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Case Report

Utero-Cutaneous Fistula after Cesarean Section: A Case Report

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Abstract

Background

Cesarean section (c\s) consider relatively safe with some known complications that could develop to the mother during or after the procedure. Utero-cutaneous fistula is a very rare complication that occurs due to different entities, but mostly due to uterine or pelvic surgeries. A case study conducted in 2015 showed that in the past 50 years, only 26 cases of utero-cutaneous fistula (including their case study) has been identified. The aim of our case report is to highlight the rare Obstetrical conditions in the region for better diagnosis and management.

Case Report

A cesarean section (C\S) was done for the patient involved the lower uterine segment due to abnormal Cardiotocography (CTG) readings. Months later the patient presented with abnormal bleeding from the surgical scar which point to an abnormal wound healing after the procedure. Ultrasound (U\S) and Magnetic resonance imaging (MRI) was done. The results showed a fistula formation through the the endometrium, myometrium and the abdominal wall confirming rare diagnosis of utero-cutaneous fistula. The patient treated with surgical laparotomy and excision of the fistula.

Conclusion

Utero-cutaneous fistula (UCF) is a very rare complication resulting from multiple causes but mostly due to cesarean section (c\s). The diagnosis of UCF could be difficult due to its rarity, and the health care providers are not familiar with such rare condition. Diagnosis of UCF could be confirmed by Computed tomography (CT), Magnetic resonance imaging (MRI) or Ultrasound (U\S). UCF is treated mainly by surgical intervention, and medical treatment can be another choice in a special cases. Women presents with bleeding from the surgical scar post-cesarean section should always be under suspicion of utero-cutaneous fistula formation. Patients with diabetes mellitus should be encouraged to control their blood sugar prior to pregnancy that might be beneficial in the prevention of UCF.

Introduction

Cesarean section (c\s) consider relatively safe with some known complications that could develop to the mother during or after the procedure like infection, heavy blood loss, injury to the bladder and rarely maternal death. A very rare complication after cesarean section is utero-cutaneous fistula (UCF). In a case study conducted in 2015 showed that only 26 cases (including their case study) in the past 50 years has been reported worldwide [1]. UCF considered the rarest form among gynecological fistulas unlike the other common forms such as vesico-vaginal and recto-vaginal fistulas [2]. A fistula is defined as an abnormal communication between two epithelial surfaces [3]. UCF is formed more often as a complication of uterine or pelvic surgeries [4]. Other causes of such rare condition have been described including intrauterine device and endometriosis [5]. In our knowledge, no reported cases of UCF was found in the Kingdom of Saudi Arabia. We report this case of a young woman who developed UCF following cesarean section. Thus, we aim by this case report to highlight the rare obstetrical conditions in the region for better diagnosis and treatment.

A case report

A 34 year old Saudi lady G5 P4 + 0 in her 38 weeks of gestation was admitted through the Emergency room (ER) with premature rupture of membranes (PROM). She underwent c\s due to pathological CTG readings. She had previous one c\s due to macrosomic baby, and she is known case of diabetes mellitus type II on insulin.

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The patient underwent emergency lower uterine segment c\s, and the findings noted during the procedure includes moderate anterior wall adhesions, omental adhesions to the middle of the rectus sheath, the omentum was adherent to the anterior abdominal wall with thick muscular and vascular bands in front of the uterus, also the bladder was very high. Other than these findings, the procedure was successfully completed with no complications and the patient discharged from the hospital.

Post-delivery the patient started to develop wound infection, she was referred to the dressing clinic for wound care, then the patient seen by the endocrinologist for suspected impaired wound healing secondary due to diabetes mellitus and was instructed to continue on insulin therapy to enhance wound healing.

Two months later she came through the ER complaining of bleeding from the c\s scar that turned out to be menstrual blood coming out from the uterus through a fistula; these findings were confirmed by U/S (Figure 1) and MRI (Figure 2). The U/S showed ill defined hypoechoic area seen in subcutaneous area at the site of the scar containing fluid plus air with continuation with the anterior abdominal wall of the uterus at the site of the scar.

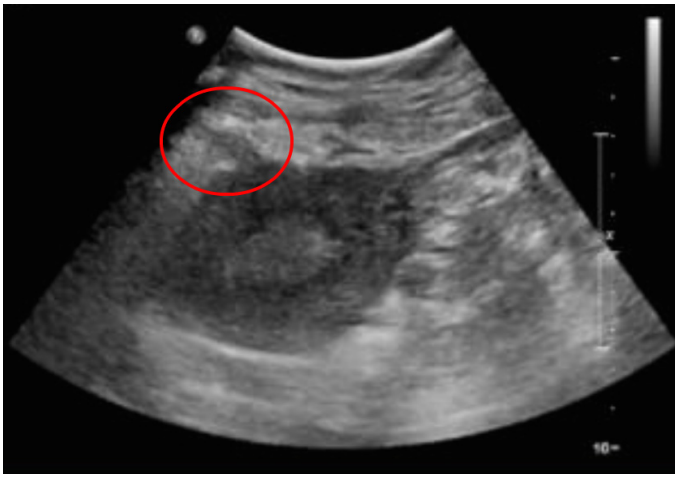

Figure (1): Pelvic U/S shows fistula formation

MR imaging showed endometrial-cutaneous fistula and there was a defect at the surgical scar about 4 cm extending from the endometrial cavity to the intra-abdominal wall representing a fistula formation between the endometrium, myometrium and abdominal wall. After the confirmation of UCF, the patient booked for a surgical repair of the fistula. Excision of the UCF was done by laparotomy and the findings during the procedure were fistula tract extending from the skin to the uterine cavity, and it was 7-8 cm in long. Skin incision was done with scalpel around the fistula opening. Skin and subcutaneous fat around the tract was cut using cuttery. The fistula circumferentially was cut until reaching the uterine cavity, and then it was excised. The uterine cavity was closed with 0 vicryl in two layers. The patient discharged from the hospital in a stable condition. The patient was following in the clinic post-excision and she was completely recovered with no complications. In November 2016, the patient was contacted to know if there's any development in her condition, she was pregnant. In 2017, she was delivered successfully by uneventful c\s.

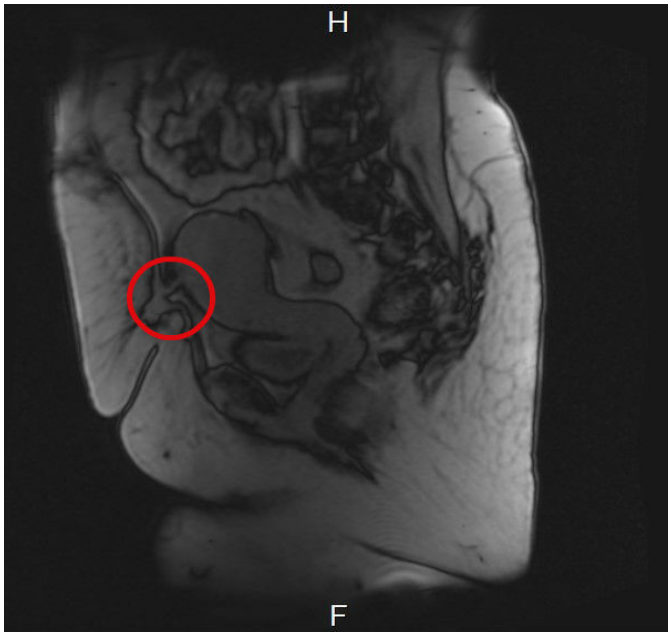

Figure (2): T2 MRI shows fistula extending from the uterus to the outside skin

Discussion

Utero-cutaneous fistula is a very rare complication that could develop due to different entities, but mostly as a post cesarean compilation [5]. Also myomectomy could lead to utero-cutaneous fistula formation [6]. Utero-cutaneous fistulas are difficult to treat, as most surgeons are not familiar with such rare condition and medical treatment is not effective as surgical treatment. In our case, the patient at first started to develop wound infection, and it seems that infection is a complicating factor in combination with multiple adhesions that was found during her last emergency c/s. Also medical condition such as DM could play a role in the process of utero-cutaneous fistula formation, as diabetes interferes with wound healing. Bleeding from the surgical incision is characteristic of utero-cutaneous fistula and the diagnosis of this condition can be confirmed by different modalities including MRI, fistulogram, computed tomography. Our patient presented with bleeding from the surgical incision post cesarean section, which was confirmed to be through utero-cutaneous fistula by performing MRI that showed the communication between the endometrium, myometrium and the abdominal wall.

The formation of utero-cutaneous fistula showed a correlation with classical uterine incision, and since classical uterine incision has become much less in the practise, so does the formation of an utero-cutaneous fistula [8]. Despite it's much more common in women who underwent classical incision; our patient underwent a transverse uterine incision involving the lower uterine segment. Surgical intervention in utero-cutaneous fistula is the definite treatment, but some case studies found in the literature showed that Gonadotropin releasing hormone (GnRH) could be beneficial in treating utero-cutaneous fistulas [7,9]. Medical treatment proven to be beneficial in women who prefer to preserve fertility, but in women who do not wish to preserve their fertility, surgical intervention is recommended choice. Diabetes mellitus could be an important factor in the formation of UCF, and controlling blood sugar could prevent this rare condition. Although utero-cutaneous fistula is rare, and managing the patient could be difficult, but our case was successfully managed and treated by surgical laparotomy and excision of the fistula.

Conclusion

Utero-cutaneous fistula (UCF) is a very rare complication resulting from multiple causes but mostly due to cesarean section (c\s). The diagnosis of UCF could be difficult due to its rarity, and the health care providers are not familiar with such rare condition. Diagnosis of UCF could be confirmed by Computed tomography (CT), Magnetic resonance imaging (MRI) or Ultrasound (U\S). UCF is treated mainly by surgical intervention, and medical treatment can be another choice in a special cases. Women presents with bleeding from the surgical scar post-cesarean section should always be under suspicion of utero-cutaneous fistula formation. Patients with diabetes mellitus should be encouraged to control their blood sugar prior to pregnancy that might be beneficial in the prevention of UCF.

Ethical Approval

Writing this case report has been accepted by the ethical committee in the National Guard Hospital-Jeddah.

Consent

Consent has been taken from the patient verbally.

Acknowledgment

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