A Rare Case of Pregnancy Complicated by Bladder Exstrophy and Uterine Prolapse

Leila Pourali[1], Hamidreza Ghorbani[2], Atiyeh Vatanchi[1], Sedigheh Ayati[1], Ghazal Ghasemi[1], Azimeh Golzar[1]

[1] Department of Obstetrics and Gynecology, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
[2] Department of Urology, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran

Received: 11 Feb. 2021; Accepted: 21 Aug. 2021

Abstract- Uterine prolapse and bladder exstrophy (BE) during pregnancy is a rare condition. The aim of this study was to present a rare case of pregnancy complicated by both bladder exstrophy and uterine prolapse. A 39-year-old pregnant woman (gravida 2, para 1) presented to the maternity department at 39 weeks of gestation with labor pain. Physical examination showed regular uterine contractions; the cervix was completely out of the vaginal opening with dilatation of 3 cm and effacement of 30%. She had a history of multiple surgeries for correction of bladder exstrophy and also suffered from uterine prolapse. In active labor, abnormal fetal heart rate tracing happened, so an emergent cesarean section was planned, and a healthy neonate with the normal Apgar score was born. At regular follow-up until four months after delivery, there was no sign or symptom of uterine proplase. Multidisciplinary management of patients with BE and uterine prolapse may result in optimal perinatal outcomes. Uterine prolapse may disappear after delivery, even in the complicated case of bladder exstrophy.

Acta Med Iran 2021;59(9):564-566.

Keywords: Uterine prolapse; Bladder exstrophy; Pregnancy; Complication

Introduction

Bladder exstrophy (BE) is a complex congenital anomaly involving the musculoskeletal system and the urinary, reproductive and intestinal tract (1,2). The reported incidence ranges from 3 to 5 per 100,000 live births and occurs more often in males than females. It is also more frequent in firstborn children (2). Uterine prolapse during pregnancy is a rare condition, and the number has reduced further worldwide over the past decades, probably due to a decrease in parity (3). There are some pieces of literature that reported uterine prolapse or bladder exstrophy during pregnancy (4-6), but the aim of this study was to present a rare case of pregnancy complicated by both bladder exstrophy and uterine prolapse.

Case Report

A 39-year-old pregnant woman (gravida 2, para 1) presented to the maternity department at 39 weeks of gestation with labor pain. Physical examination showed normal vital signs and regular uterine contractions; the cervix was completely out of the vaginal opening with dilatation of 3 cm and effacement of 30%. The amniotic sac was intact, and fetal presentation was cephalic. She had a history of multiple surgeries for correction of bladder exstrophy (8 times). She also suffered from uterine prolapse that happened immediately after the first normal vaginal delivery since three years ago, and she used intravaginal pessary (ring with support number 5) to overcome the bulging symptoms. Comprehensive pelvic examination confirmed stage 3 of uterine prolapse (Figure 1). Urologic consultation was performed to guide for any procedure that needed during delivery. During active labor, fetal distress happened, so an emergent cesarean section was planned, and a healthy female neonate with the normal Apgar score was born (weight 3150 gr).

The abdomen was opened by a midline incision after

Corresponding Author: A. Vatanchi
Department of Obstetrics and Gynecology, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
Tel: +98 5138012477, Fax: +98 5138430569, E-mail address: vatanchia@mums.ac.ir

entry to the peritoneal cavity; multiple small bowel adhesion bundles were dissected from the peritoneum and uterine surface. About 1 cm of ileum was perforated at that time, which was repaired by two layers of Gamby and lambert sutures using silk numbers 3-0.

The day after cesarean, vaginal examination showed no uterine prolapse.

At the first visit after the cesarean, the uterus was completely elevated in the abdominopelvic cavity. At regular follow-up until four months after delivery, there was no sign or symptom of uterine prolapse, and the uterus was palpated at the normal position in the pelvis without any significant prolapse.

Figure 1. Stage 3 of uterine prolapse at the time of delivery (The patient removed pessary by starting uterine contractions)

Discussion

The aim of this case report was to introduce a patient with a history of multiple surgeries for correction of bladder exstrophy and uterine prolapse that made the challenges for optimal management of pregnancy termination. Acute postpartum uterine prolapse may affect nearly half of BE women (7), just like the current case that the uterine prolapse occurred immediately after her first vaginal delivery. The main problem in this situation is the management of pelvic organ prolapse (POP), especially uterine prolapse, at the time of delivery. Some pieces of the literature indicated successful conservative treatment of POP during pregnancy; by intravaginal devices (pessary), also successful vaginal delivery was reported in this group of pregnant women whose pregnancies were complicated by the uterine prolapse (8-10). However, there are some reports of uncomplicated normal vaginal delivery in BE patients (6), but with regard to anatomic limitations and the risk of uterine prolapse, currently, it is generally accepted that BE patients undergo planned cesarean section with a multidisciplinary team (11,12). Technical considerations with cesarean section include performing high midline or paramedian incision to avoid damage to the urinary reservier (13). In the current case, there were lots of thick adhesive bandels extended from small bowel under the perineum near the umbilicus to the uterine wall, at the time of peritoneal opening a small bowel perforation about 1 cm was occurred which repaired after uterine repair. Fortunately, the urinary reservoir remained intact.

Sharma *et al*., reported 5 cases of pelvic organ prolapse which happened during pregnancy and resolved after vaginal delivery (4), but they were different from the current case by the time of uterine prolapse (in our case, she had POP before pregnancy). Actually, it seems that uterine prolapse before pregnancy is exacerbated during pregnancy and at least remain unchanged after delivery. Maybe pelvic adhesions play a significant role to elevate the uterus in this situation. Moreover, maybe cesarean section has a protective role against the persistence of prolapse after delivery (14).

Multidisciplinary management of patients with BE and uterine prolapse by a team which consist of expert urologist, gynecologist and perinatologist may result in the optimal perinatal outcomes. Uterine prolapse may disappear after delivery even in the complicated case of bladder exstrophy.

References

1. ReinfeldtEngberg G, Mantel Ä, Fossum M, Nordenskjöld A. Maternal and fetal risk factors for bladder exstrophy: A nationwide Swedish case-control study. J Pediatr Urol 2016;12:304.e1-304.e7 .
2. Ebert AK, Zwink N, Jenetzky E, Stein R, Boemers TM, Lacher M, et al. Association between exstrophy-epispadias complex and congenital anomalies: a german multicenter study. Urology 2019;123:210-20.
3. Pandey K, Arya S, Pande S. Pregnancy with uterine prolapse: Duhrssen's incision still valid in today's scenario? Int J Reprod Contracept Obstet Gynecol 2013;2:586-90.
4. Sharma C, Sharma M, Soni A, Soni PK, Verma A. Pelvic Organ Prolapse during Pregnancy: A Case Series and Review of Literature. General Med 2015;3:2.
5. Barik A, Ray A. A Rare Case of Pregnancy Complicated by Uterine Prolapse and Cervical Fibroid. Cureus 2020;12:e9026.
6. Hasanzadeh M, Rastin Z, Babapour N. Term Natural Delivery without Complications in a Pregnant Woman with Bladder Exstrophy: A Case Report. Iran J Obstet Gynecol Infertil 2018;21:103-8.
7. Deans R, Banks F, Liao LM, Wood D, Woodhouse C, Creighton SM. Reproductive outcomes in women with classic bladder exstrophy: an observational cross-sectional study. Am J Obstet Gynecol 2012;206:496.e1-6 .
8. Kim JO, Jang SA, Lee JY, Yun NR, Lee SH, Hwang

SO.Uterine prolapse in a primigravid woman. Obstet Gynecol Sci2016;59:241-4.
9. Mirzamoradi M, Heidar Z, Saleh M. Uterine Prolapse during Pregnancy: a Case Report. Novelty Biomed 2015;3:222-4.
10. Abdalla A. Genital Prolapse at the End Term of Pregnancy: A Case Report. Gynecol Obstet Rep 2017;3:1-3.
11. Dap M, Larmure O, Morel O, Lemelle JL. Pregnancy outcomes among patients with prior bladder exstrophy. Int J Gynaecol Obstet 2017;139:368-9.
12. Wilby D, Wood D. Revision Genitoplasty, Sexual Function, Fertility, and Pelvic Organ Prolapse in Exstrophy and the Management of Pregnancy. In: Wood HM, Wood D. Transition and Lifelong Care in Congenital Urology. USA: Humana Press, Cham, 2015:55-64.
13. Dy GW, Willihnganz-Lawson KH, Shnorhavorian M, Delaney SS, Oelschlager AM, Merguerian PA, et al. Successful pregnancy in patients with exstrophy–epispadias complex: a University of Washington experience. J Pediatr Urol 2015;11:213-e1-6.
14. Rusavy Z, Bombieri L, Freeman RM. Procidentia in pregnancy: a systematic review and recommendations for practice. Int Urogynecol J 2015;26:1103-9.