

## Case Report

# Interstitial Tubal Ectopic Pregnancy: A Very Rare Variety

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### Abstract

*A 28 years old lady, para 2+0 presented with complaints of amenorrhoea for 8 weeks and lower abdominal pain for 4 hours with features of shock. Clinically the patient was diagnosed as a case of ruptured ectopic pregnancy. Cornual*

*resection with left sided salpingectomy was done. Histopathology report confirmed interstitial tubal ectopic pregnancy which is a very rare and life threatening form of ectopic pregnancy.*

### Introduction

Interstitial tubal ectopic pregnancy is defined as the ectopic gestation developing in the uterine part of the fallopian tube. It is a rare event constituting only 1 to 3% of all ectopic pregnancies and is associated with a higher rate of complication.<sup>1,2</sup> The condition is difficult to diagnose, both clinically and sonographically. It is associated with a higher risk of shock and haemoperitoneum than other forms of ectopic pregnancies, as well as with a higher risk of maternal mortality due to delayed diagnosis and high vascularity of the myometrium.<sup>3</sup> This condition carries maternal mortality risk up to 2.2%.<sup>4</sup>

### Case History

A 28 years old woman, para (2+0) NVD at term at home was admitted under gynaecology & obstetrics department in SSMC and MH with complaints of amenorrhoea for 8 weeks and lower abdominal pain for 4 hours with features of shock. On general examination, patient was severely anaemic, pulse and BP was not recordable, extremities were cold and clammy, excessive sweating was present. But patient was conscious. On per abdominal examination, abdomen was slightly distended and very tender on palpation. On per vaginal examination, posterior fornix was full & tender. Urine for pregnancy test was done and it was positive. So patient was diagnosed clinically as a case of ruptured ectopic pregnancy. Just after admission she was resuscitated by infusion Hartman solution, infusion Haemacel and injection Dopamine drip and immediately Laparotomy was

done with 2 units of blood. After opening of abdomen, it was found that there was huge clotted and non-clotted blood within peritoneal cavity. The uterus was bulky in size. There was a ruptured point on the left cornu of uterus from where bleeding came out. By squeezing the uterus, a gestational sac with blood clot was brought out through ruptured point. Cornual resection with left sided salpingectomy was done. Right sided fallopian tube and both ovaries were healthy and conserved. Resected tissue was sent for histopathology and it confirmed ruptured interstitial tubal ectopic pregnancy. Post operatively 2 units of blood was transfused to the patient. The patient was discharged after 7 days of hospital stay.

### Discussion

Interstitial segment of the fallopian tube is the segment that lies within the muscular wall of the uterus. Ectopic pregnancies that implant in the interstitial portion of the fallopian tube named as interstitial ectopic pregnancy represent only 5% of all tubal ectopic gestations<sup>5</sup>. It is rare although some cases may be missed because pregnancy can be discharged through uterus. The term cornual pregnancy is used interchangeably in the United States as a synonym for interstitial pregnancies. However it refers to a pregnancy in the interstitial segment of a unicornuate or bicornuate uterus. Risk factors associated with the higher incidence of interstitial ectopic pregnancy include uterine anomalies, previous ectopic pregnancy or salpingectomy, PID, in vitro fertilization and ovulation induction.<sup>6,7</sup> As the pregnancy grows in the area of the fallopian tube within the uterus, myometrial distensibility allows pregnancy tend to present relatively late, even into 2nd trimester (12-14 wks) gestation. Rupture of such an advanced gestation may result in catastrophic haemorrhage due to its combined

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vascularization by uterine and ovarian arteries with a mortality rate of up to 2.2%.<sup>6,7,8,9</sup> Diagnosis of interstitial tubal ectopic pregnancy relies heavily on ultrasound especially TVS (Trans Vaginal Sonography) and potentially on laparoscopic evaluation<sup>10</sup>. USG frequently shows a thin rim of myometrial tissue surrounding ectopic gestational sac.<sup>11</sup> The interstitial line has been described as an echogenic line extending into the cornual region and abutting the gestational sac and is highly specific for interstitial ectopic pregnancy.<sup>7</sup>

Evaluation with Trans vaginal sonography allows accurate diagnosis which is critical for management. one study has showed that early diagnosis of interstitial tubal ectopic pregnancy with Trans vaginal sonography allows conservative management with methotrexate. If the diagnosis is made later in gestation, however surgical treatment with cornual resection or even hysterectomy may be required. However treatment options for interstitial tubal ectopic pregnancy include local injection or systemic therapy with methotrexate (MTX), local injection of potassium chloride, conservative laparoscopic surgery & uterine artery embolisation and in emergency situations, cornuectomy or hysterectomy.<sup>12,13</sup> Evidence of a haemorrhagic ectopic pregnancy is an indication for laarotomy.

Although surgical management of interstitial pregnancy has remained most common, MTX has been used as first line treatment. Because of the later presentation interstitial pregnancy are often associated with high HCG levels and presence of foetal cardiac activity. There is no consensus on the dose or number of MTX injection that should be used at the treatment of interstitial pregnancy. There are reports of successful treatment with single dose MTX injection, however there are also reports of failures.<sup>2,8</sup> It has been theorized that interstitial pregnancy are less susceptible to MTX because of their increased blood supply although size of the gestation may also be a factor. It has been recorded that interstitial pregnancy with HCG levels > 1000 mIU/ml should be treated with multidose MTX.<sup>14</sup>

In an analysis of 13 series of a total of 47 total cases treated with MTX, fisch et al<sup>15</sup> concluded that MTX is a safe option. However, there are reports of high failure rates and there is a need of proper patient selection and extended monitoring. On rare occasion abortion occurs through uterine cavity. In interstitial tubal ectopic pregnancy, commonly ruputure rent is so big

and general condition of the patient is so low that most often, a quick subtotal hysterectomy was done. However if the condition permits and uterine conservation is desirable, cornual resection may be attempted.

### Conclusion

Interstitial ectopic pregnancy can be quite difficult to make, requires accurate ultrasound interpretation, and may require laparoscopic evaluation. Ruptured interstitial ectopic pregnancy may present with hypovolumic shock necessitating emergent laparotomy. In the stable patient, conservative measures may be attempted, including laparoscopy or medical management. Future fertility is possible for interstitial pregnancy treated conservatively, although there is a concern for uterine rupture secondary to the weakened myometrial wall. This concern is both for interstitial pregnancies treated surgically or with chemotherapeutic measures.

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