

## Osteochondromatosis of the hip Joint. Report of a Cast.

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This is an unusual arthropathy in which multiple metaplastic growth of cartilage occurs in the synovial membrane of joints or rarely in a bursa, tendon sheath, joint capsule or paraarticular connective tissue.

These may calcify or ossify forming osteocartilaginous masses as loose bodies. These bodies may be attached to the synovial membrane by a pedicle or become free in the joint space. The object of this paper is to present a rare case of this disease which diagnosis can be made on the basis of X-ray findings.

### CASE REPORT

A woman thirty years old, sought medical attention on Jan 73 because of a dull intermittent pain in the right thigh for 10 years duration. The pain had been aggravated during the winters and being disappeared after having bed rest for 3 to 4 days.

On examination no swelling or atrophy of the thigh or around the right hip joint was visible. The range of extension was 15 degrees as compared with full 30 degrees extension on the left side. The hip had also a flexion contracture of 10 degrees. There was 10 degrees limitation of internal rotation but no limitation of external rotation. No limitation of abduction or adduction was noted.

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Roentgenogram of the pelvis revealed typical picture of synovial osteochondromatosis of the right hip joint. This showed many calcified loose bodies of ovoid or circular shape occupying the joint space. (Fig 1).

The X-rays of other joints such as knees, shoulders, elbows and wrists were normal.

The diagnosis of osteochondromatosis of right hip joint was made on the basis of X-ray findings. Biopsy of the joint was suggested for confirmation but the patient refused it.

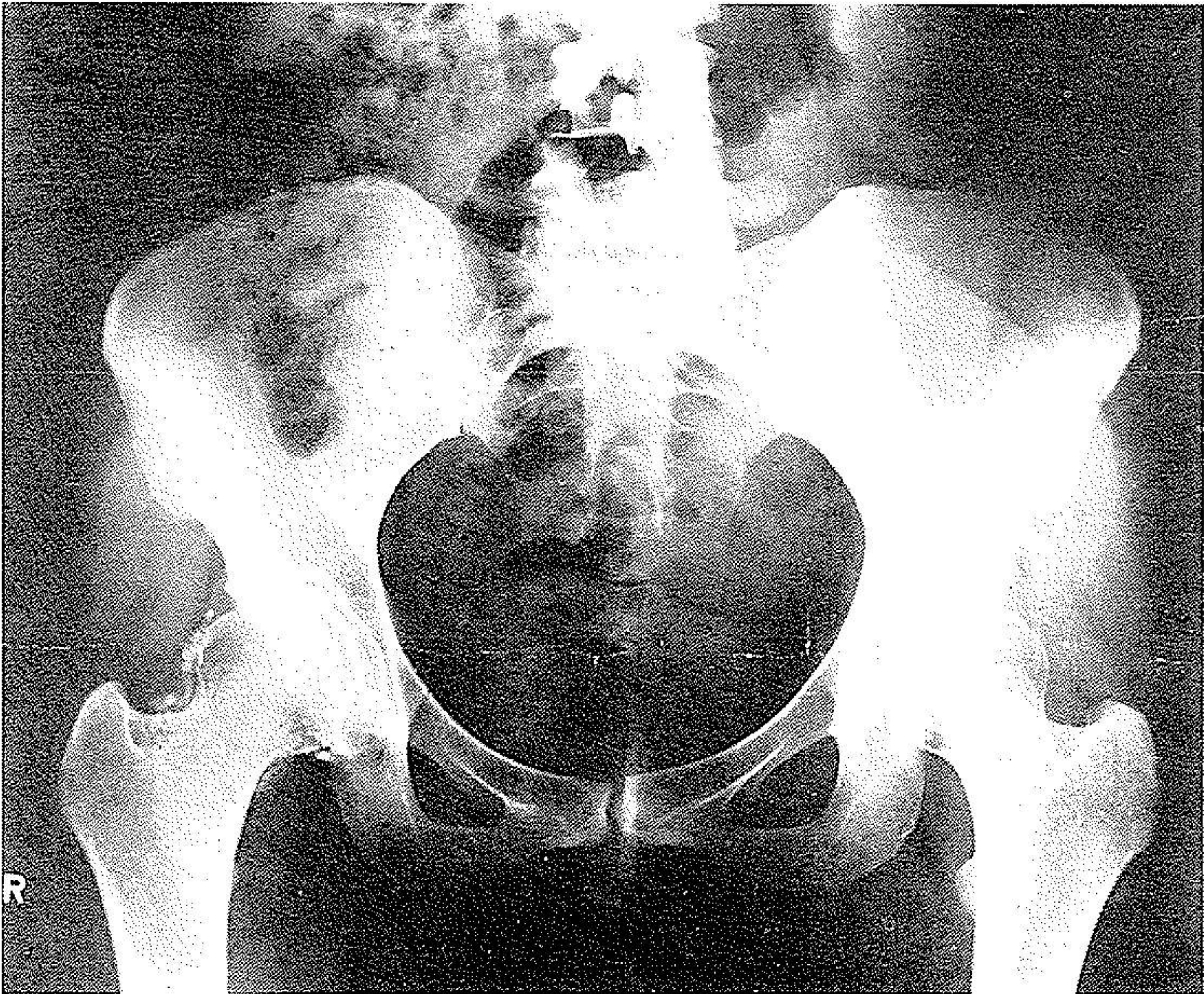


Fig. 1 Ragiograph of the pelvis. showing multiple ovoid and circular radio-paque loose bodies in the right hip joint.

### Discussion.

The etiology of this condition and the stimulus which results in metaplasia of synovial cells into chondrocytes are unknown 2,5,7.

There is little evidence for an infectious origin and culture of synovial fluid of 14 cases of synovial chondromatosis explored by Jeffery has yielded no growth of any organism 5,7.

It is doubtful whether trauma could be a definite cause. The occupation of the patient or a familial history of chondromatosis do not seem also to be significant 7,8,9.

Most of the workers believe that the condition is a benign slow progressive neoplasm 5,7 and rarely, if ever, it undergoes malignant degeneration 3.

Osteochondromatosis is usually seen in young or middle-aged with higher incidence in men 7,8,10. However a case of osteochondromatosis of the knee in an 18-month old boy has been reported 1.

Most commonly the knee is involved. The hip joint is less frequently affected 5,8,10. Mussay and Henderson's report of five cases involving the hip joint out of 104 cases of osteochondromatosis contains the largest number of cases reported 7. The elbow and the shoulder are less involved 4.

In Lequesne's view 6, the order of frequency of involvement of the joints as a percentage of the cases are as follows: knee 40, elbow 35, hip 10-20, shoulder 5-7 and ankle 3.

Osteochondromatosis of the temporomandibular joint has also been reported 2.

The clinical diagnosis of osteochondromatosis of the hip may be difficult and delayed, because its function does not appear to be impaired until sizable loose bodies are present and the disease is well advanced 7. If proper radiographic techniques are utilized and due consideration is given to the clinical picture, a diagnosis will frequently be established with confidence 5.

Plain X-ray of the joint in frontal, lateral or oblique projections made with both soft tissue and bone exposure are often sufficient 10.

The most characteristic radiographic findings are multiple, ovoid or circular radiopaque loose bodies of varying size. These may coalesce to form amorphous irregularly bordered shadow which may occupy the entire joint space or only a portion of it 4,10.

However, the roentgenogram may be of little aid, in those cases in which the cartilage has not yet become calcified, especially in the hip joint 4.

Tomography and arthrography further delineate the nature of calcification and question of adjacent osseous changes, and also visualization of uncalcified cartilage involving the synovium.

Other conditions such as degenerative joint disease, osteochondritis dissecans, neuropathic arthropathy and rheumatoid arthritis are readily differentiated by their lack of true cartilaginous metaplasia in the synovial membrane. Pigmented villonodular synovitis is another disorder which is with nodular articular soft tissue mass, but calcification is almost always absent. A dark brown or serosanguinous fluid is often obtained if joint is aspirated 8,10.

The diagnosis of osteochondromatosis can be established with certainty by open biopsy of synovial membrane 6,7.

### **Summary**

Osteochondromatosis of the hip is a rare disease in which segments of synovial membrane become cartilaginous. These may calcify or ossify forming osteocartilaginous masses as loose bodies.

It occurs most often in young or middle-aged adults and the etiology of the condition is unknown.

The diagnosis can be apparent with due consideration on clinical history and proper X-ray examination of the joint.

One case of such disease with typical X-ray findings is reported.

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### Résumé

L'Osteochondromatose de la hanche est une maladie rare, dans laquelle certain segment de la membrane synoviale devient cartilagineuse. Ceu-ci peuvent se calcifié ou s'ossifié, constituant des corps étrangers.

Il apparait, ce plus souvent, chez des jeunes ou des gens d'age moyenne. L'etiologie est inconnue.

Le diagnostic peut etre etabli par l'histoire clinique et des examens radiologique appropries des articulations.

Une cas, dont la radiologie est typique, est presenté ici.

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