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Rupture of the Symphysis Pubis During Vaginal Delivery Followed by Two Subsequent Uneventful Pregnancies

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BACKGROUND: Rupture of the symphysis pubis during vaginal delivery is a rare but debilitating complication. Factors contributing to rupture are poorly defined.

CASE: A healthy primigravida suffered a rupture of her symphysis pubis during an otherwise uncomplicated vaginal delivery. She experienced significant pain and difficulty walking for 6 months after the injury. Her 5-cm symphyseal separation was managed successfully with physical therapy and activity restriction. The patient's two subsequent deliveries (one vaginal and one via cesarean delivery) were uneventful.

CONCLUSION: Severe symphyseal rupture during vaginal delivery can be managed without surgery. Risk factors for rupture are not well defined. Based on a literature review, there is a significant risk of repeat symphyseal rupture with subsequent vaginal delivery. (*Obstet Gynecol* 2002;100:1114–7. © 2002 by The American College of Obstetricians and Gynecologists.)

Rupture of the symphysis associated with vaginal childbirth is a rare and debilitating disorder. Very little information exists regarding the management of subsequent

pregnancies. We present a case of a woman with a 5-cm symphyseal separation with vaginal delivery followed by two subsequent normal pregnancies.

CASE

A young, healthy primigravida experienced spontaneous rupture of membranes followed by spontaneous labor at 37 weeks' gestation. Her pregnancy had been uneventful. Cervical dilatation progressed to 4 cm 2 hours after her membranes ruptured and she was given epidural anesthesia. She progressed through the active phase of labor without oxytocin augmentation, and was fully dilated 6 hours after the placement of her epidural catheter. She then pushed for approximately 30 minutes. During the final few contractions, the McRobert maneuver was used although there was no apparent indication to do so. The patient and the delivering physician heard a loud pop while she was pushing in this position during one of the final contractions. Within 2 minutes of that sound, she delivered a healthy 6 lb 14 oz boy whose Apgar scores were 9 and 9 at 1 and 5 minutes, respectively. The third stage of labor and immediate postpartum period were uneventful. Approximately 2 to 3 hours after her epidural catheter was removed, the patient reported severe sharp suprapubic and iliosacral pain, and she was unable to stand or walk without assistance. Physical examination at that time was remarkable only for extreme suprapubic tenderness to palpation. A pelvic x-ray (Figure 1) revealed a 5-cm separation of her pubic symphysis. The orthopedic surgery service was consulted and the patient was fitted with a pelvic binder. She required postpartum hospitalization for 18 days, and during that time she remained primarily in the supine position with a pelvic binder in place. She could not move her lower extremities without extreme pain until 10 days postpartum. During that time she was periodically manually rotated from side to side in an effort to prevent pressure ulcers. She began physical therapy 14 days postpartum, and initially she could not walk with-

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Figure 1. Pelvic x-ray several hours after 5-cm separation of the pubic symphysis during spontaneous vaginal delivery. The vertical radio-opaque structures are parts of an external pelvic binder.

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out the use of a walker. She underwent twice weekly physical therapy for 3 months, and could not walk without crutches until 6 months postpartum. Her bowel and bladder functions were normal throughout her postpartum course. She required full-time home health care for 3 months to provide care for her son and herself. One year after the rupture of her symphysis she had returned to normal activity. A pelvic x-ray (Figure 2) taken 2 years after her injury revealed an asymptomatic 1.3-cm residual separation of her symphysis (Figure 2).

Two years after the rupture of her symphysis, she became pregnant again. Her second pregnancy was uneventful. She did not appreciate any “extra” pain in the suprapubic area throughout her antepartum course. Nevertheless, she was not willing to deliver vaginally out of fear of recurrent rupture. Her cesarean delivery and postpartum course were uneventful. Her daughter was healthy and weighed 6 lb 7 oz.

Two years later she reached term with her third uneventful pregnancy. She again gave informed consent, but this time she decided to undergo trial of labor. Her decision to deliver vaginally was based on her strong desire to experience a “normal” birth. At 38 weeks and 5 days’ gestation her cervix was found to be favorable, and her labor was induced with oxytocin. Her labor course and delivery were unremarkable. Eight hours after induction was initiated, she delivered a 7 lb 5 oz girl

spontaneously. She was discharged home on the 2nd postpartum day and experienced an uneventful postpartum recovery. Now, 5 years after her last delivery, she remains asymptomatic despite regular vigorous exercise including running and tennis.

COMMENT

Relaxation of the symphysis pubis and sacroiliac joints normally begins in the first half of pregnancy, increases during the third trimester, and returns to baseline within 5 months postpartum.¹ When widening of the symphysis pubis reaches 1 cm, patients usually become symptomatic and can be classified as having symphyseal separation.¹ The reported incidence of symphyseal separation ranges from one in 300 to one in 5000 live births.^{2,3} Symptoms include severe iliosacral and suprapubic pain as well as a waddling gait.³ Interestingly, in patients with a greater than 1-cm separation, neither the degree of separation nor relaxin levels directly relate to the severity of symptoms.⁴ Suggested etiological factors include previous symphyseal rupture, precipitous labor, cephalopelvic disproportion, abnormal presentation, previous trauma, epidural anesthesia, and use of the McRobert maneuver.^{3,5,6} Because our patient’s labor course was not characterized by any of the other factors associated with symphyseal rupture, we assume the use

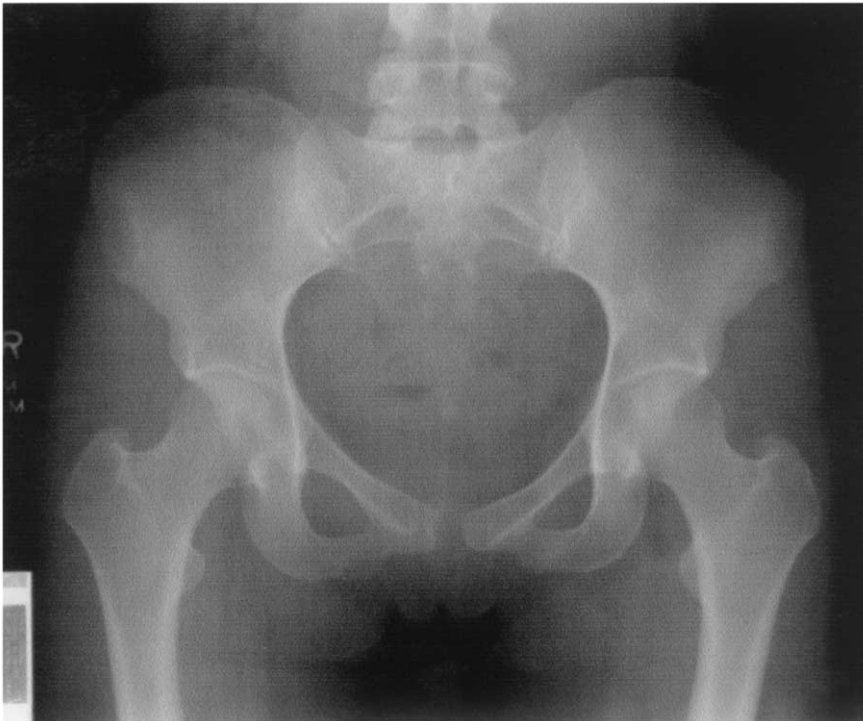


Figure 2. A 1.3-cm residual separation of the pubic bones 2 y after rupture during vaginal delivery.

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of the McRobert maneuver was the cause of her problem. Although the maneuver is supposed to be used only in cases of shoulder dystocia, women are often prophylactically placed in this position during the second stage of labor. This case illustrates at least one potential bad outcome from inappropriate use of the McRobert maneuver.

Current literature suggests that conservative therapy provides good long-term results in most patients; therefore consideration of surgical fixation should be reserved for separations of 4 cm or greater.⁷

In the reported case, the patient experienced one uneventful cesarean delivery and one normal vaginal delivery after separation. No other case report about symphyseal rupture includes this type of follow-up information. We performed a MEDLINE search for the dates 1966 to January 2002. We then performed an Index Medicus search dating back to 1900. Finally, we reviewed all of the referenced articles in the citations generated by our searches. We identified only 19 other accounts of vaginal delivery in patients with a symphyseal separation in a prior pregnancy. Of these, nine were uneventful; however, 11 of these women suffered re-separation and/or a return of symptoms.^{3,8-10}

We conclude that, given the significant risk of re-separation and return of symptoms, it is reasonable to offer

cesarean delivery for patients with a previous symphyseal separation during a prior vaginal delivery.

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Triplet Cervical Pregnancy Treated With Intraamniotic Methotrexate

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BACKGROUND: Multifetal cervical pregnancy is very rare. We are reporting a case of a triplet cervical pregnancy that was treated with direct intraamniotic instillation of methotrexate.

CASE: A young multiparous woman was diagnosed as having three gestational sacs in her uterine cervix with embryonic cardiac activity observed within one of the sacs. She became pregnant by natural ovulation and coitus. After initial failure with a single-dose intramuscular injection, the patient was successfully treated with an intraamniotic methotrexate injection under the guidance of transvaginal ultrasonography. Her reproductive capability was preserved.

CONCLUSION: Direct intraamniotic injection can be considered as treatment for multifetal cervical pregnancy. (*Obstet Gynecol* 2002;100:1117–9. © 2002 by The American College of Obstetricians and Gynecologists.)

The incidence of multifetal pregnancy is relatively low.¹ Furthermore, cervical pregnancy is the most rare form of ectopic gestation, and if not detected and treated early enough to prevent severe bleeding, it may become an obstetric emergency that requires an extensive surgical procedure. Recent advances in ultrasonography and availability of quantitative β -human chorionic gonadotropin (β -hCG) assay allows early diagnosis and treatment. A successful outcome in the management of cervical pregnancy with methotrexate has been reported.²

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We are reporting a case of triplet cervical pregnancy treated with intraamniotic methotrexate not only because of its rarity, but also to emphasize the efficacy of direct intraamniotic instillation of methotrexate for the treatment of viable cervical pregnancy.

CASE

A young multiparous woman was referred with intermittent vaginal spotting during her first trimester of pregnancy. The patient's vital signs were stable, and her abdomen was soft and nontender. Although there was a small amount of blood in the vagina, the cervix was normal in shape and size, and the external cervical os was closed on speculum examination.

A transvaginal ultrasonogram (using a General Electric Model LOGIQ 500 machine with a 7.5-MHz transducer, General Electric, Milwaukee, WI) revealed three gestational sacs within the cervical canal (Figure 1). The mean diameter of each of the sacs was 8.6 mm, 8.4 mm, and 8.5 mm. In gestational sac 1, there was a viable embryo with a yolk sac. The crown-rump length was 3 mm. No embryo but a yolk sac was identified in sac 2, and none in sac 3. The quantitative serum β -hCG was 22,965 mIU/mL, and the hemoglobin was normal.

The patient strongly desired to preserve her fertility potential and agreed to nonsurgical conservative treatment according to our clinical study protocol of single-dose methotrexate administration. Informed written consent was obtained, and the study protocol was approved by the Clinical Research Committee of our hospital.

A single dose of methotrexate (1 mg/kg) was given intramuscularly on the first day of admission. On the fifth day of treatment, her serum β -hCG was 23,386 mIU/mL, the mean diameter of gestational sac 1 increased to 17 mm, and cardiac activity was still present on transvaginal ultrasonography. The other two sacs remained unchanged in size, but the presence of a yolk sac was identified in sac 3.

Under transvaginal ultrasonographic guidance, 50 mg of methotrexate was injected into gestational sac 1 after complete aspiration of amniotic fluid with an 18-gauge ovum aspiration needle through the guide attached on