

such rarity adequate prospective studies may take many years. Undoubtedly clear differentiation between these various clinical entities is essential for effective management. In the case of non-healing granuloma, malignant lymphoma, and the confusing idiopathic pharyngopalatal ulceration, management presents minimal problems. Control of Wegener's granulomatosis, however, may necessitate a life time of cytotoxic and immunosuppressive therapy.

The dramatic improvement in outlook for patients with Wegener's granulomatosis occasioned by the addition of cytotoxic drugs to the more conventional corticosteroids is not simply because of their increased immunosuppression or their anti-inflammatory effect. Possibly the two types of drugs act at different points in the immune reaction (if this is significant), but a more likely explanation is that the cytotoxic agents act in their own special way. Published reports indicate that both alkylating agents and antimetabolites are equally effective and on occasions I have combined drugs from both groups.

PROBLEMS OF LONG-TERM THERAPY

Azathioprine has been widely used in transplant surgery, skin diseases, and other conditions, and there is much information on dosage and side effects. It is an imidazolyl derivative of mercaptopurine and by interfering with purine metabolism affects both RNA and DNA. The toxic effects include bone marrow hypoplasia, hepatotoxicity, and reduced resistance to infection, but even in the large doses used in Wegener's granulomatosis these have as yet presented few problems. It is usually necessary to achieve a daily dosage of 200 mg and then add prednisone until the E.S.R. has returned to normal limits. Since the toxic effects of both drugs are largely dose related every effort is made to reduce therapy as soon as the patient's condition is controlled. In practice this presents considerable difficulties since the most reliable guide to dosage seems to be the E.S.R. Increase in this value, it is hoped, will precede any recurrence of nasal, pulmonary, or renal disease, and certainly reduction in dosage in many patients is followed by an increase in the E.S.R. As

yet no patient has been left on this reduced dosage to test the significance of this finding for there is no guarantee that control will be possible on a second occasion.

The dangers inherent in long-term cytotoxic and corticosteroid therapy are well known and need no comment (case 12). Even the risk of sterility or genetic damage to children born of our younger patients cannot be ignored. Yet we can now increase the survival period of these patients from six months to many years, though with only their general condition and E.S.R. to guide us in determining dosage. Even when it is possible to reduce therapy to minimal levels the risk of a sudden uncontrollable relapse remains and as yet this is a risk I am not prepared to take. It seems therefore that until satisfactory evidence of the action of these drugs is available and the means by which we can reliably monitor this action each patient must be maintained on the dosage just sufficient to keep the E.S.R. within normal limits and the clinical state as normal as possible. Awareness of the potential dangers of both the cytotoxic drug and corticosteroids used and the means to remedy any side effects are vital, and these patients need to be under the care of people experienced in the management of such problems.

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Hospital Topics

Lesions of the Symphysis Pubis in Women

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Changes at the symphysis pubis due to repeated minor trauma have been reported in athletes.¹ Thirteen women seen with similar changes, resembling osteitis pubis, have been described,² while there were 27 women in a series of 45 patients with osteitis pubis.³ In three of the last symptoms had begun during or shortly after pregnancy; eight had had pelvic surgery, in four of whom infection developed postoperatively.

This paper reports the details of three women who presented with a long history of disabling pain in the pubic region. In many respects the symptoms and radiological changes were similar to those observed in athletes.¹

Case Reports

Case 1.—A 33-year-old woman presented with a nine months' history of pain in the pubic region radiating to the thigh, aggravated by bending, rising from a sitting position, and turning over in bed. She could not go for long walks, do her housework, or gardening. A particular feature was an unpleasant clicking over the pubis with all movements. She had two children aged 2 and 3,

with no history of difficulties or complications during delivery. Eight months before the onset of symptoms a coil had been inserted, and this had been followed by a copious vaginal discharge with lower abdominal pain. The coil was finally removed one year afterwards on account of the infection with subsequent reduction of the pain and discharge. Examination showed marked tenderness and clicking over the symphysis. The radiograph showed erosions and sclerosis at the margins of the symphysis (fig. 1) and considerable instability (fig. 2). Trauma was considered to be the primary aetiological factor, but at operation for fusion of the joint culture of tissue removed from the symphysis grew a coagulase-negative staphylococcus. Instability was confirmed at operation but there was no naked eye evidence of infection. Two years later she was free of symptoms.

Case 2.—A 30-year-old woman presented with a six months' history of pain in the pubic region radiating to the groin and accompanied by an unpleasant clicking sensation, most noticeable when rising from a lying position and when walking. At times the pain was so severe that she was unable to walk. She had had five children and had had a similar pain for a time after the first

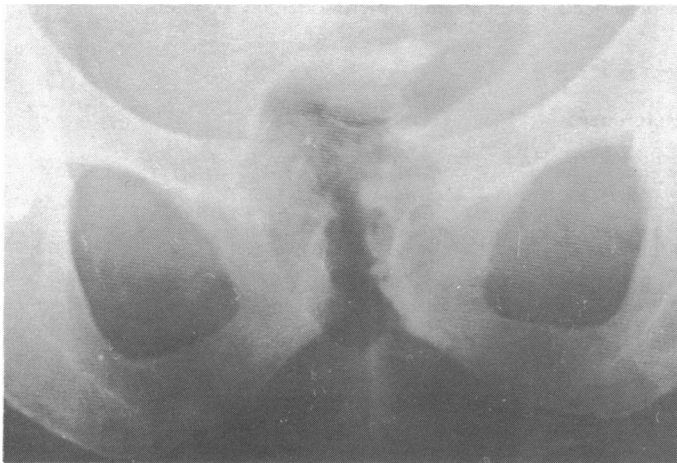


FIG. 1—Case 1. The most significant feature is the extensive marginal erosions, and reactive sclerosis is also visible.

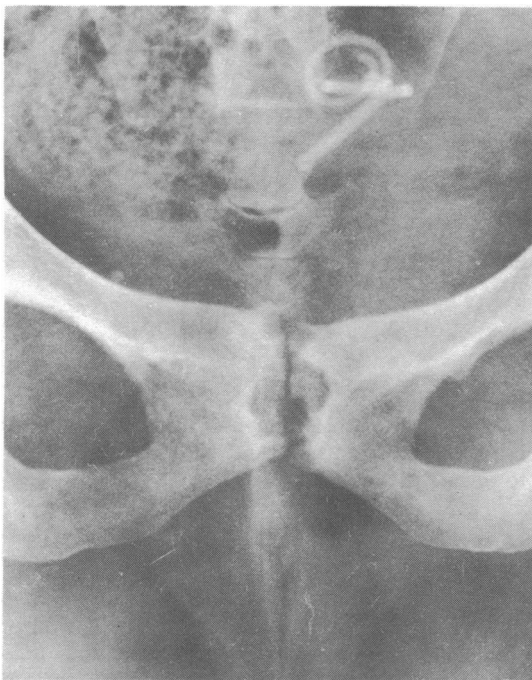


FIG. 2—Case 1. This posteroanterior radiograph was taken while the patient stood on the right leg. A moderate degree of instability is demonstrated. Note the intrauterine device.

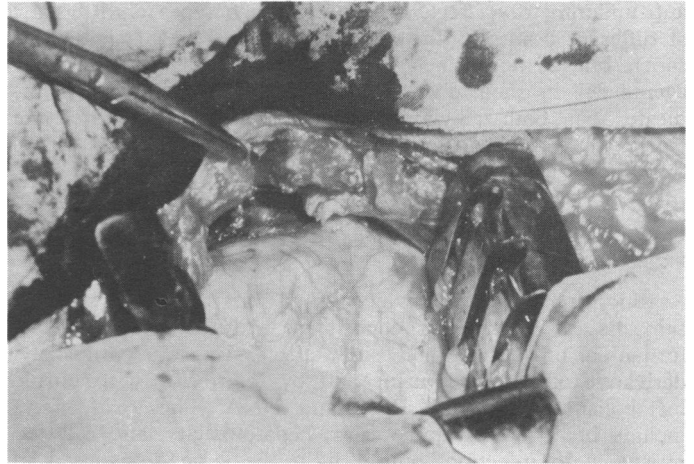


FIG. 3—Case 2. The 1.5 cm gap at the symphysis is clearly visible.

Case 3.—A 33-year-old woman complained of intermittent attacks of groin pain since the birth of her second child (aged 9 years). She had had recurrent attacks of low back pain, while clicking at the symphysis occurred at times. Recently her symptoms had become more troublesome, and she described the pain as being so bad at times that "I walked like a crab." Walking over uneven ground, standing for long periods aggravated the symptoms, and she had given up playing tennis. There had been no problems during and after the first pregnancy. During the second, however, she had developed a severe vaginal thrush infection which had lasted on and off for eight years. Labour was rapid, and the infant weighed 10 lb 1 oz. Seven years previously she had had a ventral suspension operation. Recurrent urinary infection occurred during the preceding four years. The only physical signs were tenderness over the symphysis, and pain on stressing the joint. The radiograph (fig. 4) showed intense sclerosis, marginal erosions, and instability. The possibility of operative treatment was discussed with the patient, and she elected to wait a year in the hope that spontaneous improvement would occur.

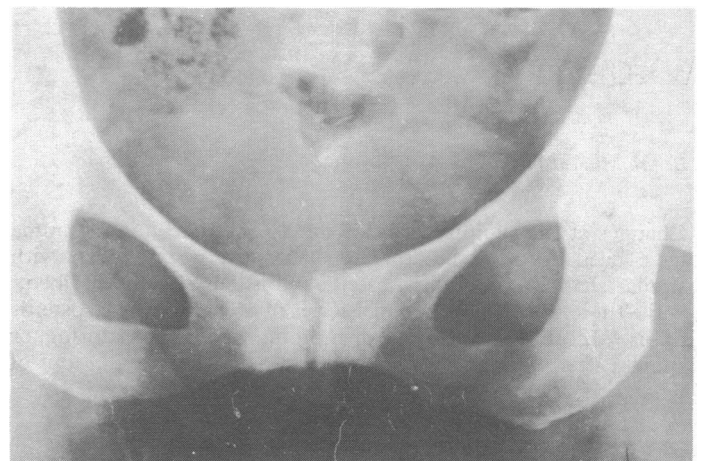


FIG. 4—Case 3. Note the extreme reactive sclerosis; marginal irregularity and instability is also demonstrated.

Note on Operative Technique

The approach to the symphysis pubis is through a transverse suprapubic incision, separating the rectus muscles vertically. An autogenous bone graft, retaining the cortex on one surface for added strength, is wedged into a preformed slot cut across the superior part of the symphysis. The size of the graft is about 1 in by $\frac{3}{4}$ in (2.5 cm x 1.9 cm) and about $\frac{1}{8}$ to $\frac{1}{4}$ in (3.2 mm x 6.4 mm) thick. The patient remains on complete bed rest for two to three weeks, followed by graduated weight bearing with crutches.

Discussion

Though the radiographic appearance resembles that described in athletes, there are certain differences, possibly of degree. Instability is common, and is usually manifested by a clicking sensation; sclerosis and marginal irregularity is more intense (Cases 1 and 3). The lesion in Case 2 more closely resembles one due to trauma, and the absence of sclerosis and erosions suggests that infection had not been a major aetiological factor. It is extremely difficult to rule out subacute infection as the primary cause of the lesions in Cases 1 and 3, and indeed an organism was cultured from the lesions in Case 1.

Features common to these three cases are: multiparity; the symptoms starting during or shortly after pregnancy or a pelvic operation; a history of pelvic surgery followed by infection; urinary tract or vaginal infections.

It is suggested that trauma from multiple pregnancies, pelvic operations, or both, together with pelvic sepsis play a part in the aetiology. The mechanism is obscure, but Coventry and Mitchell's theory would explain the clinical and radiological features—viz., that infection in the retropubic space results in venous stasis and thrombosis, which in turn leads to an avascular necrosis of the pubic symphysis.³

These case reports suggest that the lesion may cause disabling symptoms over several months or years. If spontaneous improvement occurs it must take a long time. Probably the instability causes most of the symptoms, and this is supported by the successful relief of long-standing symptoms in Cases 1 and 2 from a stabilization procedure. Nevertheless on the basis of these case reports clearly no policy about the indications for surgery can be put forward.

Summary

In three women with lesions of the pubic symphysis some features resembled osteitis pubis and other changes reported in athletes. The aetiological factors probably include trauma from multiple pregnancies or pelvic operations and pelvic sepsis, while instability of the pubic symphysis is mainly responsible for the symptoms. Spontaneous improvement did not occur in the three reported patients, but in two fusion of the symphysis pubis was effective in relieving the symptoms.

I would like to thank Dr. R. O. Murray, who has given me so much valuable assistance with the interpretation of the radiographs, Dr. P. N. Cardew, St. Mary's Hospital Audio-Visual Department, and the Photographic Department of the Royal Society of Medicine, for the photographic reproductions, and Miss L. Turpin for typing the script.

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Lesions of the Symphysis in Athletes*

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Summary

In a radiological study of the pubic symphysis in 37 athletes (26 footballers and 11 others) and 156 young men as controls changes similar to those of osteitis pubis were found in 19 (76%) of the footballers and nine of the other athletes (81%) and 70 of the controls (45%). In the controls there was a significant correlation between their athletic ability and these changes.

The clinical features consist of pain in the region of the pubis which may radiate to the groin or lower abdomen. Clicking may be present and indicates instability. Local tenderness is the only significant sign. Radiographs may show a combination of marginal irregularity, reactive sclerosis, and instability.

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A chronic stress lesion in the iliac component of a sacro-iliac joint was found in 20 out of 37 athletes, and 13 of them had instability at the pubic symphysis.

It is concluded that repeated minor trauma is the primary aetiological factor. Though the radiological appearance may resemble that of osteitis pubis, there was no evidence that infection caused the lesion in this series. Spontaneous remission of symptoms is the most likely outcome. Rest from physical exertion is the most effective treatment, and stabilization of the pubic symphysis is indicated only rarely.

Introduction

Osteitis pubis occurs in men as a complication of operations on the bladder and prostate, being first described by Beer¹ in an English journal. Since then several accounts have appeared,²⁻⁶ mainly from urological departments, while isolated cases of a traumatic lesion of the symphysis pubis resembling an osteitis have also been reported.⁷⁻¹³ Reports of the lesion resulting from athletic activity are rare, though one patient is reported as having developed changes from a basket ball injury.¹² Howse¹⁴ described the condition in an Olympic road walker, and one of us (R.O.M.) has seen it in an international fast bowler at cricket.¹⁵ In a