Investigations.—X-ray examination showed clear lung fields and an area of bone resorption in the body of the right pubic bone; adjacent bones were normal. A blood count showed red cells, 5,900,000; Hb, 116%; C.I., 0.99; white cells, 11,000 (polymorphs 80%, lymphocytes 13.3%, monocytes 6.7%); E.S.R., 17 mm. per hour (Wintrobe). The temperature and pulse remained normal during her 10 days' stay in hospital.

Through a small incision 8 oz. (230 ml.) of watery pus containing greyish-white shreds was evacuated. The cavity was 3 in. (7.5 cm.) in diameter, and was situated in the mass of the adductor muscles. The body and inferior ramus of the pubis could be felt and there was no obvious sequestrum. The wound was sutured without drainage. Acid-fast alcohol-fast bacilli resembling tubercle bacilli were seen in stains of the pus. Cultures for the selective isolation of tubercle bacilli were positive.

A 90-day course of streptomycin and *para*-aminosalicylic acid was instituted and the patient was sent home to bed. The wound healed by primary intention in the normal time, and showed firm scar formation after three months. Further x-ray films at this stage showed the area of translucency in the pubic bone to be reossifying.

COMMENT

It is of interest that the abscess fluid had tracked down the leg inside the sheaths of the adductor brevis and longus muscles, the origin of these muscles on the pubic bone coinciding with the situation of the abscess. The fluid tension inside the abscess masked the clinical features, as the "tumour" felt solid, did not fluctuate, and was not tender.

The radiological appearance of the lesion showed a patchy area of bone destruction, with no attempt at any bone formation. The absence of any bone reaction to the local tuberculous process would seem surprising in a young patient in such good general health. This type of x-ray appearance resembles that seen in osteitis pubis following prostatectomy, which also leads to gross rarefaction of the bone, giving a "moth-eaten" appearance (Mortensen, 1951). Osteitis pubis is a self-limiting condition, characterized by widespread decalcification and then normal healing, with no sequestrum formation (Hoch and Kurtz, 1951). This seems similar to the case presented here. The aetiology of osteitis pubis is still doubtful, although various factors have been described. May it not be that the pubic bone reacts in a similar way to lesions of different types—trauma, infection, ischaemia, tuberculosis, etc.?

I should like to thank Mr. R. K. Debenham for permission to publish this case, and Mr. T. S. Donovan for his advice about its management.

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Sacro-iliac Strain

The wave of popularity for the "disk lesion" as the cause of low backache with associated referred pain in the leg has tended to submerge other diagnostic labels that were previously in favour. The term "sacro-iliac strain," used to define pain of mechanical origin arising in the tissues of the sacro-iliac joint, has in my opinion suffered an undeserved eclipse, an opinion which has been notably reinforced by personal experience of the symptoms thereof on three separate occasions.

For the diagnostician no teaching can compare to that of personal experience. I am therefore in the fortunate position of being able to recognize without difficulty those of my

patients who are suffering from the same condition, and may also, I feel, be able to help others to sort out this particular cause of backache from the rather confused clinical picture as it presents itself to the clinician.

On the first occasion I noticed difficulty in standing upright on emerging from a bath in a rather rough sea. On attempting to do so I experienced pain in the region of the left sacro-iliac joint. By the next morning I felt stiff in this region, with pain, particularly on attempting any twisting movement, local tenderness over the posterior ligament of the joint, and referred pain to the upper and outer aspect of the thigh and in the groin. The following day I was manipulated by my chief assistant. The movement comprised a rotation of the pelvis to the right, the left iliac crest being also thrust downwards at the end of the movement. At this point I felt a "thud" in the region of the left sacro-iliac joint, as if something had "snapped" rather than clicked home. The pain was immediately relieved.

A few years later, some hours after digging a trench and throwing out the earth to the right, I felt an ache in the same spot. This became worse during the next few days and referred pain of the same distribution developed. I then had a further manipulation. Although I again felt a "thud" as if something was reseating itself, I was disappointed to find the pain still present. However, it disappeared during the course of the next twenty-four hours.

On the third occasion the pain came on gradually without any specific injury, though I had been indulging in various physical activities. After about three weeks I got tired of it and had another manipulation. For the first time this was a little painful, and there was no satisfying "thud." The pain was not relieved but gradually subsided before I got to the point of having a "proper" manipulation under thiopentone.

COMMENT

As the result of these experiences I am personally convinced (1) that there is such a condition as a sacro-iliac subluxation, this being probably a slight rotatory displacement of the joint surfaces, the sacrum being twisted downwards and forwards on the affected side. The feeling of something reseating itself when the pelvis was forcibly rotated in the same direction, associated with an immediate feeling of relief of tension, was quite unmistakable. (2) That there is also a condition of sacro-iliac strain which results from strain on the ligamentous tissues with, subsequently, a reflex inflammatory reaction; and that this may occur as a result of some unaccustomed activity without there necessarily being any actual subluxation of the joint. (3) That, from observations on patients, sacro-iliac strain may also be secondary to disk lesions in the lower lumbar region complicating the clinical picture produced by the disk lesion itself. Finally, the following clinical signs and symptoms will help to distinguish lesions of the sacro-iliac joints from other causes of low back pain. (1) The pain is produced or intensified by rotatory movements, flexion and extension being free and painless unless forced. (Whereas in disk lesions it is flexion and extension that causes pain, rotation being painless.) (2) Referred pain when present will be in the upper and lateral aspect of the buttock and thigh and into the groin. No lesion of the lower lumbar spine can produce referred pain in the groin. (3) There will be tenderness over the posterior ligament of the joint—that is to say, one fingerbreadth below and medial to the posterior inferior spine. (4) There will be no limitation of straight-leg raising, although this may cause slight pain at extremes, and no loss of reflexes or other evidence of disturbed function of the peripheral nerves.

In conclusion, I would point out that my own reaction to treatment was typical of the average case—dramatic cure after the first manipulation, delayed relief after the second, and no relief with the third; though there is the consolation that the condition is, I think, and hope, unknown in the elderly.

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