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Case Report

Pregnancy diagnosed in a rudimentary horn of uterus: a rare case report

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ABSTRACT

Pregnancy in a rudimentary horn of the uterus is a quite rare clinical condition with a reported incidence of 1 in 100,000 to 140,000 pregnancies. The patient may get complicated if not diagnosed timely. The standard treatment is the surgical excision of the horn. A gravida 1, para 0 patient presented at 5 weeks gestation diagnosed as pregnancy in rudimentary horn. She underwent a laparotomy with right rudimentary horn excision. The final diagnosis of pregnancy in rudimentary horn was confirmed by histopathology. A unicornuate uterus with a rudimentary horn is a congenital uterine anomaly resulting from the incomplete development of one of the Müllerian ducts also incomplete fusion with the contralateral side. This case highlights the importance of an early detection by ultrasound and the need for high clinical diagnosis with suspicion.

Keywords: Mullerian anomalies, Rudimentary horn, Ectopic pregnancy

INTRODUCTION

Uterine anomalies result from the failure of complete fusion of the Müllerian ducts during embryogenesis, the incidence in the general population of 4.3%.[1] A unicornuate uterus with a rudimentary horn is the rarest anomaly and results from the failure of one of the Müllerian ducts to develop completely and an incomplete fusion with the contralateral side.[2] First trimester ultrasound is an invaluable tool to diagnose the rudimentary horn pregnancy within time frame. If early diagnosis is missed, it can lead to catastrophe of rupture of the rudimentary horn. Such cases can lead to high maternal morbidity and mortality. Herein we aim to present a case of early pregnancy in rudimentary horn of uterus, successfully diagnosed timely due to good ultrasound skills and managed at our department.

CASE REPORT

Mrs. XYZ 27 years of age residing at Juna Vadaj, Ahmedabad, of low socioeconomic status came with history of diarrhoea and vomiting for 2 days in medical outpatient department. The patient was admitted in medicine ward same day in view of gastroenteritis and treated with IV fluids, anti-emetics and probiotics and ORS powder. After detailed history taking in medicine ward after emergency treatment, the patient revealed that she had 1 month 4 days amenorrhoea. Urine pregnancy test was performed, which was positive so immediate ObGy reference was sought.

On detail history pt had one month 4 days amenorrhoea. She was gravida 1 with active married life of 1 year. Her LMP was 1/11/24 with regular cycles. Past medical and surgical history was non-significant. The Abdomen was soft and non-tender. Per speculum examination and per vaginal examination showed no significant findings. On transvaginal sonography, well defined gestational sac of 5 mm with yolk sac seen in rt adnexa. The sac was surrounded by thick musculature which look similar as uterine wall with connection with uterus by thick muscular band (Figure 1). These findings lead to the diagnosis of

pregnancy in rudimentary horn of uterus. Rt ovary and left ovary were normal. Minimal free fluid in pelvis seen.

The patient was taken transfer to ObGy department. On transfer patient was stable vitally. Her preop investigations were sent:

Hemoglobin was 10.8 gm/dl, WBC count 4050/cumm, beta HCG was 3570 mIU/creatinine, electrolytes, PT and APTT were WNL. Patient serology was negative. Counselling and consent of patient and relatives was done. Patient was posted for emergency laparotomy after preoperative investigations and preparation. A suprapubic transverse incision kept. Intraoperatively the uterus was of normal size with normal appearing left fallopian tube. There was a rudimentary horn of approximate 3 cm size attached to uterus with bandlike tissue on right side. The fallopian tube was around 4 cm length attached to rudimentary horn (Figure 2).

Ovary was found normal. Rudimentary horn along with right fallopian tube removed (Figure 2).

The rudimentary horn was cut which confirmed the uterine tissue surrounding the sac s/o rudimentary horn (Figure 3). The specimen sent for histopathological analysis. Haemostasis checked. Saline wash given. Abdomen closed layer wise. Patient shifted to post operative word for observation. One-pint PCV given intraoperatively. Post operatively patient stable.

Histopathological report confirmed pregnancy in rudimentary horn with decidual changes in endometrium of normal uterus.

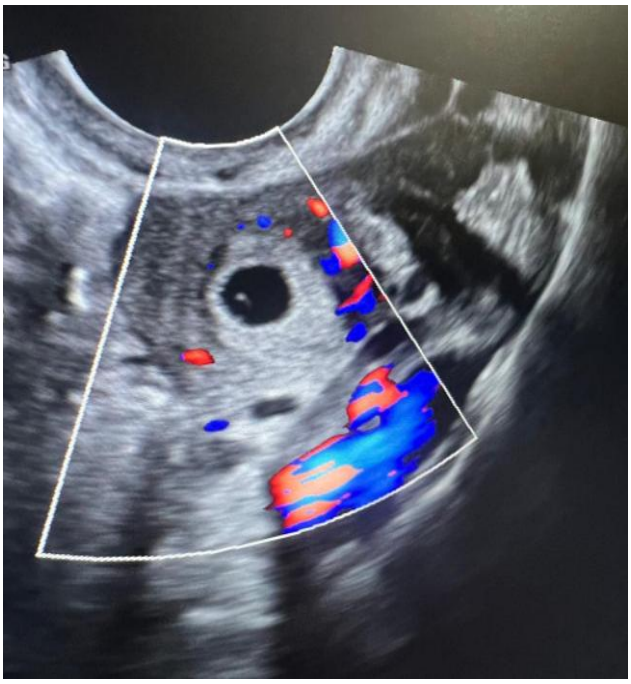

Figure 1: Ultrasound of pregnancy in rudimentary horn.

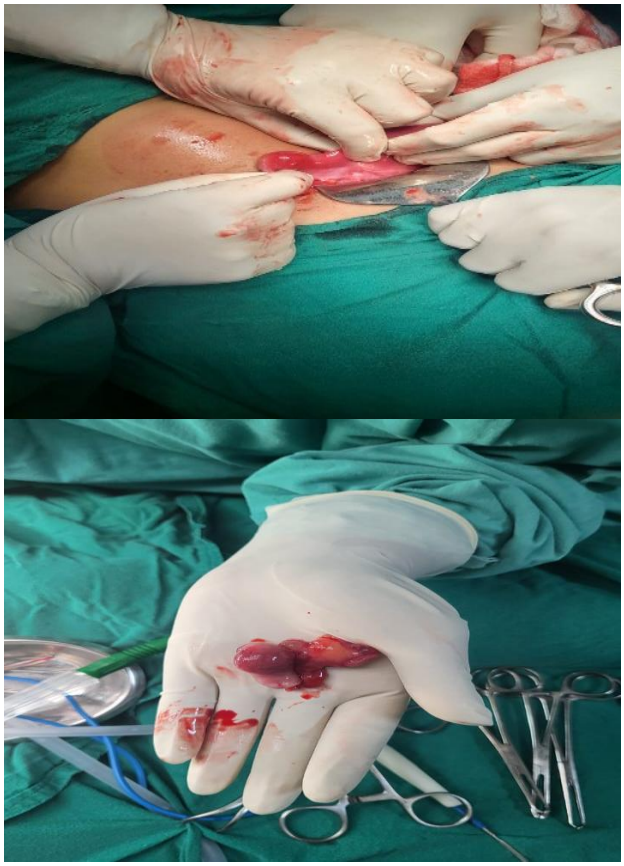

Figure 2: Intraop findings of rudimentary horn.

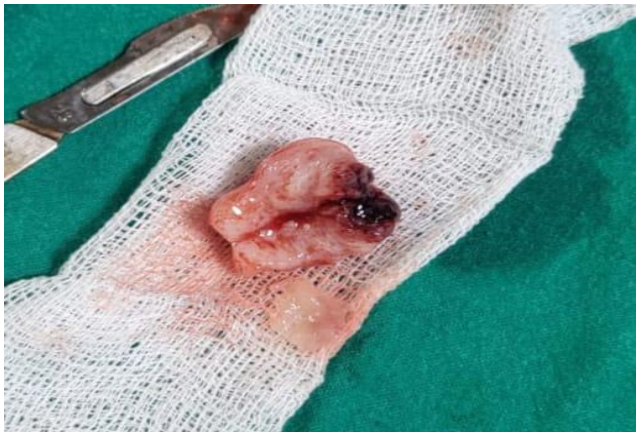

Figure 3: Cut section of horn with gestational sac.

DISCUSSION

Rudimentary horn pregnancy is an extremely rare cause of extrauterine pregnancy with a reported prevalence ranging from 1:76,000-150,000 of all pregnancies.[3,4]

The ASRM Mullerian anomalies classification 2021 (MAC2021) classifies Mullerian anomalies into nine categories which includes Mullerian agenesis, cervical agenesis, unicornuate uterus, uterus didelphys, bicornuate uterus, septate uterus, longitudinal vaginal septum, transverse vaginal septum and complex anomalies.[5]

Unicornuate uteri are further subdivided into 2 variants according to the criteria from the American fertility society.[6] Type A includes unicornuate uterus with rudimentary horn and type B unicornuate uterus containing no horn (35%).[6]

Type A is further classified into A1 including rudimentary horn containing endometrium and A2 including rudimentary horn with no endometrial cavity (33%).[6] Then A1 is further subdivided into A1a including communicating horn (10%) and A1b a non-communicating horn (22%).[6]

Our case falls in type A1b as there was a unicornuate uterus with non-communicating rudimentary horn with endometrium. A pelvic ultrasound in the early first trimester showing an empty uterus with an adnexal mass/G sac should provoke suspicion of a Müllerian anomaly.

Our case showed regular gestational sac with surrounding thick myometrial tissue and thick muscle like tissue connecting to uterus, to lead to the diagnosis.

Tsafrir et al suggested the following criteria for diagnosing a pregnancy in the rudimentary horn: (a) a pseudo pattern of asymmetrical bicornuate uterus; (b) absent visual continuity between the cervical canal and the lumen of the pregnant horn, and (c) the presence of myometrial tissue surrounding the gestational sac.[7]

A variation in the thickness of the myometrium in two horns and a marked distance between them favour the diagnosis of a rudimentary horn pregnancy.[7]

Approximately 38% of patients have coexisting renal abnormalities. Unilateral renal agenesis is most commonly found; this is always ipsilateral with the rudimentary horn.[8]

Although a definitive treatment is surgical excision of the rudimentary horn so that to prevent rupture and recurrent rudimentary horn pregnancies.[9]

In our case we removed the rudimentary horn where pregnancy was detected and fallopian tube of right side to avoid further catastrophe.

CONCLUSION

The early diagnosis of a pregnancy in a rudimentary horn requires a good diagnostic ability. An early clinical suspicion and diagnosis for uterine malformations can significantly decrease the complications and mortality rate by timely intervention.

The excision of the rudimentary horn and fallopian tube of same side is recommended surgical treatment for the good prognosis. Our case showed the need for high clinical acumen and early diagnosis for this uncommon condition.

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