



Liver vs Uterus – A Rare Case of Cornual Ectopic Pregnancy

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ABSTRACT

Implantation of the fertilised egg in any place other than the endometrial cavity or the uterus constitutes the term ectopic pregnancy. This can occur in any part of the abdominal cavity, with the fallopian tube being the most common location, including the cornua of the uterus, ovary and Cervix. Though the exact aetiology remains unknown, pelvic inflammatory disease (PID), previous ectopic gestation, pelvic surgeries, in vitro fertilisation, ipsilateral salpingectomy, infertility, history of medical termination of pregnancy, and certain types of contraception are considered risk factors. The most common method of diagnosis is by ultrasound – transabdominal or transvaginal. Treatment options include medical and surgical methods, depending on a number of factors like the gestational age, ultrasound findings, haemodynamic stability of the patient, beta HCG level and the patient's desire for future fertility. Below is a rare case of how a cornual pregnancy presented to us with co-existing liver pathology. With the desire for future fertility taken into consideration, medical management was opted by the patient and executed. The patient showed good recovery and ectopic gestation was resolved.



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live birth, proving to be one of the major causes of maternal morbidity and mortality [2]. About 95% of ectopic pregnancies occur in the fallopian tube and 55% in the ampulla [3]. Cornual pregnancy is a comparatively rarer form that accounts for 2-4% of ectopic gestations [3]. Risk factors for cornual pregnancy are similar to those of ectopic pregnancy. However, such gestation is usually tolerated for a longer duration (>12 weeks) as the gestational sac is better protected in the interstitial portion of the tube [1]. Consequence can be devastating as rupture of such gestation may lead to profuse haemorrhage and eventually death.

INTRODUCTION

Ectopic pregnancy is one which develops at any site other than the endometrial cavity of the uterus following implantation [1]. In a multicentric case-control study in India (ICMR Task Force Project, 1990), the incidence of ectopic pregnancy is 3.12 per 1000 pregnancies or 3.86 per 1000 live births [2]. A study conducted by Harish KM et al. estimated the incidence of this condition to be about 5.29 per 100

CASE ILLUSTRATION

A 32-year-old woman, G2A1, 7weeks and 1 day of gestation, came with complaints of bleeding per vaginum for 3 days with a positive urine pregnancy test. She gave a history of bleeding per vaginum for 3 days, soaking 2 pads per day, associated with passage of clots and lower abdominal pain. No history of loss of consciousness, vomiting, loose stools or

Table 1: Serial monitoring of beta HCG

Day	Beta HCG
1	716.55
4	120.87
7	32.18
11	6.89

Table 2: Serial monitoring of LFT

LFT	Day 1	Day 2	Day 3	Day 5	Day 7	Day 9
S.bilirubin T/D	0.32/0.10	0.10/0.02	0.30/0.10	0.40/0.20	0.47/0.13	0.40/0.09
SGOT	78	128	55	94	189	74
SGPT	123	135	98	140	216	180
ALP	96	88	83	120	110	109
T.P/ ALB	6.9/4.1	6.5/3.8	6.3/3.5	7.3/4.8	7/4/3	6.9/4.3

fever was elicited. She gives an obstetric history of prior MTP done at 22 weeks of gestation due to an anomaly of the fetus in May 2021.

Previously, she had regular menstrual cycles of 4/30 days, normal flow, not associated with passage of clots or excess abdominal pain.

On examination patient had stable vitals:

BP- 90/60mmHg

PR-82/ min

Examination of the abdomen was soft, non-tender, and with No mass palpable. Per speculum examination revealed a healthy Cervix and vagina with minimum bleeding through the os. Per vaginal examination showed Cervix pointing downwards; uterus ~ 6 weeks size, Os closed; Bilateral fornices free without any cervical motion tenderness.

Basic blood investigations revealed a normal haemogram, RFT, urine routine and coagulation profile. However, deranged LFT was noted. Medical gastroenterologist opinion was sought and followed; the patient was started on T. Ursodeoxycholic acid 150mg BD. Transabdominal ultrasound did not reveal any liver pathology; however, the transvaginal ultrasound showed a proper right cornual gestation, as depicted in the image (Figure 1, Figure 2, Figure 3). Serial monitoring of beta HCG (Table 1) and LFT (Table 2) was done as illustrated.

Deranged liver function is considered a contraindication for methotrexate administration. The situation was well explained in the regional language to the patient. However, with future fertility as one of the considerations, the patient opted for medical management rather than surgical intervention. Therefore, consent was obtained from the patient

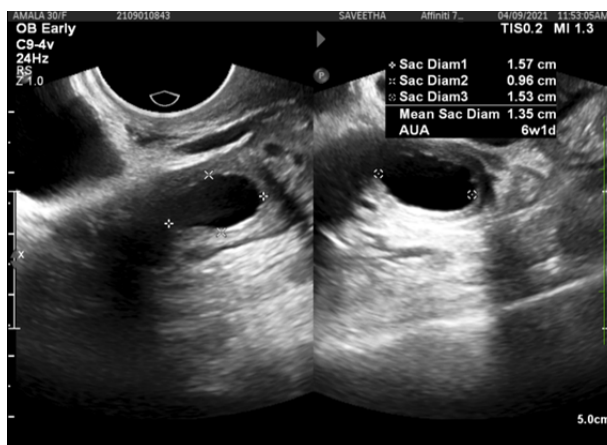


Figure 1: Ectopicgestationalsac



Figure 2: Normal left ovary

and medical management was decided as the mode of treatment and one dose of INJ. METHOTREXATE 50mg IM was administered. The patient was carefully monitored.

After beta HCG showed a negligible level and the

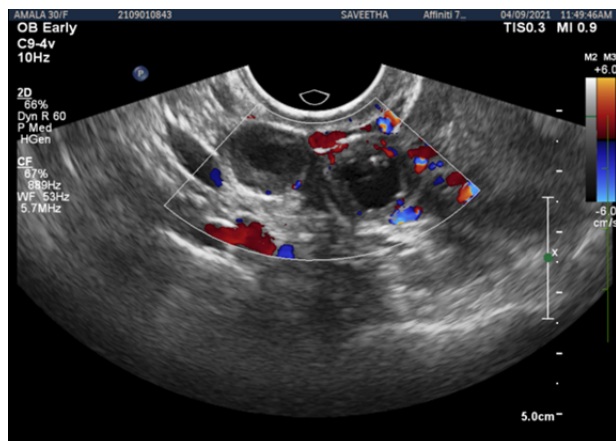


Figure 3: Gestational sac in right cornua of the uterus

patient was symptomatically fine with no complaints of bleeding per vaginum, the patient was discharged.

DISCUSSION

Ectopic pregnancy can occur anywhere in the abdominal cavity, including fallopian tubes, cornua of the uterus, ovary and Cervix. Cornual pregnancy, being a rarer entity compared to the other types of ectopic gestations, should be differentiated from an angular pregnancy. Cornual, also called the interstitial gestation, is one where the gestational sac gets implanted in the proximal portion that lies within the muscular wall of the uterus and angular pregnancy is one where the gestational sac gets implanted in the lateral angle of the uterine cavity medial to the internal ostium of the fallopian tube. The gestational sac is better tolerated in the interstitium. Hence symptoms of such gestation usually manifest later (more than 12 weeks). Difficulty in diagnosing has always prevailed due to the location discrepancies, leading to high morbidity and mortality compared to other ectopic pregnancies. Pelvic pain and spotting are the commonest symptoms as the pregnancy occurs in the junction of the uterine and ovarian vessel, the most vascularised part of the pelvis, predisposing it to rupture and imminent shock.

Risk factors for cornual pregnancy include PID, previous ectopic gestation, pelvic surgeries, in vitro fertilisation, ipsilateral salpingectomy, infertility, history of medical termination of pregnancy, contraception with Mirena IUS or progesterone only pill [4]. Jain et al. found that hormonal emergency contraceptive failure rate is high when used in periovulatory period with an increased chance of ectopic gestation. Diagnosis is based on a combi-

nation of serum beta HCG and transvaginal sonography. Being a difficult diagnosis, an eccentrically placed gestational sac surrounded by an asymmetric myometrial mantle and an empty uterine cavity are considered the closest form of diagnosis [5]. Diagnosis of interstitial pregnancy adopted by Timor-Tritsch et al. is as follows: An empty uterine cavity; a chorionic sac is seen separately and 1 cm from the most lateral edge of the uterine cavity; a thin myometrial layer surrounding the chorionic sac [6].

Treatment options are medical and surgical management. Medical management often used is Methotrexate local or systemic (1 mg/kg) + leucovorin (0.1 mg/kg). Other surgically administered medial drugs include Prostaglandin F_{2α}, RU-486, 20% KCl, methotrexate and hyperosmolar glucose – all injected into the gestation sac under laparoscope or ultrasound guidance. Surgical management can be laparoscopy, laparotomy or hysteroscopy. Laparoscopy and laparotomy include cornual resection and cornuostomy as conservative methods of surgical management. Ruptured interstitial pregnancy may manifest with symptoms of impending shock thereby requiring an emergency laparotomy and exploration. In patients with ruptured cornual pregnancy, laparotomy is preferred. Hysterectomy is reserved for cases in which haemorrhage is profuse and life threatening. In the hysteroscopic procedure, cornual endometrium is removed (including tubal ostium) under hysteroscopy guidance [7].

According to RCOG guidelines, women with tubal pregnancy may be offered medical treatment with a single dose of injection methotrexate therapy when beta HCG levels are below 3000 IU/l and have negligible symptoms. This preserves the tube and future fertility of the women. However, there is not enough clarity on the possibility of uterine rupture following this conservative type of management [8].

CONCLUSION

Diagnosis and management of cornual pregnancy pose a significant challenge due to the lesser awareness of symptoms of the condition and diagnosis at a later time. Ruptured cornual pregnancy has to be treated immediately with emergency laparotomy and cornual resection to prevent maternal mortality. Transvaginal sonography has contributed significantly towards early detection and intervention, whereby the patient can be offered conservative mode of treatment options that may help preserve fertility in women desirous of future pregnancies. Hence, adequate awareness should be brought about among the general population regarding the early symptoms of such gestations and the impor-

tance of radiological intervention during early pregnancy.

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Conflict of Interest

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