PATELLAR FRACTURE IN A PATIENT WITH FORESTIER'S DISEASE

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We report an unusual complication of patellar fracture in a patient with Forestier's disease (diffuse idiopathic skeletal hyperostosis).

Keywords : patella ; fracture ; Forestier's disease ; hyperostosis.
Mots-clés : rotule ; fracture ; maladie de Forestier ; hyperostose.

CASE REPORT

A sedentary 70-year-old man presented with a swollen left knee following a fall while walking. He complained of severe pain and was unable to bear weight on the left leg ; knee movements were restricted. On examination an obvious gap in the patella and a tense hemarthrosis were noted. There was a striking thickening of the patellar ligament and the quadriceps tendon ; these last findings were also observed in the right knee. The patient had never complained of pain in the back or other joints and was never treated with vitamin A.

Radiographs of the knees revealed calcifications in the quadriceps tendon and patellar ligament (fig. 1) and a transverse displaced fracture of the left patella. Radiographs of the dorsolumbar spine showed ossification in the anterior longitudinal ligament with focal asymmetric flowing of the new bone from external to vertebral surface (figs. 2, 3) and diffuse beaking of the vertebral margins. Radiographs of the ankle revealed calcification in the tendo Achillis and calcaneocuboid ligaments.

Though the patient's spine, knee and ankle showed radiological signs of ligamentous and tendinous calcification, the patient had no limitation of motion, pain or other joint symptoms.

Laboratory studies revealed a sedimentation rate of 52 mm after 1 hr. (Westergren) and a positive rheumatoid factor. Other blood tests were inconclusive.

A conventional tension-band wiring of the left patella was done in a figure-of-eight fashion. Postoperatively recovery was satisfactory with good functional outcome.

DISCUSSION

In 1950, Forestier and Rotes Querol (1) described a peculiar type of ankylosing hyperostosis of the spine which was different from other spinal diseases including ankylosing spondylitis and osteoarthrosis. Since then, the diagnosis of this distinct clinicoradiological entity has gained favor with many radiologists and orthopedic surgeons. Spinal and extraspinal manifestations of the disease have been reviewed in detail (2, 3).

Resnick, Shaul and Robins (3) suggested a more appropriate description of the disease by naming it "Diffuse Idiopathic Skeletal Hyperostosis (DISH)".

The disease usually affects elderly patients, mainly males, with minimal symptoms. Although the pathogenesis of DISH is uncertain, diabetes

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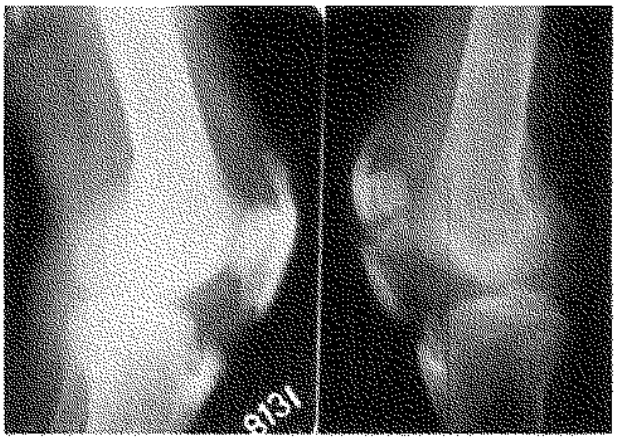

Fig. 1. — Lateral radiographs of both knees showing osseous outgrowths on the superior and inferior margins of the patella and a transverse fracture of the left patella.

Fig. 2. — A lateral radiograph of the dorsolumbar spine showing classical vertebral hyperostosis with intact intervertebral disc spaces and bridging of the anterior longitudinal ligament at different levels.

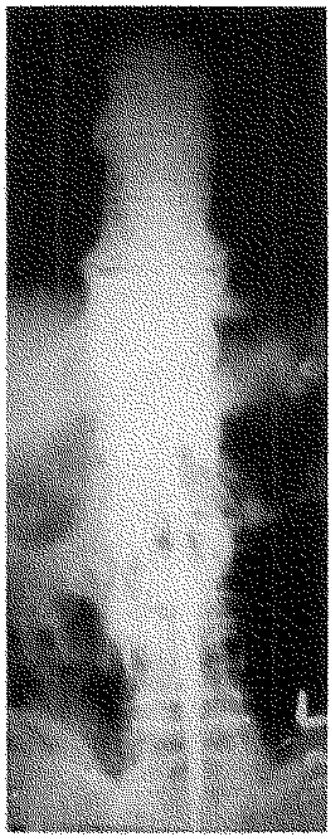

Fig. 3. An anteroposterior view of the dorsolumbar spine showing calcification of the anterior longitudinal ligament and vertebral hyperostosis.

mellitus, obesity and vitamin A therapy have been associated in some patients (2).

Radiographic features are alarming, with spinal and extraspinal manifestations. In the classical description of ankylosing hyperostosis of the spine (1, 2), there are bony outgrowths, predominating in the thoracolumbar area along the anterior and right lateral aspects of the vertebral column. The extraspinal manifestations of DISH have been highlighted by Resnick *et al.* in 1975 (3) in a series of 21 patients. Scattered osseous outgrowths at the sites of ligamentous and tendinous attachments were frequently found.

Although involvement of the knee (especially of the patella) has been observed (3) in the past, no case of a fractured patella in a patient with DISH has been reported, to the best of our knowledge. Our patient's patellar fracture with the

osseous outgrowths on the superior and inferior margins of the patella was alarming and prompted further investigation. This fracture would seem to result from a relatively weak spot in the patella caused by the tight anchoring by the osseous outgrowths on the superior and inferior margins of the patella.

In conclusion this patellar fracture helped us to investigate and diagnose our patient with DISH. However the management of this fracture was conventional, with a satisfactory outcome.

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SAMENVATTING

U. K. DEBNATH, R. VAISHYA en H. S. VARMA. Patellafraktuur bij een patiënt met ziekte van Forestier.

De auteurs beschrijven een geval van patellafraktuur bij een patiënt met de ziekte van Forestier (hyperostosis ankylosans vertebralis senilis).

RÉSUMÉ

U. K. DEBNATH, R. VAISHYA et H. S. VARMA. Fracture de rotule dans un cas de maladie de Forestier.

Les auteurs décrivent une fracture de rotule chez un malade, souffrant de maladie de Forestier (hyperostose ankylosante vertébrale sénile).