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Case Report

Ruptured Rudimentary Uterine Horn Pregnancy: A Case Report

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Abstract

Pregnancy in rudimentary uterine horn has been reported to be very rare in literature, and is associated with adverse complications. Furthermore, it is also difficult to diagnose, and in most cases, is diagnosed after being ruptured. A case of ruptured rudimentary uterine horn pregnancy presented at Elsaudi Maternity Hospital (Sudan). Despite her recurrent presentation for persistent suprapubic pain and frequent ultrasound scans, the uterine horn pregnancy was not detected, and the diagnosis was made during laparotomy as her condition started to deteriorate progressively due to massive internal bleeding from the ruptured uterine horn.

Keywords: rudimentary uterine horn pregnancy, ectopic pregnancy, Mullerian anomalies, early pregnancy complication

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1. Introduction

Mullerian anomalies have been reported to affect about 5–8% of women [1, 2], diagnosed mainly through imaging techniques, such as a 2D/3D ultrasound scan, CT scan, MRI, and combined laparoscopy and hysteroscopy. However, it is difficult to diagnose and is sometimes diagnosed intraoperatively. Recently, there has been an increase in the diagnosis of Mullerian anomalies due to the availability of advanced imaging methods that aid in proper planning of pregnancies and therefore decreasing the unexpected and missed complications. Live birth rate with Mullerian anomalies depends on the type and its classification, with increased risk of recurrent miscarriage in septate and arcuate uterus. However, better outcome has been reported after hysteroscopic removal of uterine septum. According to the ESHRE classification, there are two types of rudimentary uterine horn, communicating and non-communicating. Pregnancy is

impossible in the non-communicating type. However, pregnancy in communicating rudimentary uterine horn poses a risk of catastrophic complications, including rupture which increases the risk of maternal morbidity and mortality as reported in both case reports [3, 4].

2. Case Presentation

A 22-year-old Sudanese pregnant women in her first pregnancy at 25 weeks gestational age presented with generalized abdominal pain for one day. One week prior, she had presented with a history of liquor drainage and longstanding suprapubic pain, PPROM, and preterm labor was one of the differential diagnosis; therefore, she was admitted, her vital signs were checked which were all normal, speculum examination was negative for liquor drainage or vaginal discharge, and her cervix was closed. Her investigation including full blood count and CRP was normal, and her ultrasound scan revealed normal intrauterine pregnancy corresponding to 25 weeks of gestation. She was given antibiotic and steroid and was then discharged. A follow-up plan was made.

The second time, the patient presented with generalized abdominal pain with shoulder tip pain along with nausea and vomiting. On examination, she was pale, tachycardic, tachypneic, and had low blood pressure (BP). Her abdominal examination showed generalized tenderness, rigid abdomen, and a fundal level of 28 weeks. Vaginal examination revealed closed cervix, no vaginal bleeding; however, cervical excitation test was positive. Abruptio placenta was suspected; thus, resuscitation was initiated, the patient cannulated, and blood sample was taken for blood group, cross-matching, RFT, LFT, and coagulation profile. She received up to 3 liters of fluid, two binds of blood, and four binds of fresh frozen plasma. Her investigation showed an HB of 7 gm/dl, a platelet count of 110, normal RFT and LFT, and prolonged APTT. Fetal heart could not be detected using a handheld fetal doppler, and bedside ultrasound scan showed no fetal heart, with transverse lie. Therefore, decision was made to go for laparotomy. Intraoperatively, a ruptured right-side communicating uterine horn with intact right ovary and tube was seen, along with intact uterus. The fetus was floating inside abdominal cavity, the ruptured horn was partially connected to the uterus near fundus and at the lateral site, and the concept of removal was conundrum, as there was a large area to be repaired at the lateral site of the uterus which would affect her future fertility and even early uterine rupture. However, attempts to repair the ruptured horn with continuous/locking suture failed as her vitals continued to deteriorate; thus, the decision was made to remove the ruptured uterine horn and the uterus was repaired carefully

in three layers at the site of communicating horn near the fundus, with preservation of right ovary, after which the patient's vitals started to improve.

Postoperatively, the patient was admitted to ICU; she received four binds of blood along with FFP, cryoprecipitate, and two binds of platelet. Her vitals and her MEWOS chart were improving. She was discharged on day 5 in good condition and appointment was made to discuss the result of histopathology after two weeks.

3. Discussion

Unicornuate uterus is a type-2 classification with unilateral hypoplasia or agenesis that can be further classified into communicating, non-communicating and with cavity or no cavity. Unicornuate uterus with rudimentary uterine horn is associated with wide range of obstetric and gynecological complications such as infertility and dysmenorrhea. Pregnancy in the rudimentary horn is rare, it occurs in 1:100,000 to 1:140,000 cases [5]. The diagnosis of rudimentary uterine horn pregnancy is lifesaving, despite its difficulty due to the scarcity of the condition. Rupture of the horn due to underdeveloped myometrium, and that the uterine muscle will not extend with growing fetus which lead to rupture [3]. All Mullerian anomalies can be diagnosed through ultrasound with varying degrees of sensitivity; the sensitivity of diagnosing rudimentary horn is 26% [5]. However, the ESHRE recommends MRI for the diagnosis. Placenta previa and placenta accrete spectrum can be associated with rudimentary horn pregnancy, which further increase maternal morbidity and mortality, in terms of massive blood transfusion and maternal death. Renal anomalies are commonly associated with Mullerian anomalies [6]; therefore, the follow-up should include careful assessment of kidneys and renal tract with appropriate involvement of other disciplines.

The key in diagnosing such condition lay behind strong suspicion and careful obstetrics and gynecological history. In this case, unfortunately, despite more than three ultrasound scans that were done during her follow-ups, the condition could not be diagnosed timely, and the patient had to eventually undergo laparotomy. This of course was associated with increased morbidity and later litigations.

If condition diagnosed antenatally, the main strategy is excision of the rudimentary horn [6, 7], whether laparoscopically, if the patient's condition is stable and the condition is diagnosed early, or via laparotomy, if the patient is unstable. In our case, although we tried to suture the ruptured horn, there was bleeding and the patient's hemodynamical status was deteriorating, which lead us to proceed for excision, after which the patient's condition was improved.

4. Conclusion

Delayed diagnosis of pregnancy occurring in rudimentary horn is associated with increased maternal morbidity and mortality. However, early diagnosis and detection of the condition will reduce the risk, allowing the healthcare professional to plan an appropriate noninvasive intervention.

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Ethical considerations

Ethical clearance was obtained from the hospital and the patient gave consent for taking picture and for publication.

Competing interests

None declared

Availability of data and material

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