Umbilical cord prolapsed through urethra: An unusual presentation of a vesico-uterine fistula

Aneela G. Kamil, Mohsen EL Mekresh

OBGYN Specialist, †Chair, Department of Urology, Mafraq Hospital, Abu Dhabi, United Arab Emirates

INTRODUCTION

There is a risk of perinatal morbidity/mortality from asphyxia secondary to mechanical compression of the cord between the presenting part and the pelvis or spasm of cord vessels secondary to cold or manipulation. [1] This case report is about prolapse of umbilical cord through maternal urethra in a pregnant lady. The literature review revealed only two similar case reports. In one case, the authors suggested spontaneous bladder rupture and scar dehiscence with umbilical cord protruding through the maternal urethra, with fetal demise in the first half of pregnancy. [2] Still another interesting report mentioned the delivery of a dead fetus from inside the urinary bladder. The uterus was found to be perforated, permitting export of the baby to the urinary bladder. [3] This phenomena was unheard of to the authors till the case was managed and a literature search was performed.

CASE REPORT

A 31-year-old woman, gravida 3, para 2, was referred to a tertiary care hospital with fetal demise and umbilical cord prolapse through the maternal urethra at 21 weeks of gestation. She was admitted to the referring hospital with complaints of on-and-off watery vaginal discharge and mild vaginal bleeding. Laboratory investigations showed hemoglobin of 9 gm/dl, white blood cell count of $11.3 \times 10^9/\mu l$, urine analysis yielding WBC $\geq 100/HPF$ and blood group A+.

At the tertiary care facility, initial patient assessment revealed a pulse rate of 111/min, blood pressure of 138/74 mmHg, respiratory rate of 22/min and temperature of 37.5 degrees centigrade. There was no history of any associated medical disorders, no prior history of contraception, hematuria or urinary incontinence. Her first pregnancy ended 6 years ago, at term, by emergency cesarean section (CS) for non-reassuring fetal heart tracing. The outcome was male weighing 2.3 kg, alive and healthy. Her second pregnancy ended, 2 years ago, in CS at 24 weeks of gestation due to antepartum
hemorrhage. Outcome was early neonatal death of a male baby. Intraoperatively, bladder injury was identified and repair was performed by a urologist. She received two units of blood and remained in the intensive care unit for 3 days. After the second CS, she had symptoms of lower urinary tract infection for which she received treatment on an outpatient basis, but no hematuria. In the current encounter, the uterus was enlarged to 20-weeks size and was tender to palpation. The uterine contour was normal and there were no palpable contractions. On local examination of the vulva, a 4-inch-long thin loop of umbilical cord was seen coming through the maternal urethra. On speculum examination, there was no leakage of liquor or bleeding through the cervix. Urgent ultrasound scan confirmed fetal demise and one small defect was seen in the posterior wall of the bladder (1.26 cm) through which the cord emerged and traversed the bladder [Figure 1]. Impression was scar dehiscence with vesico-uterine fistula.

Management plan was discussed with the patient and her husband. The couple refused for any images to be taken during the procedure. Laparotomy was carried out. There was no free fluid in the peritoneal cavity. Uterus appeared normal. Uterovescical pouch was obliterated with dense adhesions. Adhesions were released by sharp and blunt dissection. On dissection, a 1.5 cm connection was found between the dome of the bladder and the anterior uterine wall. Fetal and membranes were evacuated from the uterus through a low transverse uterine incision. Uterus was repaired in two layers. Bladder repair was carried out in two layers after adequate mobilization of the tissue planes. Foley’s catheter was retained for 10 days. Successful repair was confirmed on post-operative cystourethrogram.

DISCUSSION

Impressions about the sequence of events leading to this case scenario remained vague. The timing of development of the vesico-uterine fistula was not clear as the patient did not complain of any hematuria or urinary incontinence after her last surgery and was never evaluated post-operatively by a urologist. Probably, previous repair gave way with progressive uterine enlargement during this pregnancy. The weak area developed into a fistula. The thin loop of cord incidentally passed though the opening, traversing the bladder and protruding through the urethra.

In the case reported by Popli, the patient was in the second trimester of her pregnancy with fetal demise and had previous history of uterine surgery in the form of two CS and a dilatation and curettage. Moreover, their patient did not report of any urinary incontinence and hematuria. At laparotomy, they found a loop of cord going out through a 1-cm horizontal defect in the anterior uterine wall and entering into the base of bladder and finally coming out through the maternal urethra.[2] The history as well as the operative findings were very similar to the present case. The other case history mentioned delivery of a dead fetus from inside the urinary bladder. The patient had a history of a prior CS, was in the second trimester of her current pregnancy and presented with abdominal pain and fetal demise. She developed hematuria during labor. Head of a dead fetus was seen inside the bladder on cystoscopy. Operative findings included rupture of the anterior uterine wall and posterior wall of the bladder. Dead fetus was delivered from inside the bladder.[3] The pregnant state, second trimester, fetal demise, history of CS and operative finding of defects in the bladder and uterus make it very similar to the present reported case. The common factors in the three cases highlight the importance of post-operative follow-up for women undergoing CS. Women with symptoms of urinary incontinence or gross hematuria usually seek opinion and advice. Detection of microscopic hematuria with proper evaluation and treatment options is understudied in females. Sandhu et al. performed a literature review and concluded that consensus guidelines need to be developed, with special emphasis on pregnancy and the diagnosis and treatment of microscopic hematuria.[4]

We counseled our patient accordingly for follow-up with the urologist and early booking at a tertiary care hospital in case of a next pregnancy.

REFERENCES

1. Murphy DJ, Mackenzie IZ. The mortality and morbidity associated with umbilical cord prolapse. Br J Obstet Gynaecol 1995;102:826-30.
2. Kiran P, Manju P, Asha G. Cord prolapse through the urethra. Aust N Z J Obstet Gynaecol 2002;42:413.
3. Fath A, Ferneh A, Ugrur A, Hayrettin S, Ahmed Y. Delivery of dead fetus from inside urinary bladder with uterine perforation: Case report and review of literature. Urology 2005;65:797.
4. Sandhu KS, La Combe JA, Fleishman N, Greston WM, Lazarou G, Mikhail MS. Gross and microscopic hematuria: Guidelines for obstetricians and gynecologists. Obstet Gynecol Surv 2009;64:39-48.

How to cite this article: Kamil AG, EL Mekresh M. Umbilical cord prolapsed through urethra: An unusual presentation of a vesico-uterine fistula. Urol Ann 2013:5:124-5.

Source of Support: Nil, Conflict of Interest: None.