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Case Report

Unicornuate Uterus With Pre Ruptured Rudimentary Horn Pregnancy At 15 Weeks Gestation: Case Report

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Abstract

To describe the diagnosis and management of one case of pre rupture rudimentary horn pregnancy of unicornuate uterus in the early second trimester by clinical suspicion, sonography, and laparotomy. This paper presents a rare case in which a rudimentary horn pregnancy was suspected clinically at 15 weeks gestation with moderate to severe abdominal pain and diagnosed by sonographic criteria which revealed an empty uterine cavity with a pregnant uterine horn and confirmed by laparotomy. Which revealed a right unicornuate uterus and pre rupture a noncommunicating left rudimentary horn containing a gestational sac, fetus, and placental tissue. The patient underwent surgery, and the pre rupture rudimentary horn pregnancy with fallopian tube was resected and repair of the damaged uterine wall was made with no complications. The patient conceived spontaneously eight months after surgery and her antenatal care was regular without complications until 36 weeks gestation presented with mild left iliac fossa pain. Her vaginal examination revealed she is in labor; the patient prepared and operated the next day as elective cesarean section; the baby and the placenta were delivered without any difficulty. Rudimentary horn pregnancy is a dangerous kind of ectopic pregnancy and is considered as very rare condition which make difficulty in understanding the disease. Most of the clinicians instructed to be focus on prenatal ultrasound for an earlier diagnosis and management which results in a reduction in risk of maternal morbidity and mortality. Additionally, MRI can be used to confirm the diagnosis before an invasive procedure is undertaken.

Keywords

Laparotomy; Mullerian anomaly; Unicornuate uterus; Pre rupture Rudimentary horn

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Introduction

Unicornuate uterus accounts for 5 % of all Mullerian anomalies [1], Pregnancy in a rudimentary horn is extremely rare [2]. The reported incidence varies from 1:100 000 to 1:140 000 pregnancies [3], Mullerian anomalies in form of a rudimentary horn with a unicornuate uterus results from failure of complete development of one of the Mullerian ducts and incompletefusion with the contralateral side [4]. Abnormalities in the genitourinary system are common among patients with Mullerian anomalies which are associated with 30–40% of cases [5], according to American society unicornuate uterus is classified in class ll Mullerian anomaly with a disorder of lateral fusion of Mullerian ducts and further sub-classified as a class "a" is with cavity communicating with the uterus; class "b" is with cavity not communicating with the uterus (90%); class "c" is without cavity and class "d" is without horn [6]. The connection between the uterus and the rudimentary horn can be either fibrous or fibromuscular. Usually, pregnancy in a non-communicating rudimentary horn is very rare, the possible explanation results of trans peritoneal migration of either the sperm or the fertilized ovum from the contralateral side [7]. We present a case of a 15 weeks pregnancy in a rudimentary horn with a viable fetus diagnosed by ultrasound and confirmed with laparotomy..

Case report

A 27- years-old Libyan female gravida 2 para 1, she had a previous one full-term vaginal delivery without complications. Was admitted to Tobruk Medical Center at 15 weeks gestation with generalized abdominal pain of three days duration, which had worsened overnight prior to presentation. She had received one prenatal care in a private clinic and undergone an ultrasound scan of severe retroverted flexion uterus with a single viable fetus at 9 weeks gestation. She was hospitalized for observation. The initial impression was threatened abortion but no vaginal bleeding was noted. Her menstrual cycle was regular with average flow and without any dysmenorrhea. Her past medical and surgical histories were insignificant. The patient's general condition was good, her vital signs were normal. Per abdomen examination revealed guarding and

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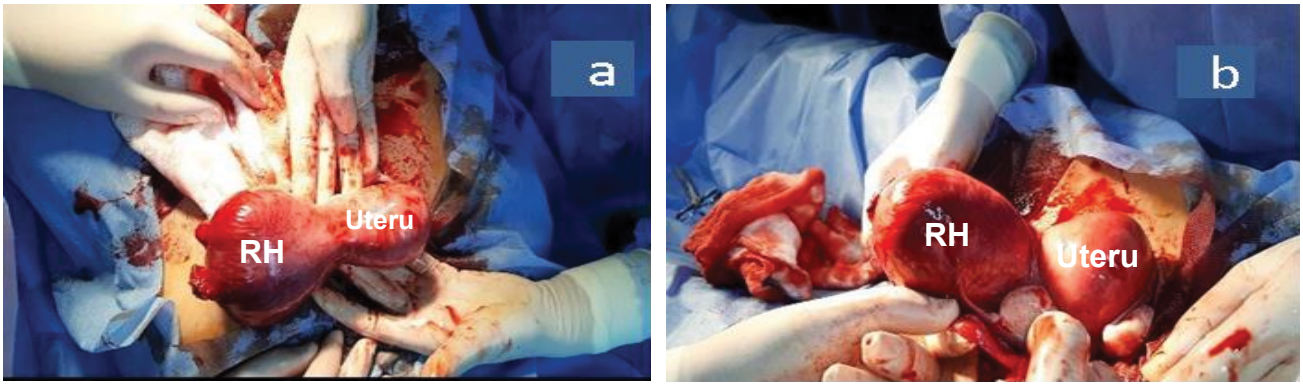

Figure 1. *Intraoperative photography showing: picture "a" fundal view of unicornuate uterus attached to left rudimentary horn pregnancy, picture "b" posterior view of unicornuate uterus with rudimentary horn pregnancy*

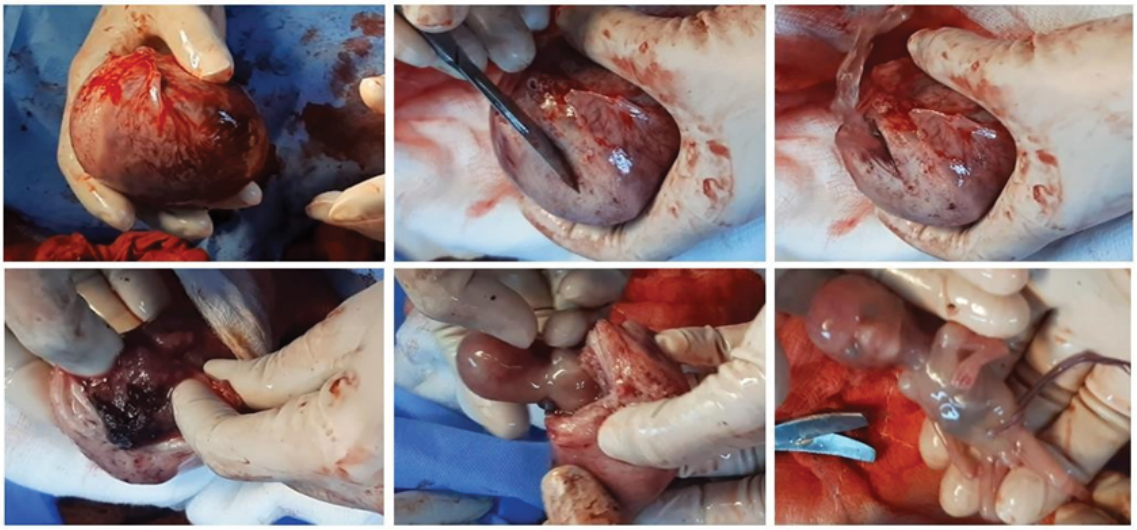

Figure 2. *Incision through resected rudimentary horn showing cord, placenta and the foetus*

tenderness in the left iliac fossa. Transabdominal ultrasound showed an empty uterus with a viable fetus corresponding to 15 weeks gestation. Her hemoglobin was 10.5 g/dl, platelet count was 240x10 L and the clotting profile was normal. She was diagnosed with preoperatively as left-sided ectopic pregnancy and planned for laparotomy. An emergency laparotomy was performed immediately. The intraoperative finding revealed right a unicornuate uterus with the normal ovary and a fallopian tube was found. To the left was a pre rupture left rudimentary horn pregnancy with the normal ovary, fallopian tube, and round ligament (Figure 1).

No communication from the horn to the contralateral uterine cavity was seen. So, the diagnosis of the unicornuate uterus with left rudimentary horn pregnancy was confirmed. Resection of rudimentary horn and the fallopian tube with the repairof the damaged uterine wall was done. A transverse incision was made on the anterior surface of resected rudimentary horn and the fetus was delivered as male weighed about 400 g and the cord and the placenta was attached to the cavity of the rudimentary horn (Figure 2).

Her postoperative recovery was good. She was discharged from the hospital on the third day. She was scheduled for a hysterosalpingogram three months later and ultra-sonographic examination for associated urinary tract anomalies and she was also educated on the need for elective cesarean section for any future pregnancy. Sonography of the kidneys showed no abnormalities in the urinary system.

Histologic examination of the specimen showed that placenta was adherent to the myometrial wall and diagnosed as placenta accreta. The patient conceived spontaneously eight months of surgery and her antenatal care was regular without complications until 36 weeks gestation presented mild left iliac fossa pain. Her vaginal examination revealed she is not in labor, her investigation was normal, the patient was prepared and operated on the next day as elective cesarean section, and the baby and the placenta were delivered without any difficulty. The uterus was noted at the operation time to be unremarkable, apart from a scar on the anterolateral wall of the uterus indicating previous surgery (Figure 3).

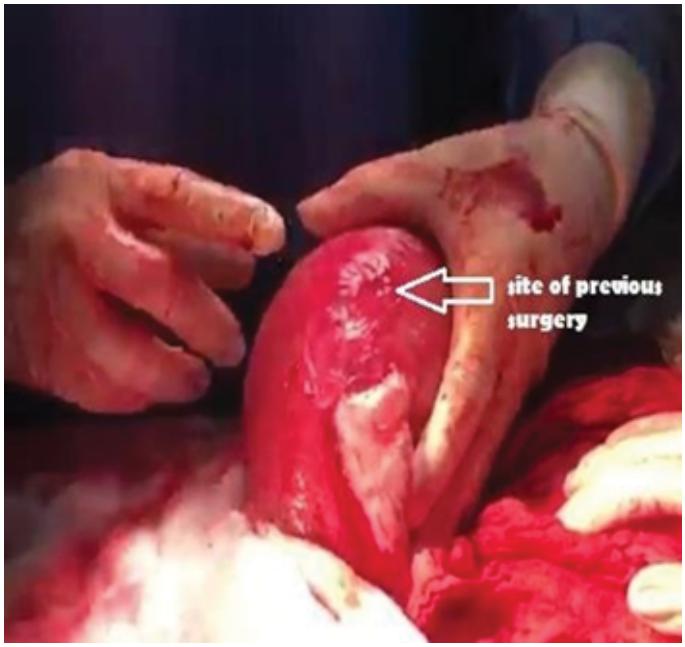

Figure 3. *Site of previous surgery*

Discussion

Identification of unicornuate uterus is almost accidental as it is usually asymptomatic until reproductive age [8], he diagnosis of the rudimentary horn is difficult. The following criteria have been suggested by Tsari et al for sonographic diagnosis of rudimentary horn pregnancy include (1) pseudo pattern of asymmetrical bicornuate uterus, (2) absent visual continuity between the cervical canal and the lumen of the pregnant horn, and (3) the presence of myometrial tissue surrounding the gestational sac [9]. According to Oral et al., more than 10% of rudimentary horn pregnancy had placenta accrete [10]. So, the diagnosis is confirmed only after laparotomy, the risk of rupture of rudimentary horn pregnancy approximately 80%, most of which occur in the second trimester before the 20th-week gestation [11], it can cause severe morbidity to significant mortality which ranged from 6% to 23% [12]. Where the removal of rudimentary horn pregnancy is not possible, a total hysterectomy has been performed [13]..

Conclusion

The diagnosis of rudimentary horn pregnancy needs a high index of suspicion. Most of the clinicians instructed to be focus on prenatal ultrasound for an earlier diagnosis and management which results in a reduction in the risk of maternal morbidity and mortality. Additionally, MRI can be used to confirm the diagnosis before an invasive procedure is undertaken.

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