Unruptured pregnancy in non-communicating rudimentary horn of a unicornuate uterus- A rare case

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ABSTRACT

Pregnancy in non-communicating rudimentary horn of unicornuate uterus is very rare type of ectopic pregnancy. Only few of such cases rupture in first trimester, but eventually ninety percent of such cases rupture in second trimester. A high index of suspicion and careful ultrasound examination can detect the condition earlier before rupture.

Here we report a case of 32years old G3P2L2, presented with 7weeks of gestation with acute abdomen. On ultrasonography, unruptured cornual ectopic pregnancy was suspected. Emergency exploratory laparotomy was done. Intra-operatively there was unruptured ectopic pregnancy in non-communicating horn of a unicornuate uterus. The rudimentary horn with unruptured pregnancy was excised and bilateral tubectomy was done. This case is reported because of its rarity as well as to stress the need for high index of suspicion and role of ultrasonography in the diagnosis this rare and dreadful entity.

Keywords: Laparotomy, Rudimentary horn, Unruptured pregnancy, Unicornuate uterus

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INTRODUCTION

The prevalence of congenital uterine anomalies among fertile women is reported as 1:200 to 1:600. The prevalence of unicornuate uterus with rudimentary horn is even rarer that is 1:100,000.[1] The rudimentary horn may consist of a functional cavity, or it may be a small lump of uterine muscle with no functional endometrium.2 Pregnancy in a rudimentary horn is rare, incidence quoted is between 1per 76,000 to 1 per 140,000 pregnancies in literature.[3]

Although diagnosis of rudimentary horn pregnancy remains challenging, few cases of early (first trimester), prerupture sonographic diagnosis of this condition have been reported.[4, 5] Once the diagnosis is made, treatment is excision of rudimentary horn. Ipsilateral salpingectomy should also be performed as there is possibility of tubal ectopic pregnancy in future, success with intracardiac potassium chloride and methotrexate leading to self resorption of conceptus also been reported.[6] Here we report a case of unruptured rudimentary horn pregnancy.

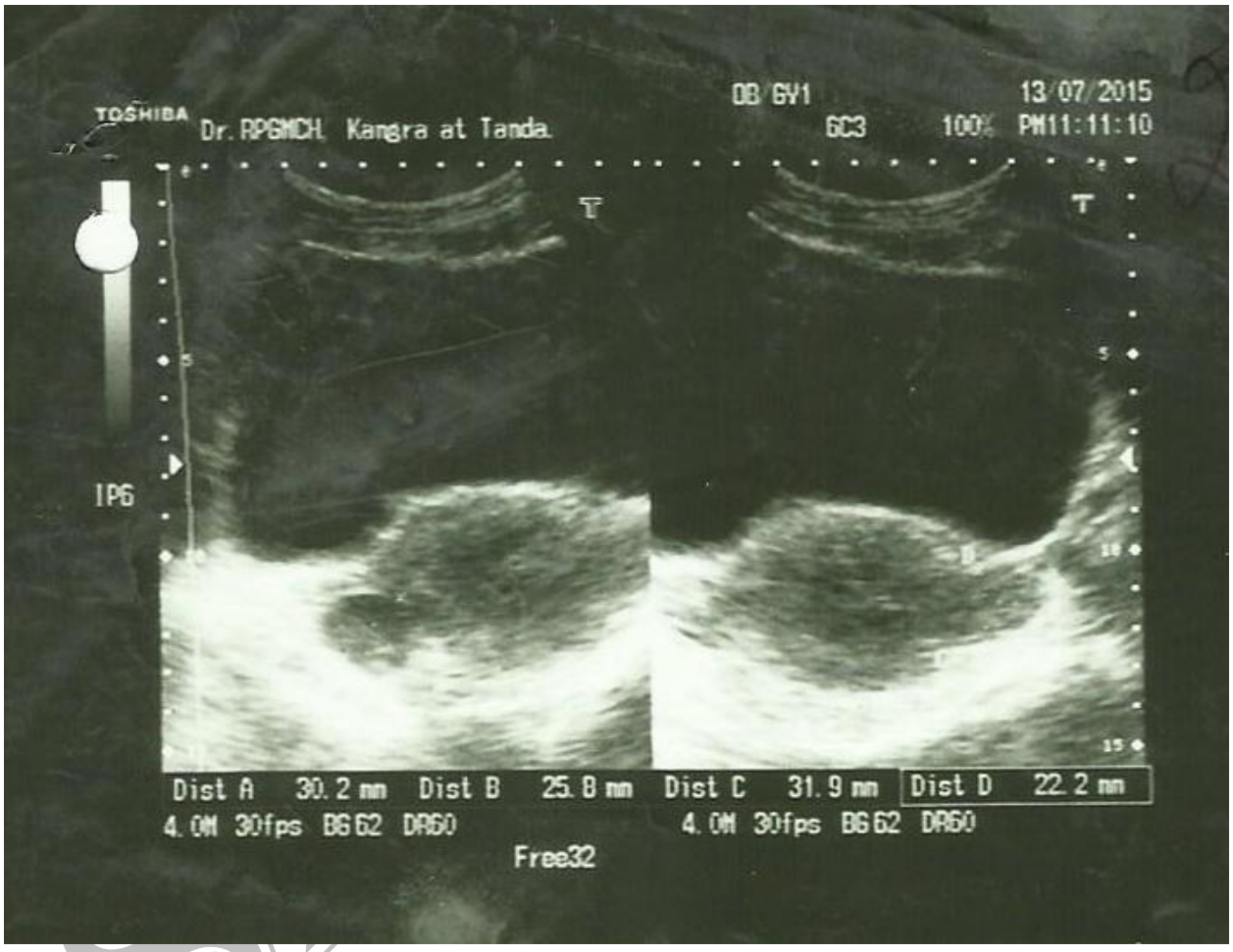
CASE REPORT

Here we report a case of 32 year old $G_3P_2L_2$ at 7 weeks of pregnancy with complaints of irregular bleeding per vaginum since 1 month and pain lower abdomen since 2 days. Patient was admitted in emergency labour unit. Termination of pregnancy was attempted 15 days back at 5 week of gestation by dilatation and evacuation in a private medical clinic. Menstrual history, she attained menarche at age of 14 years, her cycle was regular. Obstetric history: Married for 12years, there is history of two normal term vaginal delivery; last childbirth was 7 years back. There is history of barrier contraceptive method used.

At that time, her vitals were stable, Pulse rate 90 beats per minute, afebrile, blood pressure was 110/70 mmHg. Pallor was absent. Per abdomen examination: abdomen soft, there was tenderness on deep palpation in right iliac fossa, no rigidity, no guarding, bowel sounds were present. Per speculum examination: minimal bleeding present, os closed. Per vaginum examination: Uterus anteverted 8 weeks size, soft, deviated to right, right fornix tender and full. Chest and cardiovascular examination was normal.

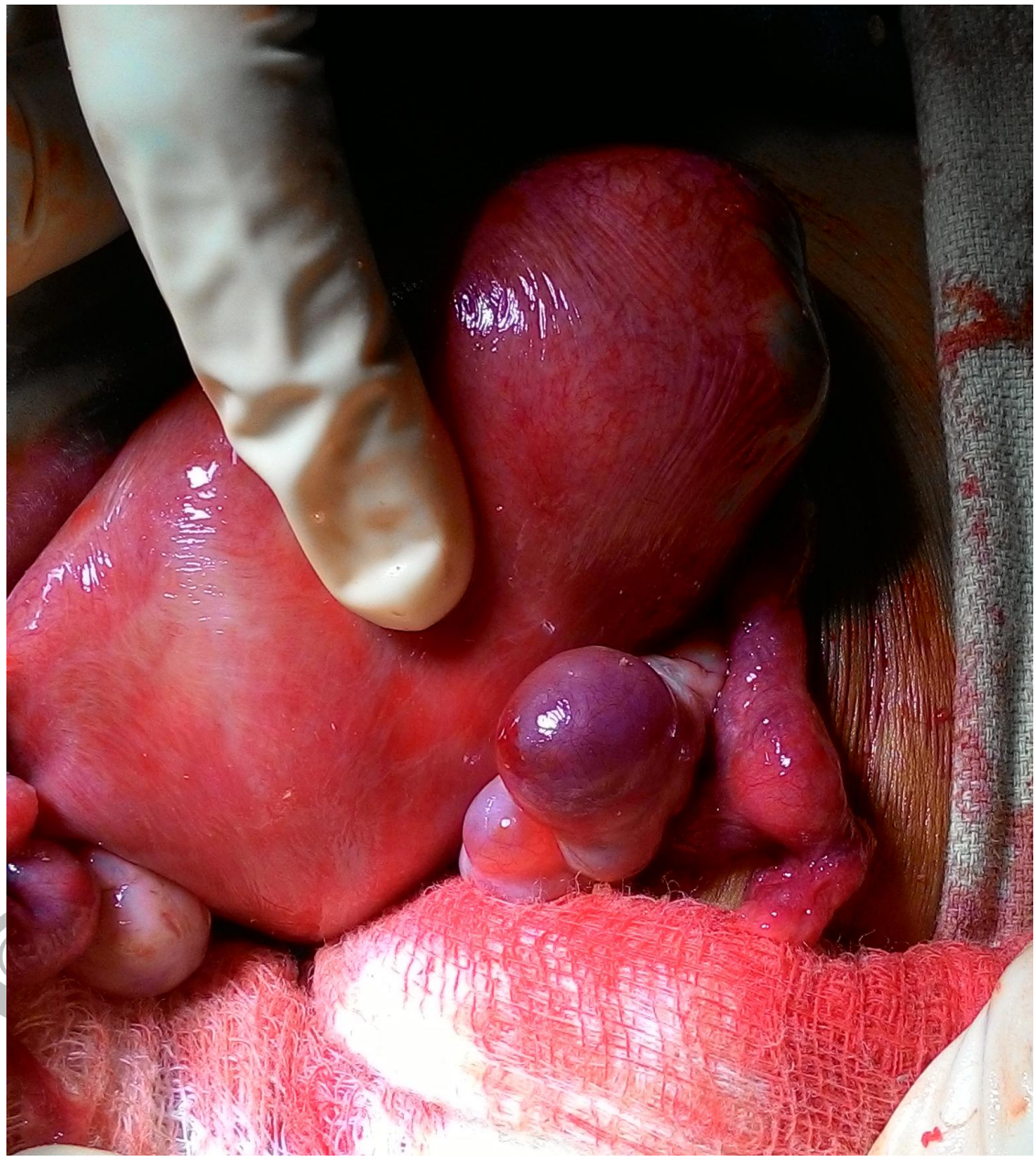
Urine pregnancy test was positive. Paracentesis and cudocentesis were negative. Haemoglobin was 11gm%. TLC-DLC normal, Serum electrolytes- renal and liver function tests were normal. Urgent ultrasonography done showing (Figure 1): irregular gestational sac like structure in right cornual location of the uterus of size 2.2x2.1 cm, with fetal node but no evidence of fetal cardiac activity with minimal free fluid in pelvis, bilateral adenexa normal? Possibility of ectopic cornual or rudimentary horn pregnancy.

Figure 1: An irregular gestational sac like structure in right cornual location of the uterus of size 2.2x2.1 cm, with fetal node but no evidence of fetal cardiac activity with minimal free fluid in pelvis, bilateral adenexa normal? Possibility of ectopic cornual or rudimentary horn pregnancy.



Emergency Laparotomy was planned. Relatives and patient counselled about possibility of cornual or rudimentary horn pregnancy. Patient and her husband also given the consent of bilateral tubectomy. Operative findings (Figure 2): No haemoperitoneum was seen. The uterus was unicornuate, normal looking with left tube and ovary attached to its cornua, while unruptured ectopic pregnancy was in rudimentary horn of size3x4cm, thin walled about to rupture, attached to uterus on right side and was non-communicating.

Figure 2: The uterus was unicornuate, normal looking with left tube and ovary attached to its cornua, while unruptured ectopic pregnancy was in rudimentary horn of size3x4cm, thin walled about to rupture, attached to uterus on right side and was non-communicating.



The right fallopian tube was swollen, right ovary normal. The rudimentary horn was excised and bilateral tubectomy done as patient was multiparous and consent of tubectomy was given by the both husband and wife. The post-operative period was uneventful. She was discharged on 7th post-operative day. The

histopathology report showed the rudimentary horn ectopic pregnancy with portion of fallopian tubes.

DISCUSSION

The ectopic pregnancy in rudimentary horn is very rare. The first case was described by Mauriceau in 1669.[7] Rudimentary horn with unicornuate uterus results from failure of complete development of one of the mullerian ducts and incomplete fusion with the contralateral side. In 83% of the cases the rudimentary horn is non-communicating.[8] The possible explanation of ectopic pregnancy in rudimentary horn cases is transperitoneal migration of the spermatozoa or fertilized ovum from the contralateral tube. Unlike tubal ectopic pregnancy, which usually ruptures in first trimester, about 90% of these pregnancies culminate in rupture mostly in the second trimester.[9]

In order to diagnose ectopic pregnancy in early stage, every women, who presented with unexplained abdominal pain, should be suspected to have ectopic pregnancy until proved otherwise.[10]

A careful pelvic examination in the first trimester showing deviated uterus with palpable contralateral pelvic adenexa should arouse suspicion of uterine anomaly.[9]Diagnosis prior to rupture is unusual, but could be made with ultrasonography and MRI. Tsafrir et al outlined a set of criteria for diagnosing a pregnancy in the rudimentary horn. They are :(1) A pseudo pattern of asymmetrical bicornuate uterus; (2) Absent visual continuity tissue surrounding the gestation sac and the uterine cervix; (3) Presence of myometrial tissue surrounding the gestation sac. None-the-less most of cases remain undiagnosed until it ruptures and presents as an emergency.[11]

Additionally, hypervascularization typical to placenta accrete may support the diagnosis of rudimentary horn pregnancy.MRI has proven to be a useful, noninvasive tool for the diagnosis of mullerian abnormalities. [12] The commonest associated anomaly is renal (36%) most common being ipsilateral renal agenesis followed by pelvic kidney. [13]

The traditional and established treatment for rudimentary horn pregnancy is surgical removal of the pregnant horn even in unruptured case to prevent rupture and recurrent rudimentary horn

pregnancy. [15] Laproscopic excision of the rudimentary horn pregnancy prior to rupture has been done successfully since last two decades. [14] Medical management with methotrexate during early pregnancy in the rudimentary has also been done successfully. [6]

CONCLUSION

Rudimentary horn pregnancy is a rare condition. This can be a life threatening condition when present with rupture of horn and intraperitoneal haemorrhage. High index of suspicion and early diagnosis followed by early intervention can save many lives.

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