Acute Intrapartum Rupture of the Pubic Symphysis Requiring Resuscitation and Surgical Intervention: A Case Report

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Abstract

Background: Pubic symphysis rupture significant enough to cause serious complications or require surgical intervention is exceedingly rare. Here we review the literature and examine the details of a unique presentation.

Case: A 27-year-old woman presented in labour at 34+6 weeks gestation after an uncomplicated monochorionic-diamniotic twin pregnancy. After vaginal delivery, she developed a substantial labial hematoma. Hours later, she became hemodynamically unstable. Imaging revealed a 4.7-cm pubic diastasis and a small arterial tear. One week later, the diastasis had expanded to 6 cm on X-ray. As a result, the patient underwent surgical intervention. She was discharged home on postpartum day 21 and remained non-weight−bearing for 8 weeks.

Conclusion: Pubic symphysis rupture is a potentially life-threatening obstetrical complication that requires early recognition and effective multidisciplinary care.

Résumé

Contexte : Il est extrêmement rare qu'une rupture de la symphyse pubienne occasionne de graves complications ou soit assez importante pour qu'une intervention chirurgicale s'impose. Nous présentons une revue de la littérature et évaluons un cas étonnant.

Cas : Une femme de 27 ans ayant eu une grossesse monochoriale biamniotique sans complication s'est présentée en travail à 34+6 semaines de gestation. Après avoir accouché par voie vaginale, elle a développé un hématome important au niveau des lèvres. Quelques heures plus tard, son état hémodynamique est devenu instable. Des tests d'imagerie ont révélé une diastase de la symphyse pubienne de 4,7 cm ainsi qu'une petite déchirure artérielle. Des radiographies exécutées une semaine plus tard ont révélé une diastase de 6 cm. La patiente a donc été opérée. Elle est rentrée à la maison 21 jours après son accouchement et n'a pas pu faire de mise en charge pendant 8 semaines.

Conclusion : La rupture de la symphyse pubienne est une complication obstétricale potentiellement mortelle; c'est pourquoi un diagnostic précoce et l'intervention d'une équipe multidisciplinaire sont nécessaires.

Key Words: Labour, pregnancy, twins, pubic symphysis diastasis, pubic symphyseal rupture, Destot sign

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INTRODUCTION

Separation of the pubic symphysis greater than 10 mm is considered pathologic.[1] This is generally diagnosed clinically and confirmed with imaging.[1,2] Conservative management is preferred.[1,2] Risk factors for this unusual obstetrical complication have been postulated but have been difficult to confirm. Nonetheless, no obvious risk factors were present in this case. Serious complications are exceedingly rare. In this paper, we describe a unique, dramatic presentation.

THE CASE

The patient was a healthy 27-year-old woman with an uncomplicated medical history. She had been followed by the Maternal Fetal Medicine service for a spontaneously conceived, uncomplicated monochorionic-diamniotic twin pregnancy.

She presented to triage at 34+6 weeks gestation with spontaneous rupture of membranes and early labour. Her cervix was 3 cm dilated. Her pelvis was deemed to be clinically adequate. Bedside ultrasound confirmed vertex/vertex presentation. Her last formal ultrasound had been 2 days prior which reported Twin A measuring at the 34th percentile and Twin B measuring at the 12th percentile with both fetuses having a biophysical profile of 8/8 and normal Dopplers. She was admitted to Labour and Delivery in anticipation of a spontaneous vaginal delivery.

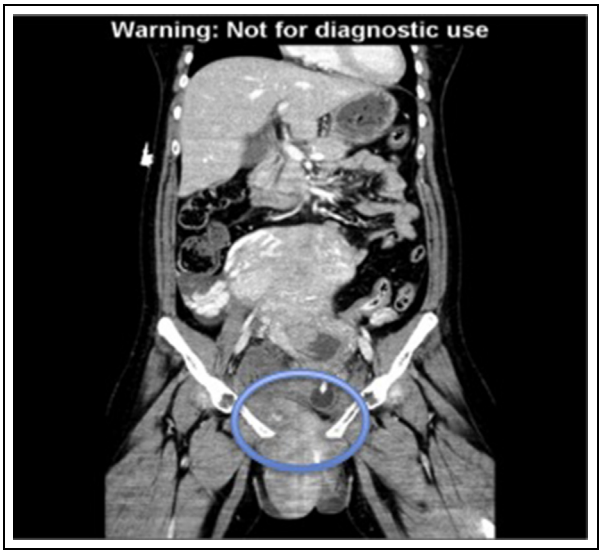
The patient's labour progressed uneventfully. She had a difficult second stage, despite effective pushing for over 2 hours and a functional epidural. During active pushing, the patient shrieked, "I feel like my bones are cracking!" on several occasions. Both babies delivered in the occiput posterior position and she required a mediolateral episiotomy.

Twin A weighed 2230 g (male) and Twin B weighed 2290 g (male). Apgar scores for Twin A were 8 and 8 at 1 and 5 minutes, respectively. Apgar scores for Twin B were 8 and 9. Arterial and venous cord gases for Twin A were 7.21 and 7.19, respectively, and 7.18 and 7.17 for Twin B.

The patient developed severe labial swelling during repair of her second-degree perineal laceration/episiotomy within minutes of delivery. A Foley catheter was placed. Repeat examination of the vaginal walls and cervix did not reveal any lacerations. Rectal exam was also normal. STAT bloodwork revealed a drop in hemoglobin from 127 to 109. Vitals were stable. Over the next 90 minutes, the hematoma remained visually unchanged and the patient was otherwise clinically well. She was transferred back to Labour and Delivery for observation.

Two hours later, the team was called to the bedside for confusion and decreased level of consciousness. The patient's blood pressure dropped to 90/60 and her pulse was 120 and thready. Repeat bloodwork revealed a hemoglobin of 83. Anesthesia was called and transfusion of 2 units of packed red blood cells was initiated. The patient was transferred to the ICU and intubated. On examination, the hematoma remained unchanged. Interventional Radiology was consulted and the patient was sent for a STAT CT angiogram with contrast for consideration of arterial embolization. A selected image from the CT scan is shown in Figure 1. Injury to a small branch of the internal pudendal artery was queried that was not amenable to embolization. It was postulated that the arterial injury and resultant hematoma were secondary to a distraction injury of the pubic symphysis with significant pubic diastasis measuring more than 4 cm.

Figure 1. Selected image from CT abdo/pelvis. This image highlights the pubic diastasis (circled), here measuring 4.7 cm, as well as the large hematoma involving both labia, the mons pubis and peripubic space with extension into the pre-peritoneal space. The uterus is deviated cephalad.



The patient remained hemodynamically stable in the ICU overnight. She received a further 2 units of packed red blood cells the next morning and was extubated. Orthopedic Surgery was consulted on postpartum day 1 for severe diastasis. After pelvic X-ray, conservative management was recommended.

The patient remained unable to bear weight. Repeat pelvic X-ray was ordered on postpartum day 7. This demonstrated worsening of the diastasis to 6 cm. She therefore underwent an open reduction and internal fixation (ORIF) with orthopedic surgery on postpartum day 8 (Figure 2).

On postpartum day 11, Plastic Surgery was consulted for poor wound healing and necrosis of the extensive vaginal hematoma. Conservative management was effective. The patient was discharged home on postpartum day 21. On routine 6 week postpartum follow up, the patient's hematoma was healing well and the Foley catheter was removed. Both twins were doing well. On the recommendation of Orthopedic Surgery, she remained non-weight–bearing for 8 weeks.

DISCUSSION

Separation of the pubic symphysis in the obstetrical population has a reported incidence ranging from 1 in 300 to 1 in 30 000 deliveries.[1] Symptoms include the sudden onset