



## SPECTRUM OF ECTOPIC PREGNANCY: A CASE SERIES

Agarwal Shubhra<sup>1.</sup>, Kaur Satwant<sup>2.</sup>, Sharma Arti<sup>3.</sup>, Ritika Agarwal<sup>4</sup> and Agarwal Arjit\*<sup>5</sup>

<sup>1,2,3,4</sup>Department of Obstetrics and Gynaecology, TeerthankerMahaveer Medical College & Research Centre, Teerthanker Mahaveer University, Moradabad-244001, Uttar Pradesh (INDIA)

<sup>5</sup>Department of RadioDiagnosis, TeerthankerMahaveer Medical College & Research Centre, Teerthanker Mahaveer University, Moradabad-244001, Uttar Pradesh (INDIA)

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### ABSTRACT

The incidence of ectopic is 2% of reported pregnancies and has increased over the past decade due to increased risk factors and early diagnosis. Unruptured ectopic pregnancy can be confused with normal intrauterine pregnancy. Judicious approach with combination of transvaginal ultrasound (TVS) & hCG can be helpful for confirmation and management of ectopic pregnancy as seen in the cases mentioned in our study. Here, we discuss 7 cases of ectopic pregnancy with various clinical scenarios in a span of 1 month. The cases were managed accordingly using expectant, medical and surgical methods.

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### INTRODUCTION

The incidence of ectopic pregnancy is 2% of reported pregnancies (1). The incidence has increased over the past decade due to increased risk factors and early diagnosis. The risk factors for ectopic pregnancy are previous history of tubal surgery, prior ectopic pregnancy, IUCD insertion and pelvic inflammatory disease (2,3). Diagnosis of extrauterine pregnancy depends on clinical features, ultrasound (USG),  $\beta$ -hcg doubling time (66% rise over 48 hours) indicating a viable intrauterine pregnancy (4). Ectopic pregnancy can have various modes of presentation and can be managed by various methods like expectant, medical, surgical depending on the age, reproductive history and status of contralateral fallopian tube of the patient. Here we discuss a spectrum of cases with varied clinical presentation and managed by all possible means (medical, expectant and surgical) mentioned in literature.

#### Case 1- Rupture Ectopic Due To Injudicious Use of Mtp Kit

25 years G7P4L4A2 with overdue of 20 days presented to emergency with pain abdomen. On further enquiry, history of MTP kit intake was revealed 3 days back without documented USG. On examination, her blood pressure (BP) was 90/60 mm Hg, pulse 124bpm and severe pallor was present. On per abdomen examination guarding was present with diagnostic paracentesis revealing hemoperitoneum. Per vaginal examination revealed cervical motion tenderness and fullness

\*Corresponding author: Agarwal Arjit

Department of RadioDiagnosis Teerthanker Mahaveer Medical College & Research Centre, Teerthanker Mahaveer University, Moradabad-244001, Uttar Pradesh (INDIA)

in right fornix. Urine pregnancy test (UPT) was faintly positive. On Exploratory laparotomy right side ampullary rupture was present so right side salpingectomy and left side tubal ligation was done.

#### Case 2-Medical Management Of Ectopic

26 years G3P1L1A1 with amenorrhea 6 weeks presented with pain abdomen. UPT was faintly positive. USG suggested possibility of right side tubal ectopic pregnancy of size 3.2\*3.0cm with absent cardiac activity.  $\beta$ -hcg was 1425mIU/mL. Patient hemogram, kidney and liver function tests were within normal limits. Single dose methotrexate regime was decided where injection methotrexate was given on day 0, repeat  $\beta$ -hcg on day 4 was 842mIU/mL and day 7 was 563mIU/ml which was >15% so injection methotrexate was stopped. Patient was kept on follow up with  $\beta$ -hcg weekly.  $\beta$ -hcg came to 5mIU/ml after approximately 1 month.

#### Case 3- Failed Medical Management

23 years nullipara presented with amenorrhea of 6 weeks. UPT was faintly positive. USG suggested right side tubal ectopic of size 3.5\*3.2cm with absent cardiac activity.  $\beta$ -hcg was 2299mIU/mL. Patient hemogram, kidney and liver function tests were normal. Single dose of Injection methotrexate was given, repeat  $\beta$ -hcg on day 4 was 1839 mIU/mL and day 7 was 1324 mIU/mL, thereby injection was stopped. Patient developed acute pain abdomen on day 8. On per abdomen examination, guarding was present with hemoperitoneum on paracentesis. Per vaginal examination revealed cervical motion tenderness and fullness in right

fornix. On Exploratory laparotomy right side ampullary rupture (image 1) was present so right side partial salpingectomy was done. Contralateral tube and ovary was healthy. Ectopic pregnancy was confirmed by histopathological examination.

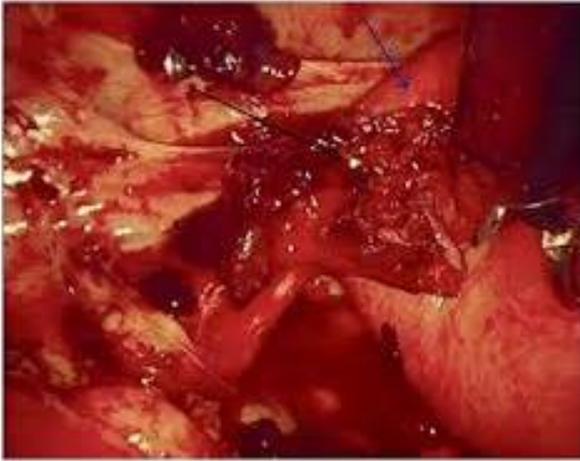


Image 1 Ampullary Rupture Ectopic Pregnancy



Image 2 Ruptured Ovarian Ectopic Pregnancy

#### **Case 4 - Unruptured Ectopic With Cardiac Activity**

25 years G3P2L2A1 presented with overdue of 18 days. UPT done in out patient department was positive. On per vaginal examination mild spotting with cervical motion tenderness was present. USG suggested left tubal ectopic of size 32\*33mm with cardiac activity.  $\beta$ -hcg was 2736 mIU/mL. On exploratory laparotomy left side salpingectomy and right side tubal ligation was done. Histopathological examination confirmed ectopic pregnancy.

#### **Case 5- Expectant Management**

22 years nullipara presented with amenorrhea 6 weeks. UPT was faintly positive. On examination patient was hemodynamically stable. No abnormal finding on per vaginal examination was noted. USG suggested tubal ectopic of size 20\*24mm.  $\beta$ -hcg was 183 mIU/ml. Patient was managed conservatively and was monitored by  $\beta$ -hcg weekly.  $\beta$ -hcg returned to 10mIU/ml after 1 month.

#### **Case 6 -Ruptured Ovarian Ectopic**

23 years G2P1L1 presented in emergency with amenorrhea 2 months, per vaginal spotting and pain abdomen since 5 days. On Examination B.P. and pulse were normal. USG suggested

lefruptured ovarian ectopic of size 27\*8mm with hemoperitoneum. On Laparotomy left salpingo-oophorectomy was done (Image 2). Contralateral tube and ovary were healthy. Ovarian ectopic was confirmed by histopathological examination.

#### **Case 7 -Ectopic in Nullipara without Any Risk Factor.**

23 years nullipara presented in casualty with amenorrhea 5 and a half week. UPT was faintly positive. On examination, B.P. was 70/40 mm Hg, pulse 144bpm with severe pallor. On per abdomen examination, guarding was present with hemoperitoneum on diagnostic paracentesis. Per vaginal examination revealed cervical motion tenderness and fullness in left fornix. On exploratory laparotomy, hemoperitoneum of around 2 litres was present with left side ruptured ectopic pregnancy. Partial salpingectomy was done. Contralateral tube and ovary were healthy. No risk factor for ectopic like Pelvic inflammatory disease, Tuberculosis, Intrauterine copper device was found.

## **DISCUSSION**

Unruptured ectopic pregnancy can be confused with normal intrauterine pregnancy (5). Combined approach with clinical examination, TVS and hCG is helpful for confirmation in almost all the cases. Ectopic pregnancy can be managed by expectant, medical & surgical methods as seen in the above mentioned cases. If TVS shows no intrauterine pregnancy at hCG level  $>2000$  IU/L, it can be treated as a case of extrauterine pregnancy. Ectopic pregnancy can be managed conservatively if hCG level is low and it resolves by itself in 88% patients with initial hCG less than 200mU/mL as seen in case 5.(6) A falling hCG level is the most common indicator used for successful medical or expectant management but tubal rupture can also occur even with falling hCG levels as seen in case 3. Methotrexate is the drug of choice for medical management of ectopic pregnancy. Contraindications of methotrexate are if patient is hemodynamically unstable, ruptured ectopic pregnancy, poor compliance, gestational sac larger than 3.5 cm, embryonic cardiac activity, breastfeeding, immunodeficiency, liver and renal disease, preexisting blood dyscrasias, active pulmonary disease and peptic ulcer disease(7). Medical management could be a single/double /multiple dose of methotrexate as seen in case 2 and 3. Approximately 15% to 20% of patients require single and 54-56% require multiple dose (8,9).

Surgical management is done by laparotomy or laparoscopy depending on expertise. Earlier it was the notion that ipsilateral oophorectomy decreases the chance of recurrence of ectopic but subsequent studies have found no such advantage. (10,11). Salpingostomy is preferred over salpingectomy in cases where contralateral tube is damaged and patient is desirous of fertility. Salpingostomy carries a risk of persistent pregnancy in patients with high starting  $\beta$ -hCG levels, early gestations, and small ectopic pregnancies ( $<2$  cm) thereby requiring weekly follow up with hCG (12). Laparoscopically and methotrexate-treated patients have similar reproductive outcomes (13,14). The cases mentioned above are a wide spectrum of ectopic pregnancy presentation and management in modern obstetrics thus improving the fertility outcomes. In conclusion the reproductive outcome and high morbidity associated with ectopic pregnancy requires a combination of clinical acumen and diagnostic

investigations for deciding the appropriate management protocol.

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