Enthesopathy of the hip joint

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SUMMARY

Morphologically, enthesopathy appears as dystrophic calcification or ossification of tendon insertion. In the study of the initial stages of arthrosis on necroptic material roentgenologically 158 and of these histologically 62 hip joints were investigated. A typical picture of so-called non-inflammatory enthesopathy was present in thirteen cases on the major and in three cases on the minor trochanter. Histologically, we observed enthesopathy-like changes, but to a much lesser extent in the insertions of the articular capsule. These pictures which on the X-ray resembled initial osteophytes were found seven times on the head of the femur and fourteen times on the edge of the joint acetabulum. There was no correlation to osteoarthrosis.

Key words: Hip Joint, Enthesopathy, Capsule Insertion, X-Ray and Histological Investigations.

INTRODUCTION

Enthesopathy (enthesis = insertion) is the clinical term for a number of pathological painful changes in the insertion of tendons. Morphologically it appears as calcification or ossification of tendon insertion. A major contribution were the papers of Niepel et al. (1,2) which described in detail the localization, clinical and X-ray picture as well as the histopathology of enthesopathy.

Our report is concerned with the roentgenological and histological studies of the initial stages of deforming arthrosis of the hip joint. We observed enthesopathies on tendon insertions and similar pictures on the insertion of the articular capsule.

MATERIAL AND METHODS:

Random roentgenograms of the pelvis were prepared, immediately evaluated and where signs of initial degenerative changes were observed the hip joint (head and acetabulum) was removed. A coronal section 1 cm thick was cut out of the joint and fixed in 10% neutral formol. After evaluation of the roentgenogram of the hip joint lamella the pertinent parts of the head or acetabulum after decalcification with 7.5% nitric acid (3) were embedded in paraffin. The samples were stained with hematoxylin-eosin. Histologically, 62 joints from 158 X-ray observations (44 men, 18 women, mean age: men 67 women 71 years) were processed. There was no patient in the sample with MB (rheumatoid spondylitis).

RESULTS

Of the 62 hip joints examined 13 cases showed so-called non-inflammatory enthe-
sopathy in the area of the major and in 3 cases of the minor trochanter. Its extent ranged from calcification of tendon insertions, which represented spiky or rugged appositions on the cortical layer (Fig. 1) to larger ossified formations which were sometimes entirely separated from the bone proper (Fig. 2). Enthesopathy on the lesser trochanter in all cases was of minor extent (Fig. 3). Very rarely were similar pictures encountered in a less typical localisation: in two cases on the lateral surface of the iliac bone near the acetabulum (Fig. 4).

Microscopically, besides dystrophic calcification of insertion we also quite frequently found foci of metaplastic ossification. The histologic picture ranged, according to the length of the process duration, from findings of woven bone with a typically dull margin (Fig. 5) to a completely rebuilt lamellar bone (Fig. 6).

Studying the formation of initial osteophytes we observed on the insertion of the articular capsule on the head and acetabulum of the hip joint microscopic pictures similar to enthesopathy on tendon insertions but of smaller dimensions. In all cases these were ossifications apparently on the basis of previous dystrophic calcification of the articular capsule insertion. For microscopic differentiation from initial osteophytes the typ-