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Spontaneous pubic symphyseal diastasis following vaginal delivery

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Summary

Public symphysis diastasis is an uncommon condition which is caused mostly by severe trauma like road traffic accidents and fall from heights.

We present cases of pubic symphysis diastasis following spontaneous vaginal delivery. This is to reiterate the fact that this type of public symphysis diastasis is different from other types of traumatic pubic symphysis diastasis and can be managed successfully with absolute bed rest.

Keywords: *Public symphysis diastasis, spontaneous vaginal delivery: absolute bed rest.*

Résumé

La diastase de symphyse pubique est une anomalie pas très rencontrée qui est causée en majorité par des traumatismes des accidents automobile et des tombées des hauteurs.

Nous présentons les cas de diastase de symphyse pubique après accouchement. Cette étude a pour but de reiterer le fait que ce type de diastase de symphyse pubique est différent des autres type de diastase de symphyse pubique d'origine traumatique et peut être soigné par le repos absolu couche.

Case reports

Slight separation of the pubic symphysis during pregnancy is considered to be physiological and is part of the laxity caused by the hormone of pregnancy to create room in the birth canal for the expulsion of the fetus [1]. However, complete separation of the symphysis pubis during vaginal delivery is rare [2,3]. Separations of more than 10 mm are usually associated with pubic tenderness and difficulty with walking and are considered to be pathological rather than physiological.

We report three cases of wide separation of the pubic symphysis during vaginal delivery. Our aim is to reiterate that this type of diastasis differs from other types of traumatic pubic symphysis diastasis.

Case report I

N.Y. a 28 year-old Gravida 3 para ²⁺² (2 alive) admitted in labour with cephalic presentation. She was delivered of a live male infant weighing 3.15 kg after 6 ½ hours of labour, but she sustained a second degree perineal tear which was promptly repaired. She developed pain over the pubic region with associated difficulty in walking 2 days postpartum.

Examination revealed tenderness over the pubic symphysis. Pelvic compression and distraction tests were

positive. Pelvic radiograph confirmed pubic symphysis diastasis of 30 mm. She was managed conservatively on bed rest and analgesics and ambulated six weeks after delivery.

Case report II

A 30 year-old gravida 4, Para ¹⁺² woman was referred to our hospital for antenatal care and delivery on account of a previous caesarian section for cervical dystocia two years prior to presentation. There was no complication or pubic discomfort post partum. Current delivery was preceded by spontaneous onset of labour pain at 39 weeks gestation. She was in labour for 6 hours with second stage delayed for 60 minutes due to persistent occipito-posterior position. She had spontaneous vaginal delivery and a second degree tear which was repaired. Immediately post partum, she complained of pain at the pubic symphyseal region aggravated by movements of the lower limbs. This was followed by inability to pass urine due to the severe pubic pain but no back pain. Pelvic x-ray (Fig. 1a) revealed diastasis of the pubic symphysis of 30 mm, thus confirming spontaneous symphysiotomy.



Fig. 1a

She was immediately commenced on pelvic sling support for 10 days with adequate analgesia. Follow-up X-ray (Fig. 1 b) showed progressive reduction of the pubic diastasis and she was gradually ambulated thereafter. Presently, 1 year post partum patient is asymptomatic with normal gait. Clinically, the hip is stable and no limb length discrepancy.

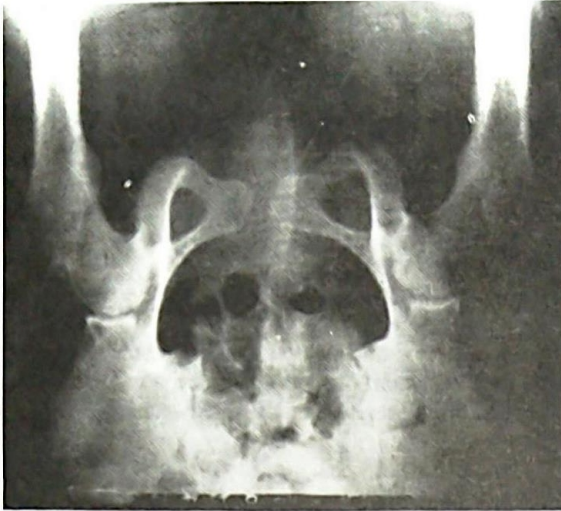


Fig. 1b

Case III

A.O a 30 year-old woman Gravida 2 para 1+0 (1 alive) was admitted in labour at gestational age of 41+ weeks with cephalic presentation. She had oxytocin augmentation of labour lasting 2 hours.

She was delivered of a live female infant weighing 3.5 kg. She had episiotomy which was repaired. She developed pain over pubic region a day after delivery while attempting to ambulate.

Examination revealed tenderness over the pubic symphysis. Pelvic radiograph (Fig. 2) confirmed 20 mm pubic symphysis diastasis. She was managed conservatively on bed rest and when seen at follow-up clinic, she was asymptomatic with normal gait.



Fig. 2

Discussion

Symptomatic spontaneous pubic symphysis diastasis following vaginal delivery is considered to be rare but in actual fact, it occurs more frequently than is generally believed^{2,3}. The rarity of this clinical condition is probably due to its under diagnosis. The literature reviewing spontaneous separation of pubic symphysis following vaginal delivery is very scarce and the opinions about its incidence are divided

[2,4]. Cibils cites Boland who found a frequency of 1 in 20,000 deliveries [4,5,6,8,9]. The variations in the incidence is partly due to the different criteria used for diagnosis by the authors as well as the inclusion of antepartum and traumatic separation in some studies [3]. Boland in another write up noted an incidence of 1 in 685 at the Boston lying-in hospital, stating that the condition was much more frequent than was realised [4].

The aetiology of the rupture of pubic symphysis is not well known but many authors have advanced several hypotheses for this condition following vaginal delivery [3,4]. Elasticity of the ligaments of the pubic symphysis and sacroiliac joints under the influence of progesterone and relaxin is known to be increased in pregnancy and this allows for greater elongation of these ligaments before they are rendered incompetent at a critical level during child birth [1,2].

According to Trillat *et. al.* [2,7], at the limit of elasticity during delivery, a symphyseal gap of 25-35 mm has been recorded. When this limit is exceeded the ligaments rupture (especially the anterior symphyseal ligaments) and this is propagated leading to the rupture of the symphysis itself. This phenomenon is more frequent in multiparous mothers where previous relaxation of the ligaments has occurred than in primiparas. Other predisposing factors include precipitous labour with probably large infants, cephalopelvic disproportion, malpresentation, malposition e.g. occipito-posterior as seen in one of the case reports and assisted delivery using forceps or vacuum [3,4]. Prenatal separations of the symphysis pubis occurs occasionally with no antecedent history of trauma [4].

The diagnosis of this condition presents no problem as this is almost always made on clinical grounds and x-ray is rarely necessary for diagnosis [3,4]. X-ray is only useful for confirmation, in detecting the involvement of sacroiliac joints and for follow-up purpose. The onset of symptoms varies between immediate postpartum period to days after delivery depending on the degree of separation [3]. Almost without exception the prime symptom is pain in the symphyseal region and sometimes in the lower back which may radiate down the thigh and legs because of the involvement of sacroiliac joint in a hinge-like effect [3,4]. As a rule, the hinging effect on this joint is thought not to be harmful unless the separation is 40 mm or greater [1,4,6].

The treatment protocols for this obstetric injury vary depending on the degree of diastasis and severity of the presenting features. According to Cibils [2,3,7], absolute bed rest on a frame board inserted between the bed springs and mattress will readily relieve the usual sagging of the bed thus removing the tension and strain from the sacroiliac joints and symphysis pubis thereby relieving the pain. The use of adhesive strapping 'elephant sling', canvas sling enveloping the pelvis and butterfly braces have been applied in the earlier cases and though effective, required long hospital stay and a constant follow-up to maintain correction of disability [3,4].

Hammock suspension for a period of three weeks has been very useful. Use of Boland belt around the hip is based on the same principle as circular adhesive strapping and of course the role of adequate and potent analgesics cannot be overemphasized. In our case reports, patient was managed with pelvic sling suspension for 10 days and thereafter commenced on gradual ambulation while the remaining two were managed on absolute bed rest for 10-14 days and commenced on gradual ambulation.

The long-term result of this condition remains difficult to evaluate. This condition is different from traumatic

separation of the pubic symphysis as it is due to hormonal effects on the ligaments and most of the cases could be successfully managed conservatively.

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