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# Chronic Pubic Symphysiolysis

## A CASE REPORT

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Loosening of the pelvic joints with separation of the symphysis is a normal condition during pregnancy. Exceptionally this condition gives rise to pain over the symphysis pubis, and in some cases over the sacro-iliac joints. Increased mobility between the pubic bones and pelvic instability without any direct connection with pregnancy seems, on the other hand, to be rare, and no specific treatment for this condition appears to have been mentioned in the literature. The following is a report of a patient in whom surgical treatment seemed warranted and had a dramatic effect.

### Case Report

The patient was a thirty-eight-year-old woman who had been previously healthy except for disease of the gallbladder and cholecystectomy in 1963. She had had normal pregnancies in 1964, 1965, and 1967 with no complaints of pain at the symphysis or in the back. All three deliveries had been normal, but the first and the last deliveries were rather protracted. In September 1971 she started to have aching in the groin bilaterally, with radiation towards the symphysis. At first she ascribed the pain to increased physical activity. After a few months she felt crepitation at the symphysis, most marked when she changed position when lying down. Gradually she began to limp because of the pain in the symphysis and groin. Roentgenograms made in December 1971 revealed narrowing of the symphyseal space and cystic rarefaction of the adjacent bones. During the early part of 1972 the patient's movements were limited greatly by pain, and she had difficulty in taking care of her household. Further roentgenograms made in May 1972 showed the same areas of destruction in the symphysis region (Fig. 1). On roentgenographic examination with the patient standing on the right leg only, there was cranial displacement of the pubic bone by four millimeters on the weight-bearing side (Fig. 2). A corresponding examination with the weight borne on the left side showed similar cranial displacement of the pubic bone of that side. Clinical examination revealed tenderness over the symphysis region, and the patient also had pain over the right sacro-iliac joint. On closer questioning she stated that she had had periodic pain in the back at the lower lumbar spine and the posterior pelvic region. She had never considered that there might be a connection between the back pain and the pain in the symphysis. Laboratory tests were all negative and the sedimentation rate was normal.

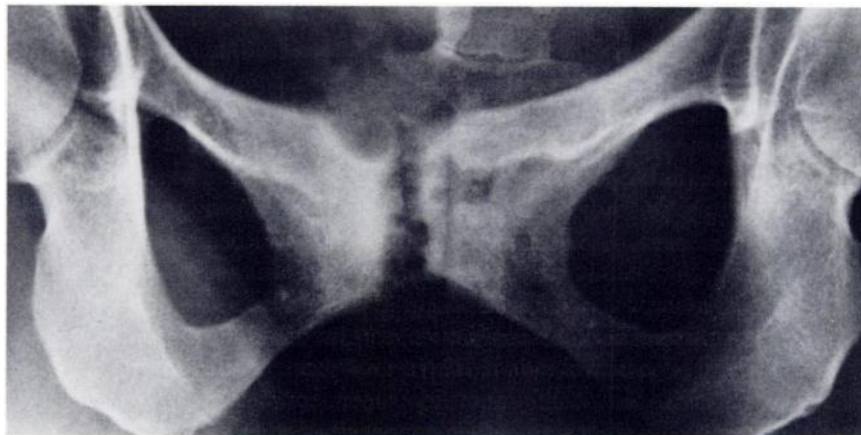


FIG. 1

At first glance the cystic rarefaction of the two pubic bones gives the impression that the symphysis pubis is wider than normal. In actual fact, it is narrower. The film was intentionally made with slight rotation, in order to project the symphysis free from the coccyx.

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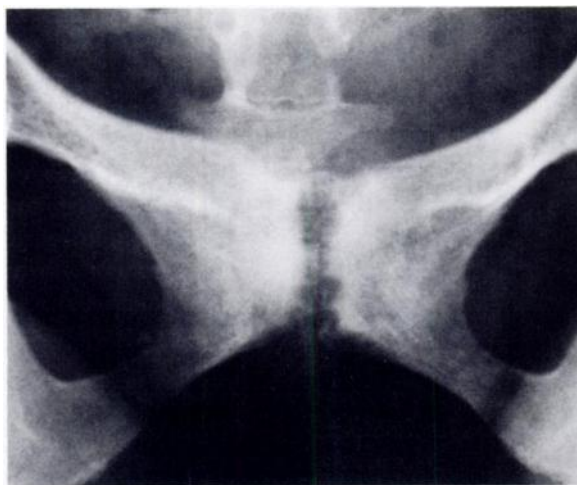


FIG. 2

Roentgenogram made with the patient standing on the right leg. This resulted in a difference in level between the two pubic bones of four to five millimeters, indicating considerable instability. Special projections over the two sacro-iliac joints showed no displacement or instability in these joints.

The use of a surgical corset combined with periods of rest had little effect on the pain. The patient could not walk more than fifty meters without pain, and it was decided to surgically stabilize the symphysis.

On July 7, 1972, a four-holed ASIF plate was applied along the cranial side of the superior pubic rami (Fig. 3-A). The periosteum on the inner side of the symphysis was raised and a cancellous-bone graft was applied. A wedge-shaped biopsy was taken from the upper part of the symphysis. The resulting defect was plugged with a bone graft. On histological examination, the biopsy specimen was found to consist of non-specific granulation tissue. No bacteriological culture was done. The cartilaginous tissue normally found in this region was not present, which indicated destruction of the symphyseal connection.

The postoperative course was uneventful. The patient was advised to limit weight-bearing for about two months and then to gradually increase her activity to normal.

Roentgenograms made fifteen months after the operation (Fig. 3-B) showed that the pubic bones had united. The inner side of the symphysis was jointed by mature bone tissue at three months (Fig. 4-A), and the previous gap in the frontal part of the symphysis was closed (Fig. 4-B). No reaction around the osteosynthesis material could be seen. Four months after the operation the patient started normal physical activity, including skiing and other sports, and at latest follow-up fifteen months after operation the patient was asymptomatic.

### Discussion

The disorder in the present case must be considered quite different from the symphysiolysis during pregnancy, which is a physiological condition. There the widening of the symphysis ranges from four to seven millimeters<sup>5</sup>. At about the time of delivery this natural symphysiolysis results in instability which can be demonstrated by roentgenography while the patient is weight-bearing on each leg separately. As a rule the symphyseal changes regress during the first months post partum, so that the symphysis regains a normal appearance roentgenographically. Occasionally, however, additional changes occur in the medial parts of the pubic bones in the form of cystic regions with bone resorption and also sclerosis and irregularity of the bone adjacent to the symphysis<sup>5</sup>. These changes, which may be signs of a disorder, often lead to narrowing of the symphysis seen roentgenographically, despite rarefaction in the bones.

The residual changes after delivery are reminiscent to some extent of changes that occur in arthrosis and arthritis. A number of alternative diagnoses therefore have to be discussed in the present case, including osteitis pubis of specific or non-specific origin and rheumatoid arthritis<sup>1-6</sup>. In patients with pronounced cystic changes in the symphysis region, hyperparathyroidism, myelomatosis, and sarcoidosis may be considered. Some systemic diseases such as ochronosis and hemochromatosis also give a picture of symphyseal arthrosis. From time to time after a prostate operation or gynecological operation resorp-

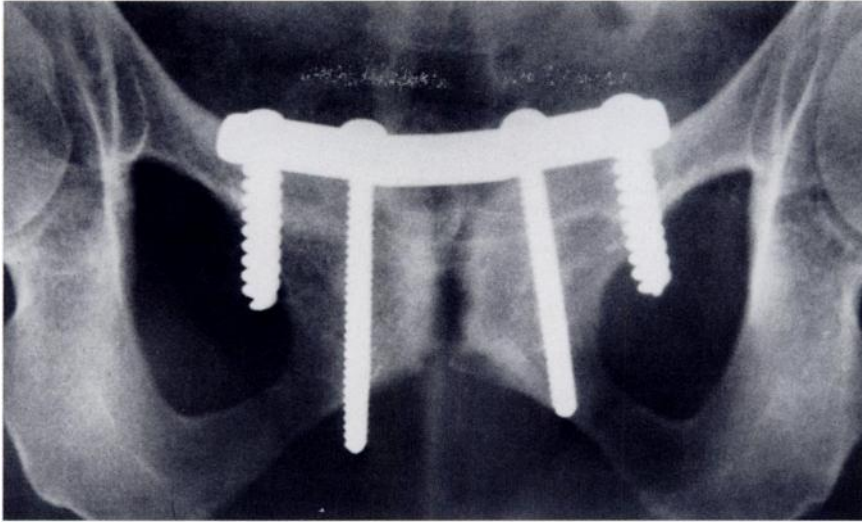


FIG. 3-A

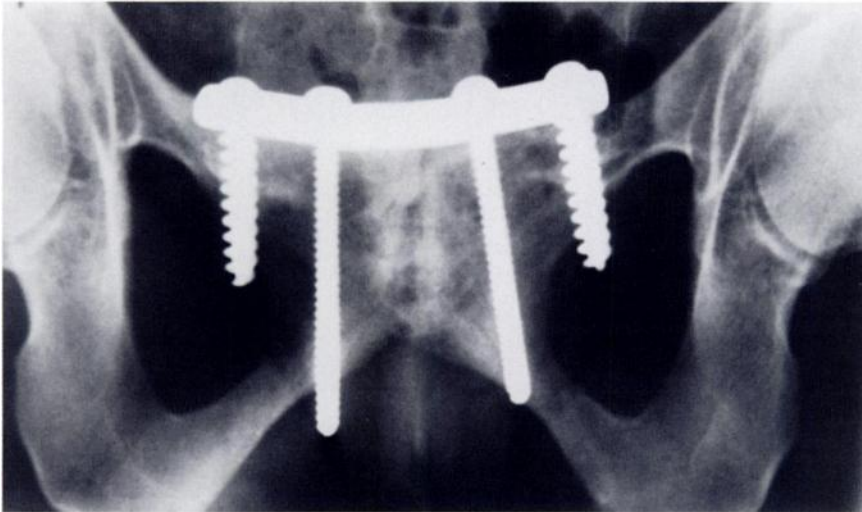


FIG. 3-B

Fig. 3-A: The two pubic bones stabilized at the same level in relation to one another by means of a four-holed ASIF plate. The wedge-shaped iliac-crest bone graft placed in the upper part of the symphysis can be seen. A layer of cancellous bone has been grafted on the inner side of the symphysis.

Fig. 3-B: Fifteen months after operation the pubic bones were broadly united with mature bone.

tion of bone over the symphysis is seen, a change which gives rise to no symptoms. In our patient all of the above-mentioned diagnoses were essentially excluded. The biopsy taken at operation excluded a specific cause of the disease.

It is not improbable that in this patient painless and undiagnosed symphysiolysis may have been present at the time of the last delivery. The relative pelvic instability then may have been aggravated and made permanent by increased activity (skiing, jazz ballet). The disease can hardly be regarded as involving the symphyseal region alone. It may be that there also was instability or increased movement in one of the sacro-iliac joints<sup>5</sup>. It should be noted that this patient had had pain and tenderness over the right sacro-iliac joint.

Symphysiolysis in pregnancy is treated with a pelvic girdle or corset, in some cases combined with reduced physical activity, a regimen which was tried in our patient without effect. It therefore seemed reasonable to solve the problem of treatment by a stable metal-

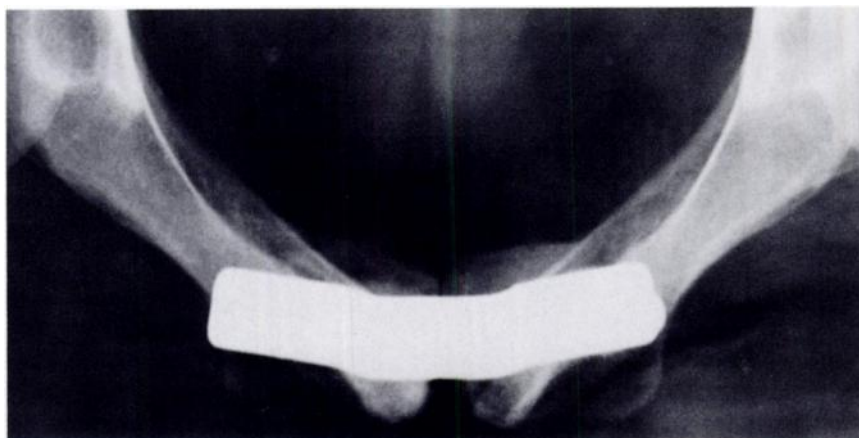


FIG. 4-A



FIG. 4-B

Fig. 4-A: Roentgenogram made four months postoperatively. Behind the symphysis there was already a bone bridge six to eight millimeters thick, consisting of apparently mature bone connecting the two pubic bones.

Fig. 4-B: The frontal part of the symphysis gap seems to be completely filled with mature bone fifteen months after the operation.

lic connection over the symphysis together with osseous fusion. Such a procedure, however, will make normal delivery impossible in the future, a fact which was thoroughly discussed with the patient before the operation. The pain in the symphysis region and the difficulty in walking disappeared after a short time, and did not reappear during the fifteen-month follow-up. The pain in the back and pelvis also disappeared, a sign that the symphyseal fixation gave sufficient stability to prevent painful hypermobility in the sacroiliac joints.

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