



A review of 4 cases of Post-Partum Diastasis of the Pubic Symphysis and Outcome of conservative management: A hospital based study from western Nepal.

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ABSTRACT

Background: Rupture of symphysis during vaginal delivery is a relatively rare condition. We are reporting here 4 cases from 4 different places .The authors observed this rare occurrence while working in Bhutan, North Africa and India and Nepal.

Four different parturient women suffered rupture of their symphysis pubis during vaginal delivery. The first one due to shoulder dystocia and the Primi Para due to forceps delivery and 3rd and 4th one while delivering at hospital .

All of them experienced significant pain and difficulty in walking following the injury. Symphyseal separation was managed successfully with physical therapy and activity restriction and immobilization of the joint by applying the Elastoplasts around the joints.

A diagnostic tool for this condition is an antero- posterior X ray of the pelvis.

Conclusion: severe symphyseal rupture during vaginal delivery can be managed without surgery. Current literature suggests that conservative therapy with oral analgesics with physical therapy gives good results.

KEYWORD: Pubic symphysis diastasis, vaginal delivery, pubic bone separation.

INTRODUCTION

The pubic symphysis is a secondary cartilage like joint classified as amphi -arthrosis covered by a layer of hyaline cartilage with an interposed softer fibro-cartilaginous disc acting as a buffer. It is a joint that allows only very limited movement except under hormonal stimulation in third trimester of pregnancy. Historically considered a rare event, a review of the literature finds a wide variation in the estimate of incidence ranging from 1:300 to 1 : 30,000^{1,2,3}. Scriven et al ⁴ reported 1: 800 in his series. The diagnostic tool for this condition is an antero-posterior x-ray of the pelvis.

Factors contributing to rupture of symphysis pubis during vaginal delivery are poorly defined. The injury is thought to be caused by fetal head exerting pressure on pelvic ligament which have been weakened or relaxed by the hormone progesterone and relaxin .McRobert's maneuver which is generally safe may result in pubic symphysis diastasis, especially when excessive force is used or there is prolonged placement of the legs in hyper flexed position as reported by seth & culligan et al ^{5,6,7}.

A pubic diastasis can be suspected if the patient complains peri /post partum acute and persistent pain in the pelvic area (both iliac fossa and pain in lower limb)

Description of cases :

Case 1 :

Mrs Ganga khadka, 30 years old, 3rdpara delivered a male child weighing 4.1 Kg presented to obstetrics emergency department in nepalgunj medical college in Feb. 2012 after spontaneous vaginal delivery in peripheral hospital (Surkhet mid western regional hospital) , there was history of prolonged labour and trauma . interference was done due to shoulder dystocia. On first post partum day. She was admitted with complaints of severe pain in the suprapubic region as unable to stand, walk or sit properly because of pain

On local examination per abdomen uterus was 18 weeks size, well retracted .Acute tenderness was present in the region of symphysispubis, tenderness was aggravated on side to side movement. She had no evidence of sepsis or urinary retention. A clinical diagnosis of pubic bone diastasis was considered pelvicxray showed disruption of pubic symphysis by 2.7 cm (vide figure 1)

Case 2:

A primipara 23 years old was admitted to a one of the hospital in Orissa , India followed by low forceps delivery with episiotomy .it was male child weight 3.5 kg was delivered with apgar score of 8/10 (I min) and 10/10 after 5 minutes. The patient was complaining severe suprapubic and ileoscaral pain. Her height was 157 cm she was average built and moderately anemic. A pelvic X-ray(not available) revealed separation of symphysis pubis about 2 cm . Patient was fitted with adhesive tape strapping. She required hospitalisation for 12 days. Plaster or binder is used to ensure the patients immobilisation.

Case 3:

Pema Lhaden , 35 years old G4 para 3 was admitted in a Regional Referral hospital of Eastern Bhutan , Mongar , for safe delivery in the year 2009 . On second post partum day while going for morning toilet she complained of severe pain over the mons pubis and back and was totally unable to move after that.. symphyseal separation was suspected and X ray was taken and it shows clear separation of the symphysis pubis of more than 3 mm .Orthopedic surgeon was consulted and conservative approach was given as mentioned in the table .

Case 4

Fatima Bintu, a 39 years old G9P7+2 was admitted in one of the university hospital in Somaliland , north Africa in the year 2013 for safe delivery . Ist stage went well with out any complication.she reported popping sound during late second stage of delivery and Felt and heard crackling immediately before crowning. later on she developed a right labial hematoma with swelling in the hip , buttock and groin. She could not move at all after delivery and on taking X ray her separation of the symphysis was confirmed .

Treatment :

Since the separation of the symphysis was less 3cm the decision was taken jointly with orthopedic surgeon to continue with conservative management along with Physiotherapist consultation.

Adhesive tape strapping and pelvic strapping was done by Elastoplasts. Indwelling catheter was inserted. The patient was put on prophylactic antibiotics and adequate analgesics and anti inflammatory drugs (ibuprofen and paracetamol). Follow up after 3 months shows decrease in pain at the suprapubic region. She was able to walk with support. Catheter was removed repeat x ray of pelvis was taken which showed good alignment .

Table 1 : Details of patients profile

Patient	Gravida /parity	Estimated gestational age at delivery (weeks)	Delivery types	Induction/augmentation	Analgesics used	Sex / birth wt .	Episiotomy /laceration	Sympheseal separation(on Xray mm)
1 .	G3 P201 0	41w 0/7	Spontaneous Vaginal delivery	Not documented	No intrapartum analgesia	male 4.01 kg	Right mediolateralepisiotomy /manueveres for Shoulder dystocia	27
2.	G1 P0	40w 0/7	Assisted VD with forceps	oxytocin	Pethidin	Male 3.5 kg	Medial episiotomy	25
3.	G3 P200 2	39 weeks 0/7	SVD	None	epidural	Male 4.97 kg	None	29
4	G9 P701 6	40weeks 4/7	SVD	none	epidural	Male 4.05 kg	Medio lateral episiotomy ;3 nd degree laceration : right vulvar hematoma	33

Table 2 : Details of peri-partum and post partum symptoms and treatment modalities .

Patient	Antepartum symptoms	Post partum symptoms	Treatment
1	Non reported	Supra pubic and sympheseal pain and tenderness exacerbated by movement ;anterior pubic swelling and lumbar/sacroiliac pain	PT* consultation, pelvic binder / walker : pain controlled NSAIDS Discharged on 7 th day
2	Not reported	Persistent suprapubic and left groin pain exacerbated by movement : weakness in the lower extremities and sensation of pubic separation when rising	PT *consultation, pelvic binder / walker : pain controlled NSAIDS Discharged on 12 th day after satisfaction ambulation
3	Not reported	Suprapubic tenderness with palpable defect in symphysis : 0-1/5 strength in legs bilaterally, straining discomfort and sensation of pubic separation when rising legs weak and on standing ; ambulation was not possible.	PT*consultation, pelvic binder / walker : pain controlled NSAIDS Discharged after 14 days after satisfactory ambulation
4.	Heard popping sound in pubic region during second stage Felt and heard crackling immediately before crowning	Right labia majora swelling noted immediately post partum leg, hip and buttock ; difficulty with ambulation and voiding	Evacuation of hematoma pelvic binder /walker, pain controlled with NSAIDS; , follow up for residual sacroiliac pain Discharged after 3 weeks .

PT* = physiotherapy

DISCUSSION

A pubic diastasis must be suspected if the patient complains of acute and persistent pain in the pelvic area. The treatment can be conservative and surgical. Pedrazzini⁸ et al reported conservative treatment .

Pubic bones are joined together anteriorly by symphysis pubis. The structure consists of fibro cartilage and superior and inferior pubic ligaments .The ligaments of pubic symphysis and sacroiliac joints become lax during pregnancy, Sekhare et al⁹. Diagnosis is usually clinical. X-ray and ultra sonography may help in corroborating the diagnosis.

Separation of symphysis pubis of 1 cm or less is physiologic and does not require treatment. A separation of more than 1 cm represents partial or complete rupture and usually symptomatic. A separation more than 4 cm is usually associated with involvement of sacroiliac joints. Treatment is reduction and tight pelvic binding as suggested by Cullingan et al⁶. Prognosis for subsequent pregnancy remains good.

Numerous factors have been implicated like precipitous labor, difficult forceps delivery, cephalopelvic disproportion, multiparity, previous trauma and abnormality, osteomalacia ricket, tuberculosis, congenital dysplasia, chondromalacia.

Recovery is achieved in 6 to 8 weeks or slightly longer in few cases .Complication is reported with separation of symphysis, non union, pubic arthritis, osteitis pubis, vaginal laceration, urethral injury and infection⁵.

Surgical intervention would have achieved the desired anatomical and greater stability. But mothers could not breast feed due to anesthesia, antibiotics and thromboembolic prophylaxis. Synthesis with plate and screw would lead to cesarean delivery if patient becomes pregnant again.so we suggest conservative management with adhesive tape and analgesics in moderate degree of separation of symphysis pubis.

This condition may present in early or late postpartum period. It may present asymptotically in patients and later presents with varying degree of disability ranging from suprapubic pain to inability to bear weight or inability to pass urine. The recovery is faster if it is detected earlier. Surgical intervention and plating is the preferred method if waddling gait and inability to do routine chores Kotwal PP et al¹⁰.

CONCLUSION

Pubic diastasis is an uncommon injury that should be considered when evaluating patients in post partum period who are experiencing suprapubic, sacroiliac pain or pain in the thigh. Treatment of this condition is bed rest, strapping and analgesics. Current literature suggests that conservative therapy provides good long term result in most patients.



Figure1: The x-ray of the case 1 showing separated symphyseal diastasis (27 mm).



Figure 2: The x ray showing a normal distance of pubic bones after 12 weeks of treatment (case 1)

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