Austin Journal of Obstetrics and Gynecology

Open Access

Austin Publishing Group

Case Report

Rupture of Pregnancy in The Rudimentary Uterine Horn At 32 Weeks

Oya SK[1]*, Hanifi Ş[1] and İlay G[1]

[1]Department of Obstetric and Gynecology, Mustafa Kemal University Faculty of Medicine, Turkey

***Corresponding author:** Oya SK, Department of Obstetric and Gynecology, Mustafa Kemal University Faculty of Medicine, Ürgenpaşa Mahallesi, Turkey, Tel : 05055025148; Email: oyakarapinar@hotmail.com

Received: November 25, 2014; **Accepted:** May 19, 2015; **Published:** June 19, 2015

Abstract

Objective: Rudimentary horn is a developmental anomaly of the uterus. Pregnancy in a rudimentary horn is rare, represents a form of ectopic gestation. The diagnose of the rudimentary horn pregnancy is very difficult before it ruptures.

Case: We present a case of pregnancy in the communicating horn that was difficult to diagnose which ruptured at 32 weeks. An emergency exploratory laparotomy revealed complete rupture of the rudimentary horn. A non viable female infant with a birth weight of 1900 g was delivered. The ruptured rudimentary horn and left tube were excised together.

Conclusion: Despite recent advances in ultrasound, the diagnosis of pregnancy in the rudimentary horn remains elusive with confirmatory diagnosis being made at laparotomy. Because of variable muscular constitution of the wall of the rudimentary horn, pregnancy can be accomodated until late in pregnancy, when rupture occurs manifesting commonly as acute abdomen with high risk of maternal mortality.

Keywords: Rudimentary horn pregnancy; Mullerian anomaly; Ectopic pregnancy; Rupture

Abbreviations

CRP: C-Reactive Protein

Introduction

A unicornuate uterus is a rare müllerian anomaly of which the true incidence is unknown. According to recent datas, it appears to be higher than previously estimated [1], reaching a rate of about 1 per 250 women [2]. Most unicornuate uteri have a rudimentary horn without communication to the uterine cavity [1]. Pregnancy in a rudimentary horn is rare, occurs most commonly in a noncommunicating cavitary horn and represents a form of ectopic gestation. Reported incidence varies from 1/76,000 to 1/140,000 pregnancies [3-5]. Despite recent advances in ultrasound, the diagnosis of pregnancy in the rudimentary horn remains elusive with confirmatory diagnosis being made at laparotomy. Due to variable muscular constitution of the rudimentary horn, pregnancy can be accomodated up to varying gestation in different women. It often represents as rupture of the uterine wall in the second trimester, manifesting as acute abdominal pain with intraperitoneal hemorrhage, with high risk of maternal morbidity and mortality. We present a case of pregnancy in the rudimentary horn which ruptured in the third trimester.

Case Report

A 24 year old women primigravida was transferred from a peripheral hospital with a history of 32 weeks gestation and acute pain in her lower abdomen. She is married for 1,5 years , menses occured every 28 days lasting seven days. She referred to the state hospital several times without complications and early diagnosis of rudimentary horn pregnancy was not made. And later she has an abdominal pain in some times. On april 17, 2014 she was referred to the state hospital with abdominal pain and then she was transfered to our hospital. On arrival at our hospital she was alert, her blood pressure and pulse being normal. There was focal tenderness around the uterus. Complete blood cell parameters are as follows: the white blood cell count was 11790 /µl, the haemoglobin was 7,2 g/dl, the hematocrit was 21,5%, the platelet 299 x 10^3, and C-Reactive Protein(CRP) was 2,6 mg/ µl. Ultrasound scan revealed that 32 +4 weeks viable fetus, posterior placenta and normal amniotic fluid. There was 4 cm of intraperitoneal free fluid. We administered antibiotics and intravenous mai to her and observed her progress. On the fifth hour of her hospital stay, the pain increased and it was found that the hemoglobin concentration dropped to 5,2 g/dl. An increased amount of intraperitoneal fluid and no evidence of abruption was found with ultrasound assessment. An emergency laparotomy was performed based on the suspicion of uterine rupture or ovarian hemorrhage. During the emergency laparotomy there was about 2000 ml blood in the peritoneal cavity, apparently arising from vessels of the left-sided ruptured rudimentary horn. The rudimentary horn ruptured completely from the posterior superior side (Figure 1and 2). The patient delivered a female infant with a birth weight of 1900 g and apgar score was 0. The rudimentary horn had a direct communication to the uterine cavity of the unicornate right uterus by a short fibrous stalk. The right tube and ovary appeared healthy and normally attached to the uterus. The left tube and attached to the rudimentary horn, but the left ovary was attached to the uterus (Figure 3).The ruptured uterine horn and left tube were excised from the right uterine wall and repaired in two layers with absorbable sutures. She was transfused 5 units of blood and discharged on the seventh postoperative day.

Citation: Oya SK, Hanifi Ş and İlay G. Rupture of Pregnancy in The Rudimentary Uterine Horn At 32 Weeks. Austin J Obstet Gynecol. 2015;2(3): 1043.

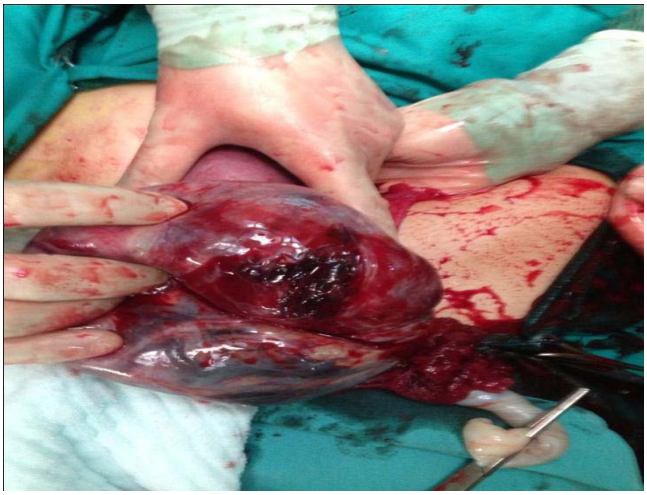

Figure 1: left side complete ruptured rudimentary horn.

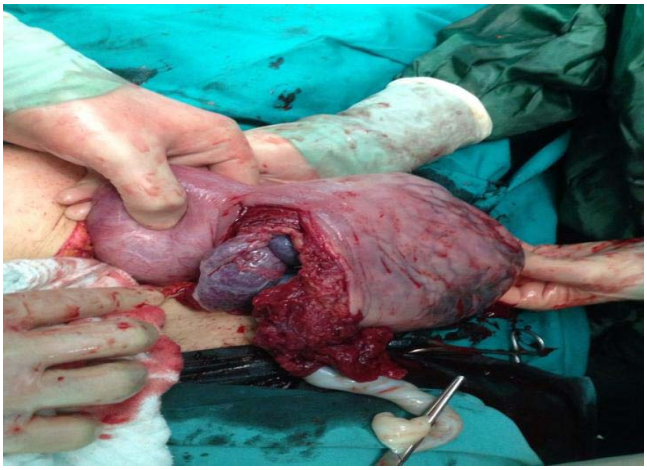

Figure 2: left ruptured rudimentary horn and right uterus.

Discussion

Ruptured rudimentary horn is a life threatening obstetrical emergency encountered rarely in the emergency department where the diagnosis is either missed or delayed. Unicornuate uterus results from abnormal development and fusion of the mullerian ducts usually associated with various degrees of rudimentary horn which may be communicating or non-communicating with the uterine cavity. The connection of the horn with the uterus may be fibrous or fibromuscular. There is no communication between the two cavities in 75% to 90% of the cases and the incidence of pregnancy in non-communicating horn is high as 83% with incidence of uterine rupture observed in 90% of cases mostly in second trimester as was observed in most cases[6-8].

To our knowledge pregnancy in the communicating horn of the uterus is extremely rare in literature. The first reported case was in an infertile patient in whom diagnosis of communicating rudimentary horn had been made prior to pregnancy[9]. There is an increased risk of miscarriage, ectopic pregnancy, preterm labor, intrauterine growth retardation and malpresentation in the rudimentary pregnancies [10-12]. Most important danger of rudimentary horn pregnancy is the

Figure 3: bilateral ovary and left tuba.

risk of rupture because of poorly developed musculature. Rupture occurs in 80–90% at mid trimester, and only 10% reach term, with a fetal salvage rate of 2% [13]. Pregnancy in the rudimentary horn is always an emergency, as rupture of the pregnant rudimentary horn can occur, as it does mostly between 10 and 15 gestational weeks [8]. Although there are sporadic case reports of producing a live infant, the prognosis of pregnancy in the rudimentary horn is often poor for the patient . Rupture of the pregnant rudimentary horn causes heavy bleeding and threatens patient's life. [13,14]. Pre-gestational diagnosis of rudimentary horn requires hysterosalpingography, hysteroscopy and laparoscopy, whereas prenatal diagnosis is attempted with ultrasonography especially transvaginal [15]. If a woman with a pregestational suspicion of rudimentary horn becomes pregnant and pregnancy in the rudimentary horn is suspected, then close monitoring is warranted due to the risks of rupture and its complications [16]. Pre-gestational diagnosis was not made in our patient; so she presented abdominal pain to the emergency service.

Early diagnosis of a rudimentary horn pregnancy is difficult, particularly because women often have a history of previous normal pregnancies. Abdominal pain and collapse with hemoperitoneum can occur suddenly [17] . in our case early diagnosis of the rudimentary horn pregnancy was not made, so she came acute abdomen to the emergency. Pelvic examination may suggest an adnexal mass, causing deviation of the uterus and cervix to one side [18]. Abdominal pain is the commenest presenting symptom associated with the rudimentary horn. Communicating rudimentary horns are less likely to be symptomatic before and during early pregnancy. The pain associated with rudimentary horns in pregnancy commences from the end of the first and beginning of the second trimester. Vaginal bleeding is rare, but when it occurs it is more likely to be associated with pregnancy in the communicating horn. Sudden collapse due to rupture of the pregnant horn with haemoperitoneum may be the only sign which is common to both types of uterine horn pregnancy as gestation advances [6].

Ultrasound scan (especially transvaginal) is increasingly providing an excellent opportunity for the detection of asymptomatic extrauterine pregnancies in clinical practice before rupture[19]. An extrauterine gestation accompanied by a well defined placenta has

been suggested to be the criterion for differentiating rudimentary horn pregnancies from abdominal pregnancy. The confines of a rudimentary horn, although very thin, tend to delineate the placenta, making it more identifiable [17]. However ,difficulty in diagnosis during early pregnancy is quite common as there are no definite signs to distinguish this abnormal implantation from normal intrauterine pregnancy, especially if it is anterior to the normal horn. Accurate diagnosis is neverthless possible and important early in pregnancy to allow planning of surgical management [7].Confirmation of diagnosis is usually surgical at laparoscopy or laparotomy. Conservative management during pregnancy is also reported in the literature in selected cases; in these cases access to immediate operative intervention is vital. Excision of the rudimentary horn and ipsilateral salpingectomy, preferably conserving the ovary, is the surgical procedure recommended for patients desiring to preserve the fertility potential; though hysterectomy may be necessary in life threatening hemorrhage. Laparoscopy can be used in unruptured cases [8].

Conclusion

We have reported this case to highlight the difficulties encountered in making the diagnosis and to remember the possibility of uterine horn pregnancy in the differential diagnosis of recurrent abdominal pain in pregnancy.

References

1. Heinonen PK. Clinical implications of the unicornuate uterus with rudimentary horn. Int J Gynaecol obstet. 1983; 21: 145-150.
2. Grimbizis GF, Camus M, Tarlatzis BC, Bontis JN, Devroey P. Clinical implications of uterine malformations and hysteroscopic treatment results. Hum Reprod Update. 2001; 7: 161-174.
3. Tsafrir A, Rojansky N, Sela HY, Gomori MJ, Nadjari M. Rudimentary Horn Pregnancy. J Ultrasound Med. 2005; 24: 219-223.
4. Nahum GG. Rudimentary uterine horn pregnancy. A case report on surviving twins delivered eight days apart. J Reprod Med. 1997; 42: 525-532.
5. Johansen K. Pregnancy in a rudimentary horn. Obstet Gynecol. 1983; 61: 565–567.
6. Elsayegh A, Nwosu EC. Rupture of pregnancy in the communicating rudimentary uterine horn at 34 weeks. Human reproduction. 1998; 13: 3566-3568.
7. Chopra S, Keepanasseril A, Rohilla M, Bagga R, Kalra J, Jain V. Obstetric morbidity and the diagnostic dilemma in pregnancy in rudimentary horn: Retrospective analysis. Arch Gynecol Obstet. 2009; 280: 907-910.
8. Nahum GG. Rudimentary horn pregnancy, the 20th century world wide experience of 588 cases. J Reprod Med. 2002; 47: 151-163.
9. Gerris J, Eulaers E, Joostens M. Successful triplet pregnancy in a patient with a unicornuate uterus with a cavitary communicating uterine horn. Human Reprod. 1993; 8: 338-341.
10. Heinonen P . Unicornuate uterus and rudimentary horn. Fertil Steril. 1997; 68: 224–230.
11. Soundararajan V, Rai J. Laparoscopic removal of a rudimentary uterine horn during pregnancy. J Reprod Med. 2000; 45: 599–602.
12. Suri V, Dhaliwal L, Prasad G, Pathak N, Gupta I. Pregnancy in a noncommunicating horn of a unicornuate uterus with fetal salvage. Acta Obstet Gynecol Scand. 2002; 81: 473–474.
13. Rolen AC, Choquette AJ, Semmens JP. Rudimentary uterine horn: obstetric and gynecologic complications. Obstet Gynecol. 1966; 27: 806–809.
14. Raga F, Bauset C, Remohi J, Bonilla-Musoles F, Simon C, Pellicer A . Reproductive impact of congenital Mullerian anomalies. Hum Reprod. 1997; 12: 2277–2281.
15. Chang JC, Lin YC. Rupture of rudimentary horn pregnancy. Acta Obstet Gynecol Scand. 1992; 71: 235–238.
16. Daskalakis G, Pilalis A, Lykeridou K, Antsaklis A. Rupture of noncommunicating rudimentary uterine horn pregnancy. Obstet Gynecol. 2002; 100: 1108–1110.
17. Jayasinghe Y, Rane A, Stalewski H, Grover S. The presentation and early diagnosis of the rudimentary uterine horn. Obstet Gynecol. 2005; 105: 1456–1467.
18. Kriplani A, Relan S, Mittai S, Buckshee K. Pre-rupture diagnosis and management of rudimentary horn in the first trimester. Eur J Obstet Gynecol Reprod Biol. 1995; 58: 203–205.
19. Chang JC, and Lin YC. Rupture of rudimentary horn pregnancy. Acta Obstet. Gynecol. Scand. 1992; 71: 235-238.

Austin J Obstet Gynecol - Volume 2 Issue 3 - 2015
Submit your Manuscript | www.austinpublishinggroup.com

Citation: Oya SK, Hanifi Ş and İlay G. Rupture of Pregnancy in The Rudimentary Uterine Horn At 32 Weeks. Austin J Obstet Gynecol. 2015;2(3): 1043.