

Ruptured Primary Abdominal Pregnancy: A case Report

Corresponding Author: Dr. Shristy Priya, Chief Resident, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune

Name of Authors:

1. Dr. Hemant G. Deshpande, Professor and Head of Department, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune
2. Dr. Madhukar Shinde, Associate Professor, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune
3. Dr. Shristy Priya, Chief Resident, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune
4. Dr. Saba Chaudhary, Junior Resident, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune
5. Dr. Shivani Patel, Junior Resident, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune
6. Dr. Radhika Dhedia, Junior Resident, Department of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune

ABSTRACT:

Introduction: Implantation of blastocyst outside of the endometrial cavity leads to ectopic pregnancy, and it might lead to one of the acute abdominal emergencies. Among all the ectopic pregnancies that occur, the abdominal ectopic pregnancy occurs less than 1% of the time. The incidence of ectopic pregnancy has increased in recent times, but easier diagnosis and prompt management has led to a drastic decline in maternal mortality and morbidity.

Case Summary: A 26 year old female, Gravida 2 Para1 Living 1 came to OPD of our institution, with a positive UPT and complaints of bleeding since 1 day. On assessment, she was found to be tachycardic, with normal blood pressure, with guarding and right ilia fossa tenderness. Ultrasound was suggestive of a ruptured ectopic. Intraoperatively a diagnosis of Primary Abdominal Pregnancy was made.

Conclusion: As the use of assisted reproductive techniques is on the rise, the complication of ectopic pregnancies is also rising in manifolds. But apart from all the risk factors that have been identified for these pregnancies, there are few cases that occur as sporadic cases with no such identifiable risk factors. Hence, only vigilance while history taking and basic clinical examination can reduce the mortality and morbidity associated with it.

INTRODUCTION

Implantation of blastocyst out the endometrial cavity leads to ectopic pregnancy, and it might lead to one of the acute abdominal emergencies encountered by the gynaecologists. Almost 97% of these types of

pregnancies occur in the fallopian tube ^[1]. Rest 3% are distributed among the cervical ectopic, caesarean scar ectopic, ovarian ectopic abdominal ectopic etc. This abdominal ectopic pregnancy occurs less than 1% of the time. The incidence of ectopic pregnancy has increased in recent times, but easier diagnosis and prompt management has led to a drastic decline in maternal mortality and morbidity. Although being a life threatening situation, females generally present late as the majority of unruptured cases are asymptomatic. But when presented with ruptured ectopic, patient arrives hemodynamically unstable, in severe pain with or without bleeding, which leads to longer hospital stay, ICU admission, blood transfusion and a major risk of damaging one's fertility by affecting the main reproductive organs. Ectopic pregnancy continues to be a significant challenge in obstetrical practice due to its bizarre clinical presentation and is one of the most common causes of pregnancy related deaths within the first trimester. ^[2]

CASE SUMMARY

A 26 year old married female presented to Gynaecology OPD at Dr. D. Y. Patil Medical College and Hospital and Research Center, Pimpri, Pune, Maharashtra, India with complaints of per vaginal bleeding since 1 day soaking 1 pad completely in 24 hours, without passage of clots, accompanied with pain abdomen, which was gradual in onset, generalized in nature, associated with nausea and vomiting, with no aggravating or relieving factors, since 3 to 4 days. She also mentioned that she had her urine pregnancy test done a week back, which had come positive.

On eliciting history, she came out to be Gravida 2 Para 1 Living 1 with previous normal vaginal delivery, and 8 weeks 2 days by her last menstrual period. She was in her 2nd month of gestation, with no folic acid or progesterone support. This was her first hospital visit after getting the positive pregnancy test. She had no ultrasonography reports available with her. Her married life was 7 years, and she had a girl child of 6 years of age. She did not give any abortion history, and said that the current pregnancy was spontaneous conception. Neither the patient, nor the relative (her husband) gave history of contraception usage except for occasional use of barrier methods. She has had no history of major illnesses like diabetes mellitus, hypertension, tuberculosis, asthma, hypothyroidism, hyperthyroidism, major surgical procedures, minor or major medical illnesses or any chronic condition. Her personal habits and family history were also not significant.

On general examination, she was thin built female, with a fair general condition, with positive pallor, no icterus, no cyanosis, no clubbing, no lymphadenopathy, no edema. She was neither febrile on touch nor was she having cold extremities. Her pulse was 110 per minute, of good volume and normal character. Her BP was 100/74 mm hg in the sitting position, with a respiratory rate of 20 cycles per min. Her quick cardiovascular and respiratory system assessment was normal. On per abdominal examination, there was guarding present with a soft non distended abdomen, with no organomegaly. Her uterus could not be palpated. There was a right iliac fossa tenderness elicited on deep palpation. On per speculum examination, there was altered colour mucoid bleed seen coming out of an open external os, with a normal vaginal mucosa and cervical appearance. Her per vaginal examination was not done.

She was sent for an urgent sonography as all her parameters were pointing towards a ruptured ectopic pregnancy. Her basic routine investigations were sent with a beta HCG level. On scan, the findings were: "Uterus is normal in size (71*37*42 mm) and showed no obvious focal myometrial lesion, with

endometrial thickness of 16 mm. Free fluid with dense internal echoes were noted in the perihepatic, Morrison's pouch, perisplenic, interbowel and pelvis regions, suggestive of moderate hemoperitoneum. A large complex ill-defined heterogenous mass with a gestational sac like structure with irregular margins showing fetal pole within (CRL 14.5 mm corresponding to 7 weeks 5 days) was seen, with fetal cardiac activity absent. Right ovary could not be visualized separately. Left ovary was normal." All findings were suggestive of right adnexal ruptured ectopic pregnancy with surrounding hematoma formation.

Upon seeing the report, she was rushed to the emergency OT for Explorative Laparotomy. Anaesthetists were informed about the same and she was operated under general anaesthesia, with ongoing PCV intraoperatively. Her preop hemoglobin was 8.0 g/dl and beta HCG level was 15000. Intraoperatively, approximately 150 ml of blood was drained from peritoneal cavity, with approximately 200 gms of blood clot. Right sided fallopian tube and ovary were examined thoroughly to hold the bleeding, but no gestational sac was encountered. We moved to the left side tube and ovaries, which also were normal. After completely removing the clotted blood, the site of ectopic pregnancy was found to be on the peritoneum covering right lower anterior uterine surface (as depicted in the picture) which was also involving some parts of large intestines. No breach was noted in whole of uterus and bilateral fallopian tubes, which pointed out to it being a primary abdominal pregnancy. The gestational sac was yet to be found. After carefully examining the clotted blood, we could see a globular structure of approx. 4 cm diameter, that was determined as the gestational sac, and was sent to pathology for confirmation. Hemostasis was achieved and patient tolerated the whole procedure well.

She was monitored intensively for first 48 hours, where she had uneventful recovery. She was given 1 PCV in post operative period, with antibiotics. Her post operative Hb was 9.6 g/dl and Beta HCG was 3450 after 48 hours of the first one, which was 750 after next 24 hours. The histopathology report showed that there were large areas of hemorrhages with necrotic and inflammatory tissue, with few degenerated and few viable chorionic villi, with no evidence of malignancy or fallopian tube, all suggestive of products of conception. She was discharged from the hospital on 8th day post op, after stitch removal.

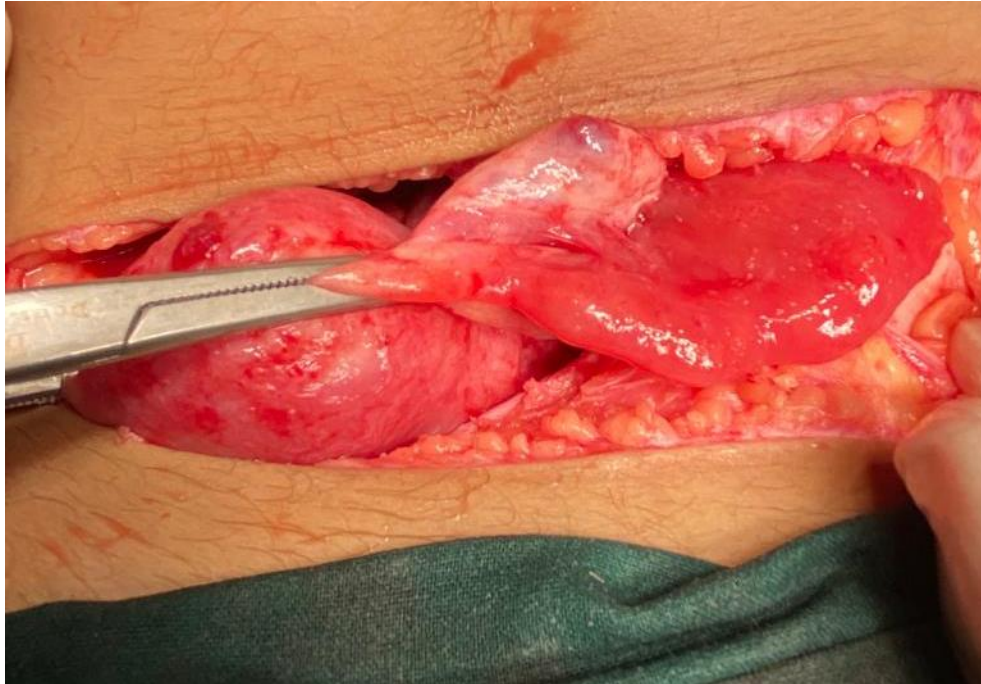


Figure 1: left sided fallopian tube with left ovary. (The whole length is intact and there is no sign of pregnancy)

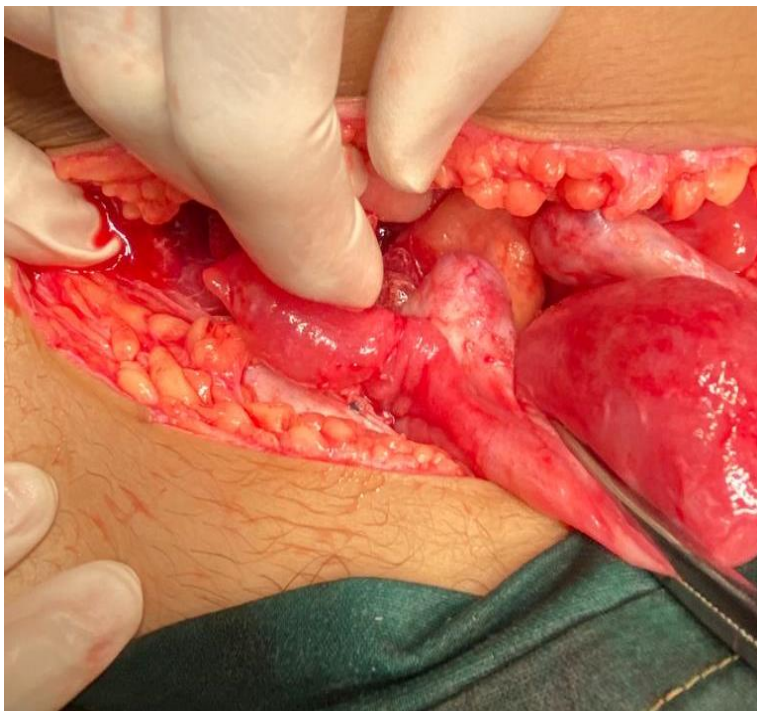


Figure 2: Right sided fallopian tube with right ovary. (The whole length is intact and there is no sign of pregnancy)

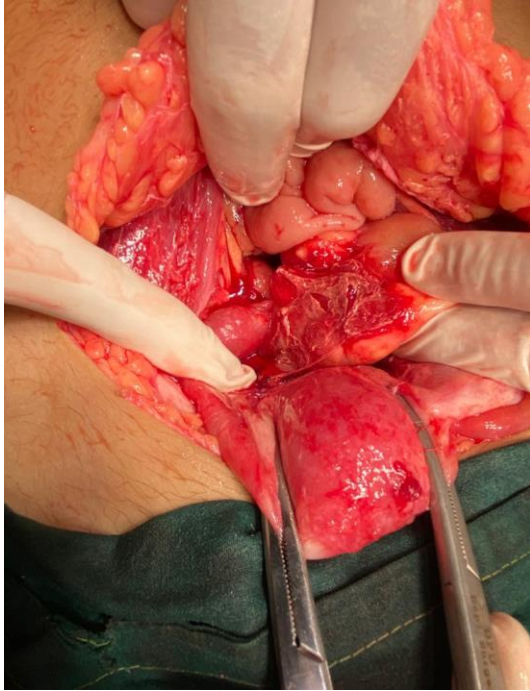


Figure 3: Site of gestational sac attachment over parts of intestine, without involving any major vessels

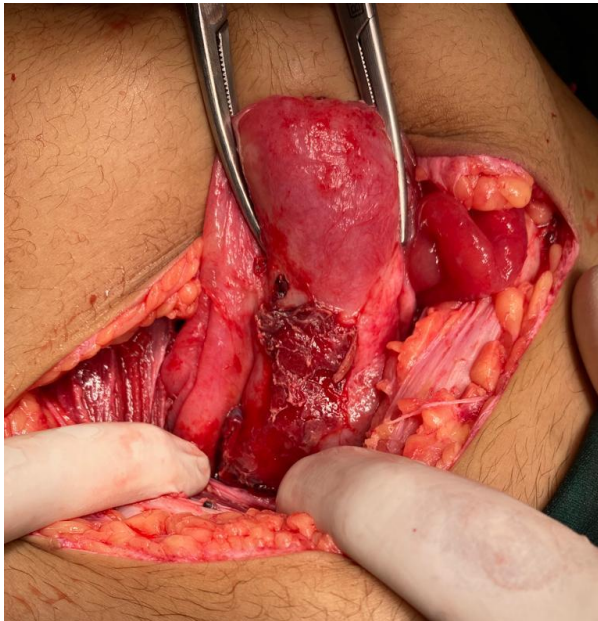


Figure 4: Site of gestational sac attachment over anterior wall of uterus, on the isthmus, without involving any major vessels

DISCUSSION:

Abdominal pregnancies are one of the rarest type of ectopic pregnancy, representing 1% to 1.4% of ectopic pregnancies.^[3] They are typically classified as Primary or Secondary Abdominal pregnancy. Pathology criteria for Primary abdominal ectopic pregnancy have been established by Studdiford and includes normal tubes and ovaries, no evidence of uteroplacental fistula and presence of a pregnancy related exclusively to the peritoneal surface and early enough to eliminate the possibility of secondary implantation after primary tubal nidation.^[4] Secondary abdominal pregnancies are more common, thought to result from tubal abortion or rupture or, less often, from subsequent implantation within the abdomen after uterine rupture. Risk factors for abdominal pregnancy include pelvic inflammatory disease, multiparity, endometriosis, assisted reproductive techniques and tubal damage. The most common area of implantation within the abdomen is the posterior cul-de-sac, and pregnancies have been confirmed in mesosalpinx, omentum, and bowe, liver, spleen, abdominal wall, and within broad ligament.^[5] Abdominal pregnancy is associated with high morbidity and mortality, with the risk for death 7 to 8 times greater than from tubal ectopic pregnancy and 50 times greater than from intrauterine pregnancy, most likely resulting from later diagnosis. Diagnosis of abdominal pregnancy by ultrasound only covers half of the abdominal pregnancies. Ultrasound features that have been suggested include gestational sac surrounded by loops of bowel, normal appearing tubes and ovaries.^[6] When diagnosis is highly suspected, MRI might be helpful. Management of abdominal pregnancy differs from case to case. As these pregnancies can continue till term, with severe anomalies in baby in most the cases like fetal pulmonary hypoplasia, pressure deformities, facial and limb asymmetry^[7], potential matnal morbidity and mortality is quite high. As a result, surgical intervention is generally advocated in case of abdominal pregnancy diagnoses.

Conclusion:

As the use of assisted reproductive techniques is on the rise, the complication of ectopic pregnancies is also rising in manifolds. But apart from all the risk factors that have been identified for these pregnancies, there are few cases that occur as sporadic cases with no such identifiable risk factors. Hence, only vigilance while history taking and basic clinical examination can reduce the mortality and morbidity associated with it.

References:

1. Stovall TG, Ling FW, Gray LA, Carson SA, Buster JE. Methotrexate treatment of unruptured ectopic pregnancy: A report of 100 cases. *ObstetGynecol.*1991;77:749-53
2. DHEEPHIKAA, S. K.; MURUGAN, Rajalekshmi. A retrospective study to assess incidence of ectopic pregnancies in Saveetha Medical College and Hospital. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology*, [S.l.], v. 9, n. 11, p. 4632-4635, oct. 2020. ISSN 2320-1789. doi:http://dx.doi.org/10.18203/2320-1770.ijrcog20204824.
3. Berek and Novak's *Gynecology*, 16th South Asia Edition, Chapter 32, Page 845.
4. Anderson PM, Opfer EK, Busch JM, et al. An early abdominal wall ectopic pregnancy successfully treated with ultrasound guided intralesional methotrexate: A case report. *Obstet Gynecol Int* 2009;2009:247452.
5. Shaw SW, Hsu JJ, Chueh HY, et al. Management of primary abdominal pregnancy: Twelve years of experience in a medical centre. *Acta Obstet Gynecol Scand* 2007;86:1058-1062.

6. Gerli S, Rossetti D, Baiocchi G, et al. Early ultrasonographic diagnosis and laparoscopic treatment of abdominal pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2004;113:103-105.
7. Baffoe P, Fofie C, Gandau BN. Term abdominal pregnancy with a healthy newborn: A case report. *Ghana Med J* 2011; 45:81-83.