

Pelvic organ prolapse complicating second trimester pregnancy: a rare condition

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Abstract

Uterine prolapse complicating pregnancy is a rare event. We report a case of a 35-year-old woman with uterine prolapsus at 24 weeks of gestation. Our case was managed conservatively with a ring pessary. Postnatally the uterine prolapse recovered spontaneously. At 12 months postpartum follow-up there was no evidence of uterine prolapse. Pessary might be the first line treatment for uterine prolapse during pregnancy.

Keywords: cesarean section, pessary use, pregnancy, uterine prolapse.

Introduction

Uterine prolapse rarely occurs during pregnancy. The complications associated with this condition include patient discomfort, cervical desiccation and ulceration, urinary tract infection, acute urinary retention, abortion, preterm labor, and even maternal death⁽¹⁾. The management of pregnancy, labor, and delivery varies considerably for patients with this condition. The treatment options range from conservative management including bed rest and pessary insertion⁽²⁾ to surgical methods including abdominal hysteropexy performed during a cesarean section⁽³⁾.

In the present report, we describe the case of a patient who developed a stage 4 uterine prolapse with a hypertrophied cervix protruding through her introitus, which was complicated by threatened preterm labor. We successfully treated the patient by pessary insertion from 24 weeks of to 35 weeks of gestation.

Case report

A 35-year-old pregnant woman (gravida 4, para 2, abortus 1) presented to our antenatal outpatient clinic at 24 weeks of gestation with a sensation of vaginal fullness, a firm mass in the lower vagina protruding through the vaginal introitus, and uterine contractions. She did not have any history of prolapse during two previous pregnancies, which resulted in two uncomplicated spontaneous vaginal deliveries. The fetal weight of the infants were 3250 and 3140 g. Six years prior to the current presentation, the patient had a spontaneous abortion after 8 weeks of pregnancy. Her medical and obstetric history did not indicate any remarkable findings with regard to pelvic trauma, prolapse, or stress incontinence. Upon admission, a pelvic examination performed in the dorsal lithotomy position revealed a stage 4 uterine prolapse with point C as the leading edge, according to the pelvic organ support quantification staging system⁽⁴⁾. Although the cervix was enlarged and slightly edematous with marked ectropion, no ulceration or desiccation was noted (Figure 1). The patient was immediately hospitalized because she experienced uterine contractions every 3 minutes, as indicated by a tocodynamometer. Routine laboratory tests and urine cultures were performed and vaginal secretions were examined. An

ultrasonography examination indicated an enlarged uterus and a female fetus with a gestational age of 24 weeks, as well as a normal amniotic fluid index and a positive fetal heart rate. No major fetal abnormality was identified, and uterine contractions were inhibited by oral nifedipine administration and hydration. In addition, corticosteroids were administered for accelerating fetal lung maturation. The os remained close, and conservative management, involving bed rest and insertion of a ring pessary, was initiated. Thereafter, she was discharged in a healthy condition and was advised to undergo routine antenatal follow-up visits.

During a subsequent visit, a vaginal examination was performed to ensure that the pessary was appropriately positioned. At 35 weeks of gestation, we noted the onset of acute premature uterine contractions and the ring pessary was easily removed. A positive result obtained following a nitrazine test indicated the occurrence of preterm premature rupture of membranes with cervical dilatation and effacement. She was subsequently admitted to the hospital, and external fetal heart monitoring indicated the presence of repetitive deep late decelerations that were unresponsive to intrauterine resuscitation. Therefore, due to fetal distress, the patient underwent an emergent cesarean section. The prolapsed uterus was manually reduced, and a low-segment cesarean section was performed. She successfully delivered a female infant weighing 2800 g with 1- and 5-minute Apgar scores of 8 and 10, respectively.

The postnatal period was uneventful. Five days after delivery, she was discharged to home in a healthy condition. A follow-up examination performed at 4 weeks postpartum indicated no evidence of uterine prolapse, and the patient did not report any complaints as well. Additional follow-up examinations at 6 and 12 months postpartum also showed no evidence of uterine prolapse.

Discussion

The occurrence of complications of pelvic organ prolapse during pregnancy is rare, with a reported incidence of 1 in 10,000 to 15,000 deliveries⁽⁵⁾. The etiology of uterine prolapse is probably multifactorial, and may include previous childbirth, previous pregnancies involving macrosomic infants,

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congenital disorders of connective tissue, pelvic neuropathies, pelvic trauma, and increased intra-abdominal pressure caused by large uterine and ovarian tumors. In women of reproductive age, the most frequent cause of pelvic organ prolapse complicating pregnancy is trauma during vaginal birth⁽⁵⁾. In the present case, multiparity may have been a risk factor for uterine prolapse. Moreover, the physiologic changes of pregnancy - including cervical elongation and hypertrophy - as well as the physiologic increases in cortisol, progesterone, and relaxin, which lead to a concomitant softening and stretching of the pelvic tissues, can also contribute to prolapse⁽⁶⁾.

Prolapse of the uterus may occur during any trimester of pregnancy, but is usually noted during the third trimester, and is treated by bed rest in a slightly modified Trendelenburg position^(1,6). In the present case, prolapse onset occurred during the second trimester; furthermore, as our patient was ambulant, we could not treat the condition only by bed rest. A prolapse that develops prior to the onset of pregnancy usually spontaneously resolves without any further complications during the second trimester⁽⁷⁾. In addition, uterine prolapse that develops during the early stages of pregnancy initially presents as cervical prolapse that resolves after labor and delivery.

This condition is rarely associated with major risks, such as fetal death and maternal morbidity⁽⁷⁾. Patient discomfort, urinary tract infection, and urinary retention are the most frequently reported antepartum complications⁽⁸⁾. In addition, cervical edema could result in obstructive labor. Cervical laceration and obstructive labor with an incidental risk of rupture of the lower uterine segment have been reported as intrapartum complications⁽⁹⁾.

Preterm labor and delivery is one of the most common complications resulting in neonatal morbidity and mortality in cases of uterine prolapse during pregnancy, and can be easily prevented. Similar to other case reports, our patient exhibited antenatal complications of preterm labor. The standard management of prolapse during pregnancy is still under much debate⁽⁶⁾. Certain conservative treatment modalities for this condition include insertion of intravaginal pessaries, physiotherapy, electrical therapy, and pelvic floor muscle training. The choice of treatment depends on the severity and the patient's preference. The insertion of a pessary is a simple and potentially effective treatment to prevent preterm birth. Groutz and contributors were the first to perform randomized controlled trials on the prevention of preterm births using a cervical pessary in pregnant women with a short cervix, and found a strong beneficial effect of



Figure 1. Uterine prolapse at 24 weeks of gestation with edematous cervix

pessary insertion in women with singleton pregnancies and a short cervix⁽¹⁰⁾. In the present case, we initially inserted a ring pessary to reduce the prolapse. Different types of vaginal pessaries have been used to treat this condition, but they frequently fall out of the vagina. Horowitz and colleagues⁽⁷⁾ reported a case where Mayer's pessary was inserted; however, the pessary fell out of the vagina at 29 weeks of gestation. In the present case, through the insertion of a ring pessary from the 24th week until the 35th week of pregnancy, we were able to successfully treat the prolapse.

In cases where all conservative solutions have failed or prolonged bed rest is impossible, laparoscopic uterine suspension may be performed⁽¹¹⁾. Moreover, cesarean hysterectomy may be a therapeutic option for women with severe pelvic organ prolapse during the third trimester who do not wish to have any more children⁽¹²⁾. Abdominal hysteropexy is an alternative surgical technique for treating uterine prolapse in women who wish to preserve their uterus. A previous report has described that this procedure can be performed during a cesarean section⁽³⁾.

Conclusions

Thus, we believe that obstetricians should carefully monitor patients for the development of prolapse during pregnancy, and should be aware of the potential complications of this condition, including preterm delivery, prematurity, and urinary tract and cervical infections. The management of this condition depends on the gestational age, severity of the condition of the cervix, duration of the prolapse, and the patient's preference. However, the optimal management guidelines for this rare condition are currently unclear. ■

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