

Case Report

Cornual Ectopic Pregnancy, Which Had Continued to Full Term; Deliver a Healthy Fetus

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Rudimentary horn pregnancy is a rare ectopic pregnancy in uterine horn caused by abnormal or failed development of one Müllerian duct with a healthy fetus. A significant number of cases reported an incidence of 1 in 76,000 and 1 in 150,000 and some cases are not detected. Timely management of rudimentary horn pregnancy is pivotal in reducing mortality and morbidity. This study is designed to present a case of live 36-week primary horn ectopic pregnancy diagnosis using Ultrasound. Serum B-HCG levels normalized on postoperative first month.

Keywords: *Cornual ectopic pregnancy, Healthy fetus, Müllerian duct anomaly Rudimentary horn.***INTRODUCTION**

The ectopic pregnancy is an implantation of the fetal tissue outside the uterus, or it is attached to an abnormal or scarred portion of uterus. The unrecognized and untreated ectopic pregnancy is associated with a high rate of morbidity and mortality.¹ Ectopic pregnancy occurs mostly in the Fallopian tube.

The ectopic pregnancy may occur in the rudimentary horn for 75% of women with unicorn ate uteri that also have a rudimentary horn. Approximately 0.5 % of women have Mullerian duct anomalies that result from incomplete development. Those women have a risk of uterine rupture. Unicornuate uterus accounts 4% to 5% of these cases and nearly 75% of them feature rudimentary horn.²⁻⁵ Such rudimentary horn arises because of congenital deficiency of Müllerian duct development on one side.⁶

The abnormal fetal presentation, which occurs in the ectopic pregnancy, makes the patients at an increased risk leading them to need surgical interference.⁷ In some cases, the rudimentary horn is asymptomatic, discovered during the evaluation of pelvic pain. The sensitivity of ultra-sonographic of a rudimentary horn pregnancy is 26% to 30% and the diagnostic accuracy is limited. These ectopic pregnancies are often discovered in the second trimester when ruptured almost occurs.⁸⁻¹¹

Around 40% of women with rudimentary horn are asymptomatic; some cases were diagnosed after a previous normal pregnancy or during routine examination.¹²⁻¹⁴

CASE REPORT

An 18 year- old- female married patient, primigravida, at 36 weeks of pregnancy. She was doing well until she presented to Gynecology clinic; at Kalamoon University, Damascus suburban, Syria, with a chief complaint of an intermittent lower abdominal cramping after 30 weeks of pregnancy which is determined according to the date of her last menstrual period. She was 14 year- old when she had her menarche. No evidence of vaginal bleeding, emesis or lightheadedness. There was no significant history of chronic medical illness and she was not receiving any medications prior to her presentation just multivitamin. No past surgical history and she has no declared any history of sexually transmitted infections or abnormal pap smears. She does not smoke or drink alcohol.

The patient was aware, she was pregnant, appeared well, wake up and in no acute distress. On physical examination, she had a normal blood pressure of 113/70 mmHg and a pulse rate of 90 beats/min, respiratory rate 25 breaths/min, the body temperature was 37.5 C° and body mass index 23, Her cardiorespiratory and neurological system were normal Her abdomen was spastic but not tender, with an evidence of uterine deviation to the left side of the pelvis. Pelvic examination was normal either. An Ultrasound examination showed the fetal age estimated using the biparietal diameter, the head circumference, the length of the femur and the abdominal circumference equivalent to 30 weeks. There was no endometrial fluid or free pelvic fluid on abdominal U/S. Her laboratory values including full blood count, urea tests, electrolytes, and glucose were within normal limits. Serum beta-human chorionic

gonadotropin (beta- HCG) was normal. Her blood type was B positive. The patient refused vaginal or anal examination for religious reasons. Ultrasound revealed findings concerning with full-term fetus with cardiac pulse documented at 140 beats/min. Therefore, we decided to wait with follow up any progress. After a while, the patient returned to the emergency with abdomen pain without labor. The laparoscopy was not implemented because there is a big rudimentary uterine horn with pregnancy inside. For this reason, a discussion took place about the cesarean procedure as soon as possible. Perioperative analgesia was induced with fentanyl 200 mg IV and paracetamol 1g IV. Antibiotic prophylaxis included ceftriaxone 1g IV and metronidazole 500mg IV. Intraoperatively, findings concerning with an ectopic chorionic sac within the horn/ left a portion of the uterine and fetal pole (Figure 1) surrounded by myometrium (M) beside an empty adhesive uterus and a narrow band of tissue connecting the horn to displaced empty uterus. The fetus delivered with good agar score weighting 2500 g and lengthening of 42 cm. Even with a normal findings of the pregnancy and the surgeon's expertise Stripped the placenta resulted in massive hemorrhage, the patient becomes unstable with low blood pressure; systolic pressure range of 82 mmHg and diastolic pressure range of 40 to 52 mmHg, and rate range of 95 to 110 beats/min, without vaginal bleeding. The uterus was enlarged; the normal adnexa was normal, the left rudimentary horn was distended by the presence of an ectopic fetus (Figure 2). The left ovarian and fallopian tube were normal too. The rudimentary horn was excised and left round ligament was sutured to the left uterus. The fetus filled completely the horn. Bleeding was ultimately controlled by transfusion of 1300 ml of blood. The dominant uterus was suspended at the left round ligament and the abdominal closing. After delivery, the empty horn (Figure 3) was noted to be connected by a narrow band. Removal the placenta achieved with difficulty and was followed by excessive bleeding from the placenta bed. A discussion was made to excise the opened rudimentary horn. Speculum examination revealed a single cervix. Post-operative, the patient recovery was uneventful. Therefore, we plan for US / MRI to rule out any associated renal anomalies. She was discharged on after 24 of surgery. Histology confirmed the presence of decidua and chorionic villi. Her hemoglobin count on day 1 was 9 g/do, oral iron and folic acid supplementation were commenced. One week later the patient's serum beta HCG had declined to normal range. The patient attended physical review to follow-up for 6 weeks, and she was well with no problem with the surgery. The patient was assured of her future fertility after ectopic pregnancy; because we removed the rudimentary horn.

Figure 1. The rudimentary horn with pregnancy inside



Figure 2. Rudimentary horn uterine without pregnancy



Figure 3. The uterus after the removal of rudimentary uterine horn and the suture



DISCUSSION

Pregnancy in the rudimentary horn is a rare obstetric situation associated with a high risk of hematoma, dysmenorrhea, hematosalpinx, and musculoskeletal malformation.^{1,12-14} We extrapolated that this ectopic pregnancy could behave like a normal pregnancy; the normal B-HCG level and positive cardiac activity.

Horn rupture occurs in 80-90% of these pregnancies during the second trimester and 10% of the pregnancies proceed to term, but 2% reach fetal survival.¹⁵ So, during an obstetric US examination, it is vital to evaluate the horn relative to gestational sac as a part of it. Even the difficult way to rule out rudimentary horn ectopic pregnancy with the US; showing a clearly visible intrauterine cavity. The endoscopy was helpful but we should swiftly diagnosis and managing, is crucial afraid of uterine rupture or other complications. Uterine horn pregnancy is an uncommon situation of ectopic pregnancy, especially with the full-grown fetus. However, the sensitivity of Doppler US to identifying the vascular between the uterus and gestational sac which proves there is a fetus in the uterine horn. It was not the ability to procedure a magnetic resonance imaging; the patient was not accepted; its implementation increases costs.

Ultrasound and MRI can be used to identify renal malformations because of the high incidence of renal anomalies with Müllerian duct anomalies.^{16,17} Surgical excision of the rudimentary horn is the main line of management as advanced rudimentary horn may rupture. Recurrence of Rudimentary horn pregnancy can occur again if the rudimentary horn is not removed.¹⁸

Laparoscopic excision is a better choice during the first tri-

mester with low complication rate, but recently few case reports of laparoscopic management of rudimentary horn in the second trimester have been reported.^{18,19}

Some used methotrexate and intracardiac potassium chloride preoperative to reduce the size of pregnancy before excision of the rudimentary horn 6 weeks later.^{16,18,19}

CONFLICTS OF INTEREST

None.

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