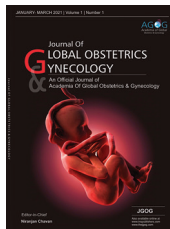


Case Report



A Rare Case Report of Interstitial Ectopic Pregnancy

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ABSTRACT

Interstitial pregnancy is a rare type of ectopic pregnancy in which embryo implants in the junction between the fallopian tube and uterus in an interstitial portion of the tube. Ampullary part of fallopian tube is the most common site for ectopic pregnancy. However, in 2-4% of cases, interstitial ectopic pregnancy is seen. Interstitial pregnancy is diagnosed at (6 + 6) weeks of gestation in 24-year-old Gravida 2 abortion 1 healthy woman. Ultrasound examination showed well-defined heterogeneous mass lesion with irregular G sac-like structure noted in the right fallopian tube? right-sided unruptured tubal ectopic pregnancy. We performed right cornuostomy by laparotomy and there were no post operative complications. Timely recognition allows for appropriate interventions to be initiated, which can help prevent life-threatening complications such as rupture and hemorrhage as it is associated with mortality rate of 2–2.5%. Diagnosis of interstitial pregnancy can be challenging, and it often requires precise ultrasound interpretation. In some cases, laparoscopic evaluation may also be necessary to confirm the diagnosis definitively. Ultrasound imaging, especially transvaginal ultrasound, is typically the first-line diagnostic tool for detecting interstitial pregnancies due to its high sensitivity and specificity in identifying gestational sacs located outside the uterine cavity. Early diagnosis and prompt management are essential in addressing maternal mortality associated with interstitial pregnancy.

Key words: Cornuostomy, Ectopic pregnancy, Interstitial pregnancy, Laparotomy, Ultrasound

INTRODUCTION

Interstitial pregnancy is indeed a rare form of ectopic pregnancy where the embryo implants within the interstitial portion of the fallopian tube.^[1] Ampullary part of fallopian tube is the commonest site for ectopic pregnancy. However, in 2–4% of cases, interstitial ectopic pregnancy is seen.^[2]

Timely recognition allows for appropriate interventions to be initiated, which can help prevent life-threatening complications such as rupture and hemorrhage as it is associated with mortality rate of 2–2.5%.^[3] Early diagnosis and prompt management are essential in addressing maternal mortality associated with interstitial pregnancy. Diagnosis of interstitial pregnancy can be challenging, and it often requires precise ultrasound interpretation.^[4]

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CASE REPORT

A 24-year-old women Gravida 2 abortion 1 presented with a complaint of pain in lower Abdomen, acute in onset, intermittently severe in nature. On examination, she was vitally stable. On per abdominal examination, her abdomen was soft and there was no guarding, rigidity and tenderness. On bimanual examination, uterus was 6–8 weeks in size along with right forniceal fullness and tenderness. An ultrasound with color Doppler of abdomen and pelvis was done. It was suggestive of well-defined heterogeneous mass lesion with irregular G sac-like structure of 6 + 6 weeks of gestation noted in the right fallopian tube? right-sided unruptured tubal ectopic pregnancy.

Written informed and valid consent was taken from patient and the relatives. Spinal anesthesia was given. Transverse incision was taken 2 cm above pubic symphysis. Abdomen was opened in layers. 3*4 cm right-sided interstitial ectopic pregnancy noted. Left fallopian tube and ovary were normal. Diluted solution of vasopressin (concentration of 0.1–0.2 U/mL) was injected to minimize the blood loss. Cornuostomy with right total salpingectomy was performed. Transverse incision taken on the antimesenteric border of the tube. Ectopic gestational sac separated and removed. The

cavity of interstitial part was closed using vicryl 2-0 in figure of 8 manner. Hemostasis checked and abdomen was closed in layers. Products of conception were sent for histopathological examination. Histopathological findings were confirmatory of ectopic pregnancy [Figures 1 and 2].

DISCUSSION

Interstitial ectopic pregnancy is an ectopic gestation which develops in the uterine part of the fallopian tube at utero-tubal junction.^[1] Interstitial pregnancy accounts for only about 2–4% of all tubal ectopic pregnancies, making it relatively uncommon compared to other types of ectopic pregnancies.^[2] Despite its rarity, it is associated with a high rate of complications.^[5] Indeed, diagnosing interstitial pregnancy can be challenging both clinically and sonographically. Uterine anomalies, such as a bicornuate uterus, can create a congenial environment for interstitial implantation. Previous ectopic pregnancies increase the likelihood of subsequent ectopic pregnancies, including

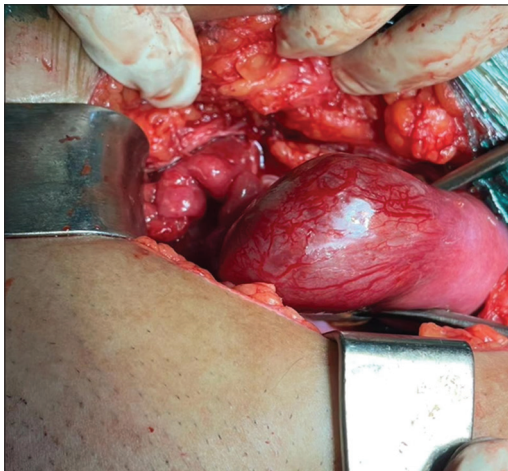


Figure 1: Right sided interstitial ectopic pregnancy

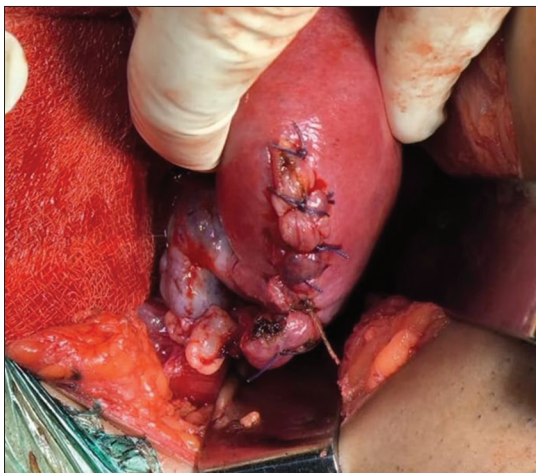


Figure 2: Ectopic sac removed and interstitial part sutured

interstitial ones. Salpingectomy, or the surgical removal of a fallopian tube, can alter the anatomy and increase the risk of interstitial implantation in the remaining tube. Pelvic inflammatory disease can cause scarring and damage to the fallopian tubes, increasing the likelihood of ectopic pregnancies. *In vitro* fertilization and ovulation induction treatments can also increase the risk due to the potential for embryo transfer into the fallopian tubes. Indeed, those are significant risk factors associated with a higher incidence of interstitial ectopic pregnancy.^[2] However, in our case, none of the above risk factors were noted. Interstitial ectopic pregnancy is associated with a higher risk of shock and hemoperitoneum than other forms of ectopic pregnancy, as well as with a higher risk of maternal mortality due to delayed diagnosis and high vascularity of the myometrium.^[6] Transvaginal ultrasound helps to make the diagnosis.^[4] The characteristic features of an interstitial ectopic pregnancy include a gestational sac located eccentrically outside the endometrial cavity of the uterus, in the region of the fundus with no or minimal identifiable myometrial tissue on its lateral aspect. The presence of an echogenic line between the gestational sac and the endometrial cavity, often referred to as the interstitial line sign, is indeed highly sensitive and specific for diagnosing interstitial ectopic pregnancy on ultrasound.^[3]

Absolutely, treatment options for interstitial ectopic pregnancy vary depending on factors such as the patient's clinical condition, desire for future fertility, and the presence of complications. Options include:

1. Medical Management: This may involve local injection or systemic therapy with methotrexate
2. Surgical Management: Conservative laparoscopic surgery may be performed to remove the ectopic pregnancy while preserving the fallopian tube, especially in cases where future fertility is desired.
3. Interventional Procedures: Local injection of potassium chloride may be used to directly target and terminate the pregnancy.
4. Surgical Procedures: In emergency situations or cases of severe hemorrhage or rupture, more extensive surgical interventions such as cornuectomy (removal of the affected portion of the fallopian tube) or hysterectomy (removal of the uterus) may be necessary to control bleeding and ensure the patient's safety.^[6]

CONCLUSION

Ultrasound imaging, especially transvaginal ultrasound, is typically the first-line diagnostic tool for detecting interstitial pregnancies due to its high sensitivity and specificity in identifying gestational sacs located outside the uterine cavity.

In some cases, laparoscopic evaluation may also be necessary to confirm the diagnosis definitively.

Early diagnosis and prompt management are essential in addressing maternal mortality associated with interstitial pregnancy.

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