Uterine prolapse in a primigravid woman

Jeong Ok Kim¹, Shin A Jang¹, Ji Yeon Lee², Nae Ri Yun¹, Sang-Hun Lee³, Sung Ook Hwang¹

Department of Obstetrics and Gynecology, ¹Inha University Hospital, Inha University School of Medicine, Incheon, ²CHA Bundang Medical Center, CHA University School of Medicine, Seongnam, ³Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, Korea

Uterine prolapse during pregnancy is an uncommon condition. It can cause preterm labor, spontaneous abortion, fetal demise, maternal urinary complications, maternal sepsis and death. We report the case of uterine prolapse in a 32-year-old healthy primigravid woman. She had no risk factors associated with uterine prolapse. She was conservatively treated, resulting in a successful vaginal delivery. This report is a very rare case of uterine prolapse in a young healthy primigravid woman, resulting in a successful vaginal delivery.

Keywords: Pregnancy; Uterine prolapse

Introduction

Uterine prolapse is a common condition in elderly females. However, uterine prolapse during pregnancy is rare, with an incidence of 1 per 10,000 to 15,000 deliveries [1]. It can cause preterm labor, spontaneous abortion, fetal demise, maternal urinary complications, maternal sepsis, and death [2]. Only a few cases of uterine prolapse during pregnancy have been reported and there is no consensus on the efficient management. Therefore, we report a very rare case of uterine prolapse in a young healthy primigravid female who was conservatively treated, resulting in a successful vaginal delivery with literature review.

Case report

A 32-year-old pregnant female, gravida 1, para 0, was referred to the obstetric department for tertiary care at 28+0 weeks of gestation with uterine prolapse. She complained of intermittent vaginal blood spotting after voiding that began 12 days (26+2 weeks of gestation) earlier. Her height and body weight were 157 cm and 55 kg, respectively, and her body mass index was 22.4. Her medical and obstetric history was unremarkable regarding pelvic trauma, prolapse, or stress incontinence. She had no surgical history or family history of connective tissue disease.

However, during the current pregnancy she had needed urinary catheterization several times because of voiding difficulty and urinary retention early in the first trimester. At that time, examination by the local obstetrician revealed no abnormality of her uterus and cervix.

She complained no discomfort including increased urine frequency, dysuria and residual urine sensation. A second-stage uterus prolapse was diagnosed at 27+2 weeks of gestation in the local clinic. Pelvic examination revealed a second-stage prolapse, with point C as the leading edge according to the pelvic organ prolapse quantification staging system uterine prolapse (Aa -1.0, Ba -1.0, C -0.5, gh 2.0, pb 3.0, tvl 9.0, Ap -1.0, Bp -0.5, D -2.0). The eroded cervix was descended to the level of the vaginal introitus. There was no evidence of cystocele or rectocele.

No fetal abnormality was identified by ultrasonography. Es-
Estimated fetal weight was 1,174 g. No uterine mass or pelvic mass was detected. Sonographic examination revealed a short cervix with 17 mm length and a T-shape (Fig. 1A). A progesterone capsule, Uterogestan 200 mg (Besins Healthcare, Bangkok, Thailand) was administrated vaginally daily.

Two weeks later (30+0 weeks of gestation), she was admitted to our hospital again because of regular uterine contractions. Pelvic examination revealed an enlarged and edematous uterine cervix and a second-degree uterine prolapse. The eroded cervix was projecting near the vaginal introitus (Fig. 1B). The cervical orifice was closed. Sonographic examination revealed a more shortened cervix with 10-mm length and a T-shape. Estimated fetal weight was 1,470 g. Acute onset of preterm uterine contractions necessitated tocolytic therapy with a favorable outcome. Corticosteroids were also administered. We recommended bed rest in a slight Trendelenburg position. Vaginal culture at admission revealed mycoplasma infection. She was treated with a single dose of azithromycin 1,000 mg. Follow-up culture revealed no evidence of infection.

At 34+0 weeks of gestation, uterine contractions disappeared without tocolytics. She was discharged. Three weeks later (37+0 weeks of gestation), she was admitted to our hospital again because of regular uterine contractions. The cervix was still prolapsed at the same level and the cervical orifice was opened to about 3 cm width. Latency period to delivery was 5 hours and estimated blood loss was about 400 mL, which was not different with them of normal pregnancy. A live healthy male neonate of 2,670 g was delivered after a 6-hour labor. Apgar scores were 10 at 1 minute and 10 at 5 minutes.

The prolapsed uterus was manually reduced. The postnatal period was uneventful. Two days after delivery, she was discharged in good health and with complete resolution of the cervical prolapse. At follow-up examination 1 and 6 months postpartum, no sign of uterine prolapse was evident.

Discussion

Uterine prolapse during pregnancy most frequently occurs in multiparous women [3]. This report describes a very rare case of uterine prolapse in a nulliparous patient. Besides pregnancy, the patient had none of the known risk factors for uterine prolapse such as uterine mass, obesity, or maternal connective tissue disorder.

A PubMed keyword search for “uterine prolapse,” “prolapsed cervix,” or “pelvic organ prolapse” with “pregnancy” revealed very few reports of uterine prolapse newly diagnosed during pregnancy. In particular, less than 20 cases (only 18 cases) have been reported in the English-language literature since 2000 (Table 1) [1-14]. This is the third reported case of a uterine prolapse in a nulliparous female patient. The first was reported in Turkey and the second was in Japan [4,5]. Also, this is the first case in which the pregnancy ended in a vaginal delivery in a primigravid woman.

Risk factors for uterine prolapse are multifactorial. Both congenital and acquired predisposing factors have been identified. Congenital factors include congenital weaknesses in the pelvic floor such as collagen defects (e.g., Marfan’s syndrome,
Ehlers-Danlos syndrome, abnormal pelvic structure, or a large uterine or ovarian mass resulting in increased intra-abdominal pressure. Obstetrical factors include previous pregnancy, vaginal instrumental delivery, young age at first delivery, previous prolonged second stage of labor, and previous neonatal birthweight. Also, age, family history of uterine prolapse, pelvic trauma history, and increased body mass index were found to be common risk factors for uterine prolapse [6,13]. However, in this case, none of these risk factors was present.

Antepartum complications associated with uterine prolapse during pregnancy are preterm labor and fetal death including abortion. Urinary tract infection and acute urinary retention can occur. Indeed, maternal death has been reported as a complication of uterine prolapse during pregnancy [2].

The most important intrapartum complication is cervical dystocia, which results in inability to attain adequate cervical dilatation. In addition, obstructive labor, as well as cervical laceration and a predisposition to rupture of the lower uterine segment, have been reported [7]. Therefore, some authors recommend elective cesarean section as a preferable mode of delivery to avoid potential intrapartum complications. However, as in this case, if the patient already has a favorably ripened cervix, obstetricians do not have to insist on a cesarean section.

The treatment of choice is conservative management during pregnancy because uterine prolapse usually resolves spontaneously after delivery. Conservative management consists of genital hygiene and bed rest in a slight Trendelenburg posi-
tion, which is managed with close follow-up on an outpatient basis or hospitalization [13]. A suspensory pessary application to protect the prolapsed cervix can also be considered, although this has been thought impractical [4,7]. Recently, cases of laparoscopic uterine suspension during pregnancy were reported, demonstrating an alternative minimal surgical approach. Cesarean hysterectomy with suspension of the pelvic floor or hysteropexy may be performed at the patient’s request [6].

In conclusion, obstetricians should be aware of this rare condition and its complications. To our knowledge, this report is the second case in which the pregnancy ended with a vaginal delivery in a primigravid patient. Although most authors recommend elective cesarean section, the method of delivery should be individualized according to the patient’s preferences, uterine cervical status, and labor progression.

**Conflict of interest**

No potential conflict of interest relevant to this article was reported.

**References**

1. Horowitz ER, Yogev Y, Hod M, Kaplan B. Prolapse and elongation of the cervix during pregnancy. Int J Gynaecol Obstet 2002;77:147-8.
2. Partsinevelos GA, Mesogitis S, Papantoniou N, Antsaklis A. Uterine prolapse in pregnancy: a rare condition an obstetrician should be familiar with. Fetal Diagn Ther 2008;24:296-8.
3. Guariglia L, Carducci B, Botta A, Ferrazzani S, Caruso A. Uterine prolapse in pregnancy. Gynecol Obstet Invest 2005;60:192-4.
4. Buyukbayrak EE, Yilmazer G, Ozyapi AG, Kars B, Karsidag AY, Turan C. Successful management of uterine prolapse during pregnancy with vaginal pessary: a case report. J Turk Ger Gynecol Assoc 2010;11:105-6.
5. Ishida H, Takahashi K, Kurachi H. Uterine prolapse during late pregnancy in a nulliparous woman. Int Urogynecol J 2014;25:1739-40.
6. Karatayli R, Gezginc K, Kantarci AH, Acar A. Successful treatment of uterine prolapse by abdominal hysteropexy performed during cesarean section. Arch Gynecol Obstet 2013;287:319-22.
7. Mohamed-Suphan N, Ng RK. Uterine prolapse complicating pregnancy and labor: a case report and literature review. Int Urogynecol J 2012;23:647-50.
8. Meydanli MM, Ustun Y, Yalcin OT. Pelvic organ prolapse complicating third trimester pregnancy: a case report. Gynecol Obstet Invest 2006;61:133-4.
9. Chandru S, Srinivasan J, Roberts AD. Acute uterine cervical prolapse in pregnancy. J Obstet Gynaecol. 2007;27:423-4.
10. Daskalakis G, Lymberopoulos E, Anastasakis E, Kalmantis K, Athanasiaki A, Manoli A, et al. Uterine prolapse complicating pregnancy. Arch Gynecol Obstet 2007;276:391-2.
11. Lau S, Rijhsinghani A. Extensive cervical prolapse during labor: a case report. J Reprod Med 2008;53:67-9.
12. Toy H, Camuzcuoglu H, Aydin H. Uterine prolapse in a 19 year old pregnant woman: a case report. J Turk Ger Gynecol Assoc 2009;10:184-5.
13. Kart C, Aran T, Guven S. Stage IV C prolapse in pregnancy. Int J Gynaecol Obstet 2011;112:142-3.
14. Cingillioglu B, Kulhan M, Yildirim Y. Extensive uterine prolapse during active labor: a case report. Int Urogynecol J 2010;21:1433-4.