

Post partum diastasis of the pubic symphysis: a case report

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Abstract. The post partum pubic symphysis diastasis is an uncommon disease. It is responsible of acute pelvic pain. It increases when manual pressure is applied to the pelvis in a latero-lateral and antero-posterior direction. The diagnostic test for this condition is an anteroposterior X-ray of the pelvis. Here we present a case following spontaneous vaginal delivery. The conservative treatment is able to obtain good results. If this disease is underestimated the patient can develop chronic pain.

Key words: Diastasis, pubic symphysis, post partum

Introduction

The pubic symphysis is a secondary cartilage-like joint classified as amphiarthrosis covered by a layer of hyaline cartilage with an interposed, softer fibrocartilaginous disc acting as a buffer. It is joint that allows only very limited movements except under hormonal stimulation during the third trimester of pregnancy or during birth when it becomes progressively looser. In normal conditions these movements are in the range of 0.5-1 mm (1). Starting from the seventh month of pregnancy a widening of the sacro iliac joint and the pubic symphysis occurs (4-8 mm) (2). The pubic symphysis articular surfaces have been the subject of numerous studies because they change with age. During adolescence they show irregular edges while at 30 years of age they become oval-shaped. Between 40 and 50 years of age the surfaces become smoother, and at 60 years they become rougher and progressively eroded (3).

Each diastasis over 10mm in males and 15mm in females is considered a subdislocation or a gap (1). According to Kraus (1930), the physiological width of the normal cleavage seen on X-rays is age related. It is 10mm at the age of 3, 6 mm at 20, and 3 mm at 50 (4).

A diastasis wider than 14 mm indicates concomitant damage of the sacro-iliac joint with anterior lacerations on one or both sides of the ventral sacro-iliac ligament. A diastasis of the pubic symphysis after birth is a rare (5) but painful complication that causes serious distress to the patient. When this occurs, adequate treatment should be given while keeping in mind the needs of the mother and the baby. In an ultrasonographic study carried out on women in labour, Scriven et al found that the incidence of pubic diastasis is 1 out of 800 patients (6).

Clinically, the patient complains of pain, with swelling and sometimes deformity appearing in the involved area. In some cases it is possible to hear a clicking sound when the patient walks. The pain increases when manual pressure is applied to the pelvis in a latero-lateral and antero-posterior direction. If the dislocation is severe it can be accompanied by shock. A small percentage of patients can develop chronic pain requiring a surgical intervention of debridement or a pubic symphysis fusion (7). The diagnostic test for this condition is an anteroposterior X-ray of the pelvis. Lesions along the genito-urinary tract may also be present. In an emergency, it is advisable to lie the patient in lateral decubitus. In his ultrasonographic

study, Scriven shows a direct link between the permanence of the symphysis gap and the presence of chronic pain.

The treatment can be surgical or conservative, which is the method performed by our group.

Case report

We have been consulted by the Department of Gynaecology of our Hospital regarding a suspected case of a left side post partum sciatica in a 30 year-old African woman, A.B., who was at her third pregnancy. The delivery occurred after 41 weeks of gestation, presented no particular complications, and the baby was of normal dimensions. He weighed 3.975 kg, was 53 cm long, his cranial circumference was 37 cm, and his presentation was cephalic. The period of dilation lasted 5 hours and 30 minutes, while the expelling period lasted 1 hour and 55 minutes. The delivery of the placenta lasted 10 minutes, while the total duration of delivery was 7 hours and 5 minutes. The following day the woman reported sacral pain affecting her mobility; a condition which required our intervention. The woman was clearly overweight (80 kg). On physical examination it was observed that the pain was in the left auricular surface of the sacrum. All the osteotendineus reflexes were normal, and the Lasegue sign was negative. There was a gap near the pubic symphysis. Palpation caused the patient a great deal of pain. Walking was difficult because of the pain and the external rotation of the right lower limb. As a result, we suggested the use of analgesics, bed rest in the lateral decubitus, a radiography of the pelvis in a.p. X-ray, and of the sacrum and coccyx in a lateral X-ray. The X-rays revealed a pubic diastasis of 31.13 mm and 28.39 mm indicating an obvious instability (Figure 1). At this point, and after our diagnostic doubts were confirmed, we constructed a homemade hammock, and ordered absolute rest for 40 days. The position that the woman assumed in this special support belt allowed the pelvis to be raised about 4 cm from the bed. During the next 4 days we progressively drew the poles of the bed closer to each other so as to "close" the hammock. In this way the patient's own weight helped to reduce the diastasis. After 4 days of this treatment,



Figure 1

the computer tomography showed a reduction of the diastasis to 14-15mm. We continued with this conservative treatment and checked on the 12th day, when the diastasis measured 17.16 mm (Figure 2). Four days later the patient refused the hammock treatment because of great discomfort even if our prescription required the continuation of this method for a total of 40 days. At this point the woman decided to discharge herself from the gynaecology department. We strongly recommended her to wear a pelvic girdle for a total of 40 days. This was made by hand using in reinforced fabric by an orthopaedic technician. When the patient



Figure 2. Follow up after 12 days

did not appear for her next appointment we decided to phone her family doctor, and fixed a new clinical and radiological tests 40 days after the beginning of the orthopaedic treatment. When the patient arrived for her next appointment, she was walking without crutches, and was not wearing the prescribed pelvic girdle. She told the staff in charge that she had worn the girdle regularly, but that she now only felt a slight pain after sitting for a long time. This could be explained by evaluating the difference in strength distribution existing between the standing and the sitting positions. In the first case the weight of the spine falls through the sacro-iliac joint and ilium on to the femoral head (gothic arch) and in the second case it falls through the sacro iliac joint onto the ischium. Because of this the incomplete symphysis closure causes pain in the sitting position. On examination the patient no longer felt pain on percussion of the sacrum, except for a slight degree of discomfort when the pelvis was digitally-pressed. The patient was walking normally and without pain. The X-ray showed a remarkable diastasis reduction to 10.55 mm. At this point we asked for a further evaluation on the 80th day, but still insisted that she had to wear the pelvic girdle. The X-ray taken on the 80th day showed a diastasis of 12.41 mm (Figure 3). Clinically the patient did not complain of any pain whatsoever, even during pubic manual pressure, and no pain when sitting. Though the patient's



Figure 3. Follow up after 80 days

compliance had not been exactly optimal, the obtained results were considered successful.

Discussion

A pubic diastasis must be suspected if the patient complains of post partum acute and persistent pain in the pelvic area. The treatment can be conservative or surgical. Many Authors advise (7, 8) the conservative treatment, which is the method performed by our group. In the first phase, this treatment consists in lying in a hammock (placed above the bed) whose function is to reduce the pelvic dislocation through pressure exerted by the weight of the patient. In the second phase a pelvic condilar plaster or a binder is used to ensure the patient's immobilization. On emergency, the surgical treatment, aimed at reducing and stabilizing the dislocation, can be done with an external fixator. Otherwise, a plate with screws can be fixed on the pelvic area, as suggested by AO (9). Other devices, such as wires, are used in this kind of pathology: in 1951, in Rome, Prof. Carlo Marino Zuco (10) advised the reduction and stabilization of the dislocation through the use of two K wires which are crossed and tied to the pubic symphysis itself.

We consider the choice of conservative treatment when the following conditions are present:

- good possibility of obtaining and maintaining an acceptable gap reduction
- a favourable evolution of the condition as described in the medical literature
- aversion to surgical reduction and synthesis because of problems deriving from surgery which would indirectly affect the new born. In fact, the mother could not breast-feed the baby because of anaesthetics, antibiotics and thromboembolic prophylaxis.

We must remember, however, that a surgical intervention would have achieved the desired anatomical reduction and greater stability. This method, however, in a few cases can lead to complications such as urinary infections (11). In addition, a synthesis with plate and screws would lead to a cesarean birth if the patient becomes pregnant again. The absence of chro-

nic pain after 80 days of treatment confirms what medical literature asserts.

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