A Simultaneous Intrauterine pregnancy with an Extra uterine pregnancy: A Surprise Combo of Conception

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INTRODUCTION

A Heterotopic Pregnancy is a rare complication of pregnancy, in which implantation occurs both inside and at an ectopic location simultaneously.[1] The reported incidence of heterotopic pregnancy is 1 in 30,000 pregnancies. It is less common in spontaneous conception. It is often seen in conceptions from Assisted reproductive techniques. The incidence may increase up to 1 in 100 to 1 in 500 cases in pregnancies from assisted reproductive techniques.[2,3,4] The risk factors for heterotopic pregnancy includes previous tubal damage, previous ectopic pregnancy and assisted reproduction techniques like ovulation induction, In-vitro fertilization, gamete intrafallopian transfer.[5]

The most common site of ectopic implantation in heterotopic pregnancy is fallopian tube. It is less commonly seen in cervix, ovary and other sites.[6,7] It usually presents with signs and symptoms like abdominal pain, bleeding per vagina, adnexal mass and an enlarged uterus. However, its diagnosis needs a high index of suspicion and expertise.

CASE REPORT

Case 1: A 35 years old lady, Gravida3 Para1 Live1 Abortion1 with previous full term vaginal delivery presented to emergency department with a spontaneous conception of 8 weeks 3 days period of gestation by her last menstrual period. Her chief complaints of spotting per vaginum and dizziness for 1 day and acute onset of abdominal pain for four hours. There was no history of trauma, use of Assisted Reproductive Techniques or Medical Termination of Pregnancy (MTP) pill intake. On physical examination, pulse rate was 104 per minute, Blood Pressure was 110/70mmHg and was afebrile. She was not pale. Per Abdomen examination showed tenderness in left lower abdomen. On per speculum examination, os was closed. Mild spotting was present. On per vaginal examination, uterus was bulky, anteverted, mobile. Tenderness was present in left fornix. Right fornix was free. Transvaginal Scan (TVS) was done which revealed a live intrauterine pregnancy of 7 weeks 2 days with complex left adnexal mass of size 4×3cm with increased peripheral vascularity with moderate free fluid in pouch of douglas. (Fig.1) A provisional diagnosis of heterotopic pregnancy with concurrent ruptured left sided ectopic pregnancy was made based on clinical presentation and radiological findings.

Patient opted for termination of pregnancy due to failure of male condom contraception method. On emergency laparotomy, left sided ruptured ectopic pregnancy was found with 400cc hemoperitoneum and left sided salpingectomy was done. The gross specimen shows left side tube with ruptured sac like structure (Fig. 2). Bilateral ovaries and right fallopian tube appeared to be normal. This was followed by dilatation and evacuation of intra uterine pregnancy. The resected tube and intrauterine products were sent for histopathological examination. On

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histopathological examination, a segment of congested tube is seen with trophoblastic tissue and chronic villi and breach in tubal wall suggestive of ruptured tubal ectopic pregnancy (Fig. 3). The intrauterine contents revealed presence of Chorionic villi consistent of products of conception. (Fig. 4). Post operative period was uneventful and she was discharged in satisfactory condition.

Case 2: A 28-year-old primigravida with spontaneous conception of 12 week 2 days presented with pain abdomen and spotting since one day. On examination, she had pulse rate of 120/min and BP of 100/60mmHg. Her Hemoglobin was 7.2g/dl. On per vaginal examination, uterus was 12 weeks in size and cervical os was closed with minimal spotting. Her Ultrasound was suggestive of intrauterine pregnancy of 12 weeks along with ruptured right tubal pregnancy with haemoperitoneum. She was taken up for laparotomy. About 800cc haemoperitoneum was present and right tubal rupture in ampullary part was noticed. The fetus with placenta was retrieved from abdominal cavity (Fig 5). Right salpingectomy done. She was given 2 packed cells. Her postoperative period was uneventful. She continued her pregnancy till 38weeks gestation and delivered a healthy baby by caesarean section done due to breech presentation. Postoperative period was uneventful.

DISCUSSION

Spontaneous heterotopic pregnancy is quite rare in occurrence. However, the incidence is on rise due to increased use of assisted reproduction techniques. Both our patients are unique in having heterotopic pregnancy from a spontaneous conception and no obvious underlying risk factors. A similar case of heterotopic pregnancy without any underlying risk factors was reported by Soares C et al., in 2020.[8]

MJ Govindarajan et al in 2008 reported a similar case of heterotopic pregnancy after natural conception where patient delivered healthy baby at term.[1] Hassani et al also reported similar case in 2010.[9] Both of these cases were managed by laparoscopic tubal surgery for ectopic tubal pregnancies and intrauterine pregnancy was allowed to continue.

In 2021, Ahmed H. Abdelmonem et al reported heterotopic pregnancy at 9 weeks and 5 days after spontaneous conception. They did surgical management of tubal pregnancy and patient continued with intrauterine viable pregnancy normally.[10]

The possibility of heterotopic pregnancy to be considered in conditions like rising Beta HCG levels following evacuation of products of conception or in presence of more than one corpus luteum on sonological imaging. High-resolution transvaginal ultrasonography with colour doppler is often helpful in making diagnosis.[11,12] The missed diagnosis can lead to serious complications like miscarriage, tubal rupture leading to intra peritoneal bleeding, hemorrhagic shock and mortality.

The management of patient depends on the clinical presentation. The surgical management is resorted in case of a ruptured tubal pregnancy presenting with haemorrhage. The medical management can be done in stable patient to disrupt extrauterine sac by injecting potassium Chloride or hyperosmolar glucose into the gestational sac under radiological guidance. The remaining Intrauterine pregnancy can be continued and managed conservatively. Our patients underwent surgical exploration as both of them presented late to us with ruptured extrauterine component.

Around 11 heterotopic pregnancies were reviewed by Goldstein JS et al. [13] which were managed conservatively with potassium chloride injection. Out of these, 6 pregnancies needed surgical intervention. Deka D et al. in 2012 also reported a case which was managed successfully by using potassium Chloride and methotrexate injection.[14]. JB Li et al. performed a retrospective study of 64 heterotopic pregnancies and compared different management options. They found out that surgical management group showed maximum abortion rate and Transabdominal aspiration of ectopic sac showed least number of abortions and best maternal and pregnancy outcome. On the other hand, expectant management showed worst maternal outcome.[15] Intensive medical literature regarding management techniques of heterotopic pregnancies and its results is lacking. Kajdy A et al. reviewed 509 cases of heterotopic pregnancies in 2021 where the outcome of intrauterine pregnancy was described in 85 cases and 60% of these patients gave birth to live baby. However, these results were not according to treatment modality chosen for above cases.[16]

DECLARATIONS

The manuscript has been read and approved by all authors. The requirements for authorship of all authors have been met. Each of us believe that manuscript represents our honest work.

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CONCLUSION

A heterotopic pregnancy, although extremely rare can result from spontaneous natural conception. A high index of suspicion and careful sonological imaging of adnexa even in presence of intrauterine gestation is crucial in diagnosing this condition. The timely diagnosis and intervention prevent complications and improves the outcome of intrauterine pregnancy as well as maternal outcome.

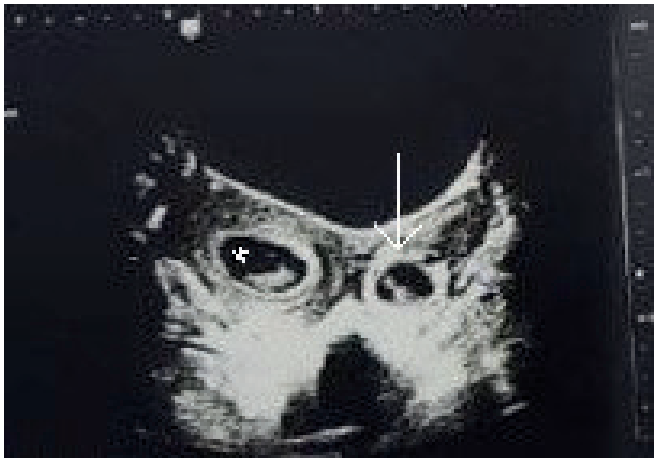

Fig.1: Trans vaginal ultrasonography showing two Gestational sacs; one intrauterine and other in left adenexa (arrow) with moderate fluid in Pouch of Douglas.

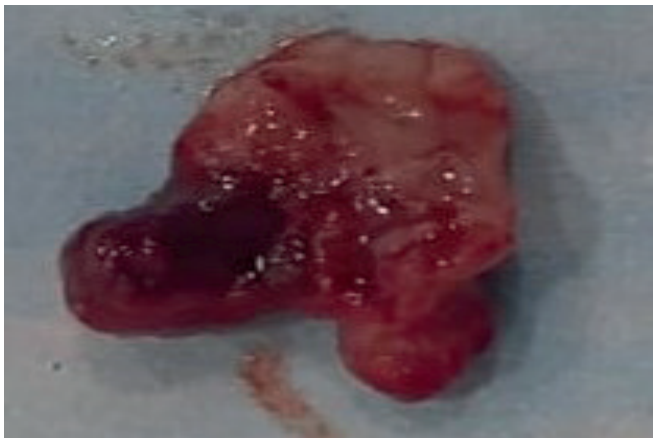

Fig.2: Gross specimen of Left fallopian tube and ruptured Gestational sac.

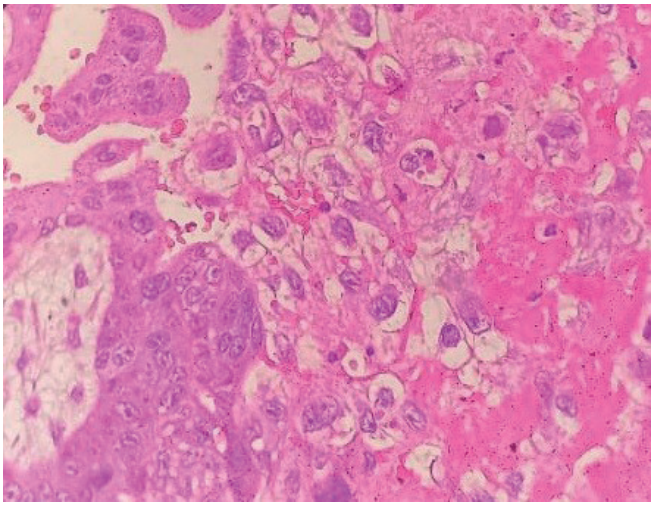

Fig.3: Histopathology image showing chorionic villi and trophoblastic tissue in fallopian tube.

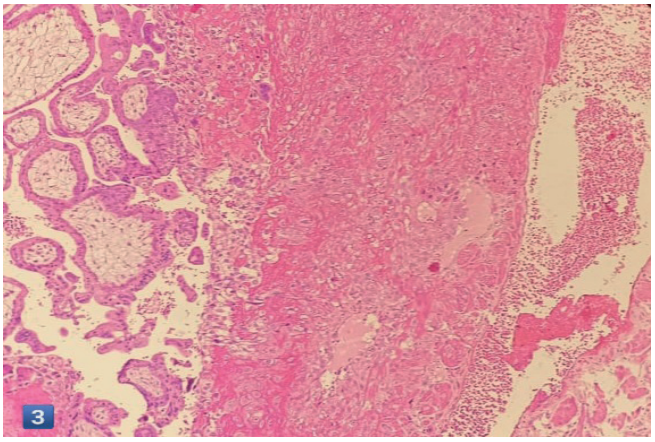

Fig 4: Histopathology image showing chorionic villi and trophoblastic tissue in uterine products.

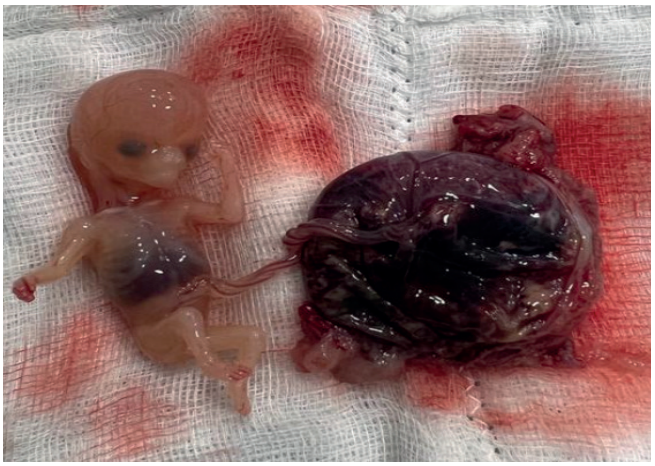

Fig 5: Right ruptured tubal ectopic pregnancy with fetus and placenta in case 2:

REFERENCES

1. Mj G, R R. Heterotopic pregnancy in natural conception. *J Hum Reprod Sci*. 2008 Jan;**1**(1):37-38.
2. Ludwig M, Kaisi M, Bauer O, Diedrich K. Heterotopic pregnancy in a spontaneous cycle: do not forget about it. *Eur J Obstet Gynecol Reprod Biol*. 1999;**87**:91–103.
3. Jerrard D, Tso E, Salik R, Barish RA. Unsuspected heterotopic pregnancy in a woman without risk factors. *Am J Emerg Med*. 1992;**10**:58–60.
4. Reece EA, Petrie RH, Sirmans MF, Finster M, Todd WD. Combined intrauterine and extrauterine gestations: a review. *Am J Obstet Gynecol*. 1983; **146**: 323-330.
5. Hirose M, Nomura T, Wakuda K, Ishiguro T, Yoshida Y. Combined intrauterine and ovarian pregnancy: a case report. *Asia Oceania J Obstet Gynaecol*. 1994 Mar;**20**(1):25-9.
6. Peleg D, Bar-Hava I, Neaman-Leavin M, Ashkena , Ben-Rafaelz IJ. Early diagnosis and successful non surgical treatment of viable combined intrauterine and cervical pregnancy. *Fertil Steril.* 1994;**62**:405.
7. Perkins KM, Boulet SL, Kissin DM, Jamieson DJ, National ART, Surveillance (NASS) Group. Risk of ectopic pregnancy associated with assisted reproductive technology in the United States, 2001–2011. Obstet Gynecol. 2015;**125**:70–78.
8. Soares C, Maçães A, Novais Veiga M, et al. BMJ Case Rep 2020;**13**:e239423.
9. Hassani, Karim Ibn Majdoub; Bouazzaoui, Abderrahim El1; Khatouf, Mohammed1; Mazaz, Khalid. Heterotopic pregnancy: A diagnosis we should suspect more often. *Journal of Emergencies, Trauma, and Shock* 3:p 304, 2010.
10. Abdelmonem AH, Sayed G, Abugazia AE, Kohla S, Youssef R. Heterotopic pregnancy after a spontaneous conception a case report with a review of clinical, laboratory and imaging findings. *Clin Case Rep*. 2021 Aug 16;**9**(8):e04649.
11. Webster K, Eadon H, Fishburn S, *et al*. Ectopic pregnancy and miscarriage: diagnosis and initial management: summary of updated NICE guidance. *BMJ* 2019;**367**:.
12. Gibson KR, Horne AW. Ruptured heterotopic pregnancy: an unusual presentation of an uncommon clinical problem. *BMJ Case Rep* 2012;2012.
13. Goldstein JS, Ratts VS, Philpott T, Dahan MH. Risk of surgery after use of potassium chloride for treatment of tubal Heterotopic pregnancy. *Obstet Gynecol*. 2006;**107**:506–8.
14. Deka D, Bahadur A, Singh A, Malhotra N. Successful management of heterotopic pregnancy after fetal reduction using potassium chloride and methotrexate. *J Hum Reprod Sci.* 2012 Jan;**5**(1):57-60.
15. Li JB, Kong LZ, Yang JB, Niu G, Fan L, Huang JZ, Chen SQ. Management of Heterotopic Pregnancy: Experience From 1 Tertiary Medical Center. *Medicine (Baltimore).* 2016 Feb;**95**(5):e2570.
16. Kajdy A., Muzyka-Placzynska K., Filipecka-Tyczka D., Modzelewski J., Stanczyk M., Rabijewski M. A unique case of diagnosis of a heterotopic pregnancy at 26 weeks—Case report and literature review. *BMC Pregnancy Childbirth*. 2021;**21**:61.