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Case Report: Uterocutaneous Fistula due to Uncontrolled Diabetes: A Case Report

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ABSTRACT

Uterocutaneous fistula is a rare complication. Here we report a 31-year-old pregnant woman with a history of cesarean section and diabetes who came to our clinic with labor pains and reduced fetal mobility. Nine days after the cesarean section, she referred to us again with a complaint of bloody discharge in the surgical wound. With further examination, uterocutaneous fistula was diagnosed in this patient and due to infection at the surgical wound and inside the fistula, antibiotic treatment was put on the agenda. This report shows the importance of the cause, diagnosis, and management of this complication.

Introduction

A fistula is a connection between two surfaces covered by an epithelium. This unusual condition usually occurs after trauma, injury, or a variety of infections (1). Most uterine fistulae situate between the uterus and bladder or uterus and bowel, mostly due to postoperative injuries or infectious diseases (2). Uterocutaneous fistula (the connection between the uterus and the skin) is a very rare complication and there are only a few reports in this field, which is mainly due to multiple surgeries especially cesarean section, use of drains, and defective closure of incisions (3). Having gestational diabetes also increases the risk of infection (4), which can increase the risk of developing uterocutaneous fistula. Based on our literature search, there are rare reports of uterocutaneous fistula; however, none of them were connected to diabetes. Finally, our case had successful management of the fistula.

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Case Presentation

A 31-year-old pregnant woman, gravida 2, parity 2, live birth 1 presented with labor pain and reduced fetal movement referred to our clinic. She had a history of 18 years of diabetes and two years of hypertension. She had a history of hospitalization for 10 days in a recent month due to diabetes. She mentioned a history of leukemia when she was 20 years old and had received chemotherapy and finally recovered after 4 years. The patient had also a history of appendectomy and sensitivity to penicillin. Her first pregnancy was premature twins (30 weeks) at the age of 25, one of whom died, and her second pregnancy was 18 months after her first delivery, both of which were delivered by cesarean section. Her vital signs were normal and her fetal heart rate was 145 beats/minute. On the clinical examination, the fundus height was proportional to gestational age. The uterine contractions occurred every 5 minutes for 50 seconds with moderate force. The cervix was closed on vaginal examination. Her gestational age was 34 weeks and one day based on last menstrual period and 34 weeks and 2 days based on ultrasonography. Laboratory results revealed creatinine 1.1 mg/dL and urinary protein random 3+. After betamethasone injection and hydration, the patient was prepared for a cesarean section due to post-injection contractions. Before surgery, clindamycin 900 mg, and during surgery due to high blood pressure up to 150/100, she was prescribed magnesium sulfate. Cesarean delivery was successful for the patient, although severe uterine adhesions to the bladder were seen during delivery, which were removed with a classic incision. The patient was discharged with personal consent by administering clindamycin 900 mg every 8 hours and monitoring blood glucose levels 48 hours after delivery. To control outcomes, Metformin 500 mg three times a day (TDS), Losartan 25 mg twice a day (BD) and prophylaxis with Heparin 5000 units were administered subcutaneously every 12 hours for up to 6 weeks after delivery. Nine days after discharge, the patient presented with complaints of discharge at the cesarean section site with fever and erythema. Pulse rate and body temperature were 90 bpm and 37.7 °C, respectively, and other symptoms were normal. On physical examination, about 3 cm from the lower incision of the midline, which also contained bloody discharge, was open. According to CBC report, the level of leukocytes was 10000. She was given ampicillin 2 gr/6 hr, clindamycin 900 mg/8 hr, and gentamicin 80 mg/8 hr with wound washing TDS. Due to the high thickness of her abdominal wall, he underwent spinal anesthesia. Abdominal laparotomy drained the secreted pus. In the part where the uterus strongly adhered to the abdominal wall, there was a 2 cm opening of the uterine incision in the uterus with some pus that was been debrided. Abdominal laparotomy drained the secreted pus. In the part where the uterus strongly adhered to the abdominal wall, there was a 2 cm opening of the uterine incision in the uterus with some pus that was been debrided. Clindamycin 900/8 hr, gentamicin 80 mg/8 hr, meropenem 1g/8 hr, and vancomycin 1g/12 hr were prescribed. Foley's catheter was fixed for 48 hours and the patient was monitored daily up to 9 days for fever and other vital signs and drainage outcome. A computed tomography (CT) was performed to check for the presence of other purulent collections in other abdominal compartments, which was normal and no evidence of abscess was found elsewhere. After 9 days, she was discharged with no problems or drainage.

Discussion

Uterocutaneous fistulas are very rare. There is no consensus on its diagnosis and treatment. Most people with this complication have a history of classic cesarean section. Recently, the incidence of this complication has decreased due to the reduction of classical cesarean section surgeries (5). In our patient, it seems, due to the history of several cesarean sections, adhesions between the uterus and the

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abdominal wall led to the development of uterocutaneous fistula. But that was not all in our case. In our patient, although the history of several cesarean sections was influential, the role of diabetes should not be overlooked. High blood sugar levels increase the risk of infection by weakening the immune system and damaging peripheral nerves and reducing blood flow (6). This increases the risk of uterocutaneous fistula. The presence of pus at the site of uterine adhesion to the skin of the abdomen confirmed this (1). Therefore, the basic need for broad-spectrum antibiotics is undeniable. Uterocutaneous fistula is usually located under a cesarean section wound (7). One study reported that uterocutaneous fistulas developed following a septic abortion caused by a laminaria tent insertion in the cervix (1). In general, the possible risk factors for this complication are a history of multiple abdominal surgeries, use of drains, incomplete closure of uterine wounds after cesarean section, intra-abdominal sepsis in the previous scar, and secondary abdominal pregnancy (8).

Blood leakage from a pathognomonic wound site is a uterocutaneous fistula. Fistogram, tomography, magnetic resonance imaging (MRI) or methylene blue test are used to confirm this diagnosis (9). In this case, the diagnosis of uterocutaneous fistula was confirmed by observing bleeding from the surgical wound site through the skin and duct of the fistula. Full closure of the uterine wound in two layers using absorbable suture, eschew inclusion of decidua during the closure, and proper tissue handling to barricade ischemia would go a long way in preventing this complication (8).

Conclusion

Although uterocutaneous fistula is rare in cesarean, more attention should be paid to the quality of suturing as well as wound management after surgery, due to the prolonged wound healing process in diabetic patients.

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