10) The advantage of arthroscopy resides in:

1. The simplicity of the follow.
2. Stiffness less than with arthrotomy. Two studies show good results of arthroscopy with a low number of recurrences, whether isolated resection of foreign bodies (18) or resection may be associated with synovectomy. (19) A third study comparing the results of resection only foreign bodies to the resection associated with synovectomy, shows than recurrences are observed only in the group without synovectomy. (20) The place of complementary synoviorthesis after synovectomy is not codified.

Conclusion

Synovial chondromatosis is a rare disease, usually benign, the diagnosis is relatively easy. Appropriate radiological assessment allows early diagnosis and arthroscopic techniques is the treatment of choice for this disease.

Abbreviations

MRI: Magnetic resonance imaging
CT: Computed tomography

References

12. Wittkop B, Davies AM, Mangham DC. Primary synovial chondromatosis and synovial
Illustrations

Illustration 1

Fig1: Standard radiographs showing synovial chondromatoses with knee osteoarthritis

Illustration 2

Fig2: Standard radiographs showing chondromatoses synovial
Illustration 3

Fig 3: CT scan showing chondromatoses of the knee

Illustration 4

Fig 4: Ablation of the chondroma by open surgery
Illustration 5

Fig5: Synovectomy by open surgery

Illustration 6

Fig6: Arthroscopic view of an intra-articular chondromas
Illustration 7

Fig7: Removal of multiple chondromas by arthroscopy

Illustration 8

Fig8: Removal of multiple chondromas by arthroscopy
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