CASE REPORT

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10.2478/AMB-2024-0026

UMBILICAL CORD PROLAPSE THROUGH URETHRA DUE TO COMPLICATED UTERINE RUPTURE

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Abstract. *Uterine rupture is a rare but potentially fatal complication of pregnancy with life-threatening maternal and fetal consequences. We present a case of umbilical cord prolapsed through urethra due to complicated uterine rupture in a patient with severe pre-eclampsia. A multiparous woman in her 30s, with history of untreated preeclampsia during this pregnancy and two previous Cesarean sections presented with spontaneous leakage of amniotic fluid in a full-term unmonitored pregnancy and occipital headache. The general physical examination showed high blood pressure values, and fetal demise was diagnosed using abdominal ultrasound. During the preparation for Cesarean section the patient developed complicated uterine rupture with urinary bladder lesion resulting in umbilical cord prolapse through the urethra. An emergency laparotomy and supravaginal hysterectomy were performed due to impossibility to repair the uterine wall. The fact that uterine rupture is a life-threatening obstetric emergency and that it is associated with high maternal and perinatal mortality indicates the necessity to consider the risk of rupture and to follow-up on the patient to prevent complications.*

Key words: *umbilical cord prolapse, uterine rupture, preeclampsia*

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Received: *20 December 2023;* ***Accepted:*** *01 February 2024*

INTRODUCTION

Uterine rupture is spontaneous tearing of the uterus that may result in the fetus being expelled into the peritoneal cavity. It is one of the most serious complications of pregnancy and childbirth, which is an important cause of maternal death in less and least developed countries [1]. It accounts for 8% of maternal mortality, and perinatal mortality varies between 35% and 75% [2]. Scar rupture is the most common form of uterine surgical rupture, which occurs in the area of a small cicatrix on the uterine wall from previous surgical interventions such as Cesarean section, myomectomy, etc. [3]. A previous Cesarean section is the main risk factor for development of uterine rupture [4, 5].

Uterine rupture with lesion of adjacent organs such as urinary bladder, ureters or blood vessels is classified as complicated uterine rupture. Complicated uterine rupture with lesion of urinary bladder is extremely rare and can lead to prolapse of umbilical cord through the urethra or development of vesico-uterine fistula as a long-term consequence [6, 7, 8].

CASE PRESENTATION

A multiparous woman in her 30s, with two previous Cesarean sections in 2009 and 2016, performed

due to preeclampsia, presented with spontaneously ruptured amniotic sac during a full-term unmonitored pregnancy and occipital headache, which was not relieved by analgesic therapy at home. Physical examination showed high blood pressure values – 160/110 mmHg and absence of edema, which is an optional sign of preeclampsia. A speculum examination showed leakage of greenish amniotic fluid. Obstetric examination established low pelvic score and cephalic presentation of the fetus. Fetal heart tones were not detected by obstetrical auscultation. Abdominal ultrasound showed a dead fetus in the uterus with an estimated fetal weight of 2700 g, anhydramnios and a placenta located on the fundus of the uterus, Grannum III. The paraclinical tests revealed thrombocytopenia (103x109/L), hypoproteinemia (Total protein 46 g/l) and slightly elevated values of liver enzymes.

Considering two previous Caesarean sections combined with a low pelvic score, spontaneous rupture of amniotic membranes and severe preeclampsia, untreated until now, a decision for an urgent operative delivery in the interest of the mother was made. In the process of preparation for C-section, prolapse of the umbilical cord through the maternal urethra was detected (Fig. 1).

Fig. 1

An emergency lower median laparotomy was performed and a cicatricial rupture of a previous isthmic longitudinal C-section that continued to the cervix and vaginal fornix was found. Bladder lesion on the posterior wall was established. The dead fetus was found in the peritoneal cavity. The fetus and placenta were extracted. An intraoperative consultation with a urologist took place. Due to the inability to repair the uterine wall, a supravaginal hysterectomy was performed with a left adnexa as a result of a hematoma in the left broad ligament. The cervix and the back wall of the bladder have recovered. An abdominal and supravesical drain in cavum Retzii and a urinary catheter were placed for 10 days. Postoperatively, triple antibiotic therapy and anticoagulant prophylaxis were started. The postoperative period passed without complications, with normalization of arterial pressure values. The patient was discharged in good general condition, without medical risk.

Pathoanatomical examination of the fetus and placenta revealed chronic chorioamnionitis, intranatal asphyxia of the fetus, focal atelectasis, and deep aspiration of amniotic fluid against the background of morphological evidence of chronic placental insufficiency.

DISCUSSION

Identifying patients at risk of uterine rupture remains challenging. Previous Cesarean section is known as main risk factor for development of cicatricial uterine rupture [9]. The risk of spontaneous cicatricial rupture of the uterus increases with the number of previous Cesarean sections [10, 11]. The development of complicated uterine rupture carries risk of rupture of adjacent organs, which can lead to life-threatening conditions for the patient or permanent damage to function of the affected organ. Some patients are asymptomatic due to silent rupture but others may suffer from different accompanying complications such as prolapse of umbilical cord through the external orifice of urethra.

CONCLUSION

Unmonitored and untreated preeclampsia can have serious consequences for the mother and fetus. It is one of the leading causes of intrauterine fetal death as a result of placental insufficiency. Prolapse of the umbilical cord through the urethra as a result of complicated uterine rupture with bladder lesion is an extremely rare but serious complication of pregnancy, requiring prompt surgical treatment by a multidisciplinary team and adequate resuscitation measures.

Conflict of Interest Statement: *The authors declare that there is no conflict of interest in this research.*

Disclosure Summary: *The authors have nothing to disclose.*

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