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Uterine prolapse with complete placenta praevia and umbilical hernia in pregnancy: a case report

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Summary

Background: Uterine prolapse in pregnancy is rare but it can cause various complications including abortion, preterm labor, cervical ulceration, urinary tract infection, etc. Risk factors include older age, ethnicity, family history, increased body mass index, higher parity, vaginal delivery, and constipation. *Case:* A nulliparous woman presented with uterine prolapse complicated with complete placenta previa and umbilical hernia. Magnesium sulfate and corticosteroids were administered and prophylactic antibiotic therapy was initiated. A selective low-segment cesarean section was performed at 36^{+3} week because of complete placenta previa and irregular uterine contractions.*Conclusion:* Uterine prolapse is rare in pregnancy but usually complicated with infection and preterm labor. Treatment for uterine prolapse in pregnancy needs to be based on patient's will, gestation, severity of prolapse, and other complications. An elective near-term cesarean section may be the safest delivery mode.

Key words: Uterine prolapse; Pregnancy; Complete placenta previa; Umbilical hernia; Cesarean section.

Introduction

Uterine prolapse during pregnancy is an extremely rare event with an estimated incidence rate of one per 10,000-15,000 pregnancies [1]. Complications of this condition include abortion, preterm labor, cervical ulceration, urinary tract infection, and even maternal death [2]. It also can affect the delivery mode [2]. Management of uterine prolapse during pregnancy should be individualized and conservative solutions are recommended during pregnancy [3-5]. In this report, the authors firstly describe a case of uterine prolapse during late pregnancy in a nulliparous woman with complete placenta previa and umbilical hernia.

Case Report

A 26-year-old nulliparous woman presented to emergency department of this hospital at 33^{+6} weeks of singleton pregnancy because of complete placenta previa with bleeding and stage III uterine prolapse (Figure 1). She first noticed vaginal bulge at the end of the second trimester but did not seek any medical care. She came to this hospital one day after a sudden onset of painless vaginal bleeding. She had no surgical history or any family history of connective tissue disease, but she had umbilical hernia after birth.

On examination, the entire cervix was lying on the vulva and the POP-Q stage was III (Figure 1). Systematic examination showed a thin and bulging abdominal wall (Figure 2). Ultrasound examination revealed an enlarged and deformed uterus with several myomas and the placenta completely covered the internal cervical os. No fetal abnormality was identified. Non-stress test was reactive, and there was no uterine contraction.

Upon admission, routine laboratory tests, vaginal discharge culture, and urine culture were obtained. Urinalysis showed pyocyte positive but urine culture was negative. Prophylactic antibiotic therapy was initiated for placenta previa with bleeding and suspected urinary tract infection. The authors disinfected and carried out manual reduction for the prolapsed cervix. Magnesium sulfate and corticosteroids were administered to inhibit uterine

Figure 1. Stage III uterine prolapse. The cervix appears enlarged, severely edematous, desiccated, and ulcerated with transparent secretions; external cervical os is closed and little bleeding is observed.

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Figure 2. Abnormal structures of umbilicus and perineum. The abdominal wall is thin and bulging (triangle), labia majora, and labia minora are deformed (arrow).

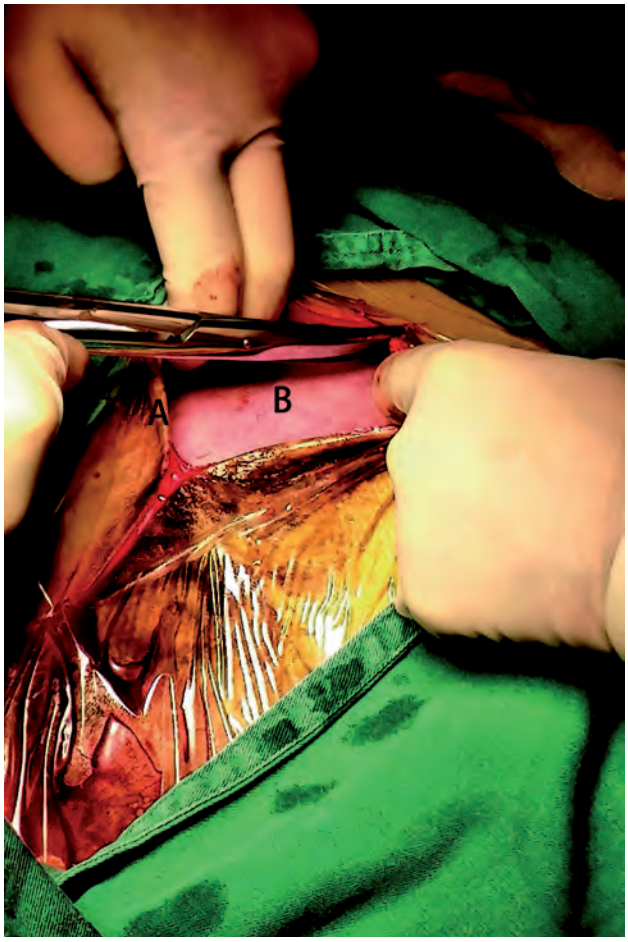

Figure 3. Absences of superficial fascia, rectus abdominis muscle or rectus sheath. The abdominal wall (A) is thin and the uterus (B) is just beneath the skin.

Figure 4. Abdominal wall (A), bladder (B), and uterus(C) are adhered to each other.

con,traction and mature fetal lung respectively.

An elective low segment cesarean section was performed at 36^{+3} week because of complete placenta previa and irregular uterine contractions. During the surgery, the authors noticed the superficial fascia, rectus abdominis muscle, and rectus sheath were absent (Figure 3). The bladder adhered to the anterior abdominal wall (Figure 4). The placenta adhered to the posterior wall of uterus and completely covered the internal cervical os. Finally, a neonate of 2260 grams was delivered. Five days after surgery, the patient was discharged and prescribed with pessary for uterine prolapse. The authors recommended regular follow-up and further treatment for her uterine prolapse and umbilical hernia.

Discussion

Uterine prolapse is rare in pregnancy and usually occurs in multiparous women. However, there have been a total of five cases from 1996 to 2015 in this hospital (Table I) and most of them were nulliparous women with no risk factors. The confirmed risk factors of uterine prolapse include older

Table I. — *Five cases of uterine prolapse during pregnancy in West China Second University Hospital, Sichuan University during 1996 to 2015.*

Year	Age	G&P	Gestational age at onset of prolapse	Stage of uterine prolapse	Risk factors	Treatment of uterine prolapse	Gestational age at delivery	Surgical indication	Delivery mode
1995	28	$G3P0^{+2}$	26^{+4} weeks	Stage I	None	Bed rest and spontaneously resolved	37^{+5} weeks	Patient's will	CS
1998	25	G1P0	About 6 months	Stage II	None	Unknown	Unknown	Unknown	Abortion
2001	35	$G4P0^{+3}$	12^{+6} weeks	Stage I	None	Bed rest and spontaneously resolved	38^{+4} weeks	Patient's will	CS
2006	34	*$G6P1^{+4}$	9 weeks	Stage I	History of vaginal delivery	Bed rest and spontaneously resolved	Unknown	Unknown	Abortion
2015	32	*$G4P1^{+2}$	40 weeks	Stage II	History of vaginal delivery	Pessary after delivery	40 weeks	Inability of cervical dilatation	CS

*G&P: gravidity &parity; CS: cesarean section. *Vaginal delivery.*

age, ethnicity, family history, increased body mass index, higher parity, vaginal delivery, and constipation. Intrapartum variables (macrosomia, long second stage of labor, episiotomy, and epidural analgesia), increased abdominal pressure, and menopause may be potential risk factors [6].

Uterine prolapse usually resolves spontaneously by the end of the second trimester without further complications, but persistent prolapse can result in mild cervical infection, spontaneous abortion, preterm labor, acute urinary retention, urinary tract infection, as well as maternal and fetal mortality [2]. Antibiotic therapy should be considered to prevent intrauterine infection after manual reduction of the prolapsed cervix or to treat urinary tract infection when necessary. Magnesium sulfate and corticosteroids should be administered to inhibit uterine contractions and promote fetal lung maturation when necessary.

As the main intrapartum complications associated with pelvic organ prolapse include inability to attain adequate cervical dilatation, a high rate of cervical laceration, and obstructed labor, previous studies recommended elective cesarean section [2]. However, there is no recommendation on time of delivery. Since this patient had complete placenta previa, the authors performed a cesarean section at 36^{+3} weeks. Other three of five cases that had delivery in this hospital all received cesarean section at different gestational ages (Table I).

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