**ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL**
***Address for Correspondence:***
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127

***Website:***
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*

eISSN : 2579-8324 pISSN : 2579-8323

# CASE REPORT

## A Case Report: Unusual Case of Heterotopic Pregnancy with Chronic Ectopic Pregnancy

Putri Embun Pagi[1], Haviz Yuad[2]

*1. Obstetrics and Gynecology Department, Faculty of Medicine, Andalas University, Dr. M. Djamil Central General Hospital Padang, West Sumatera, Indonesia*

*2. Endocrinology and Fertility Division of Obstetrics and Gynecology, Department of Obstetrics and Gynecology, RSUP Dr M. Djamil, Unversitas Andalas, Padang, Indonesia*

***Corespondence:*** *Putri Embun Pagi, email : dr.embunpagi@gmail.com*

***Abstract***

**Background :**
Heterotopic pregnancy describes the occurrence of two pregnancies in different implantation sites simultaneously, mostly manifested as intrauterine and ectopic pregnancies (ampullary in 80%). The incidence has been documented due to the increase incidence of pelvic inflammatory diseases.
**Case:** A 28-years-old primipara woman with suspected chronic ectopic pregnancy, differential diagnosed with ovarian cyst. Previously, the patient had complete abortion because abdominal and pelvic pain still present, she decided to seek treatment at RSUP dr. Mdjamil, from ultrasound was found suspected chronic ectopic pregnancy differentially diagnosed with ovarian cyst. Laparoscopy had done then, the intraoperative findings found that there was a chronic ectopic pregnancy in the left ampullary tubal and then left salpingectomy was performed.
**Conclusion:** This case is one of the unusual clinical presentations of heterotopic pregnancy. This case highlights the importance of including heterotopic pregnancy in the differential diagnosis especially in patients with persistent abdominal and pelvic pain after complete abortion.

***Keywords:*** *heterotopic pregnancy, pars ampullaris tubal ectopic pregnancy*

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
*Address for Correspondence:*
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
*Website:*
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

# INTRODUCTION

Heterotopic pregnancy is the simultaneous occurrence of two pregnancies at different implantation sites, mostly manifesting as intrauterine and ectopic pregnancies (ampullary in 80%). Heterotopic pregnancies are rare and estimated to occur in about 1 per 30,000 spontaneous pregnancies while a higher prevalence may occur with assisted reproductive techniques which can reach up to 1 case per 100 in some literature. It is a challenge to diagnose heterotopic pregnancy because of its complex clinical and laboratory findings

The incidence of heterotopic pregnancy is increased in the use of assisted reproductive technology and is also increased in PID (pelvic inflammatory disease) or pelvic inflammatory disease which is associated with a high proportion of patients with tubal disease and as a predisposing factor for heterotopic pregnancy. In several studies it was stated that heterotopic pregnancies were also associated with multiple pregnancies. De Voe and Pratt calculated the theoretical figure using the incidence of ectopic pregnancies, 0.37%, the cases multiplied by the fraternal twin pregnancies rate of 0.8%.

The exact cause of heterotopic pregnancy is unclear, but multiple pregnancies with a combination of intrauterine and extrauterine pregnancies. Ectopic pregnancies are most often associated with tubal damage and altered embryo transport. Presence of a tubal abnormality, which generally results from previous surgery, pelvic infection, and endometriosis, is the strongest risk factor for ectopic pregnancy, sexually transmitted diseases resulting in salpingitis and the efficacy of antibiotic therapy in preventing total tubal occlusion after an episode of salpingitis is associated with an increased incidence of ectopic pregnancy in general. , and in particular heterotopic pregnancy.4,5,6,7

The clinical manifestations of heterotopic pregnancy are similar to those of threatened abortion and ectopic pregnancy. Symptoms include abdominal pain, adnexal masses, peritoneal irritation, and an enlarged uterus. These patients are often diagnosed at a later gestational age (eg, 16 weeks) than isolated tubal pregnancy because when an intrauterine pregnancy is observed on ultrasound, the possibility of an ectopic pregnancy is generally not considered by the examiner. Given the high potential for misdiagnosis, there is a high incidence of tubal rupture. Rupture of the implantation site of an ectopic pregnancy will cause severe abdominal pain (acute abdomen) and hemodynamic shock.

Diagnosis of heterotopic pregnancy by history, physical examination, and investigations. All women of reproductive age with abdominal pain, uterine bleeding, or menstrual abnormalities should be tested for pregnancy. After the pregnancy is established, the location of the pregnancy is usually made by ultrasound examination. Signs suggestive of heterotopic pregnancy are the presence of a complex adnexal mass or fluid in the pelvis. If the clinician has low suspicion for a heterotopic pregnancy after visualizing an intrauterine pregnancy, the ectopic pregnancy can be falsely labeled as a corpus luteum cyst. An ectopic pregnancy containing a yolk sac or a fetus with cardiac activity makes the diagnosis easier to make.8,9,10

Several recent studies say that the use of Transvaginal Ultrasound for the diagnosis of heterotrophic pregnancy is very helpful, especially in the early stages of pregnancy. At 5-6

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
*Address for Correspondence:*
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
*Website:*
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

weeks of gestation, the sensitivity of this tool is 56%. If the pregnancy is < 6 weeks, the diagnosis can be seen from the presence of signs of activity from the baby's heart rate. The confounding of the TVS examination is that the adnexal pouch may look like a corpus luteum hemorrhage or an ovarian cyst10,11,12,

Surgical evaluation plays a key role in the diagnosis of heterotopic pregnancy. Some patients present with severe complaints or hemodynamic instability that warrant evaluation and the need for surgical treatment. In stable patients, laparoscopy has the advantage of a minimally invasive evaluation10,11,12

In this case report, we report an unusual case of heterotopic pregnancy, where in this case the ectopic pregnancy had been going on for a long time and the ectopic pregnancy was only diagnosed after an abortion in an intrauterine pregnancy.

## CASE REPORT

A 28-year-old primiparous woman was diagnosed with a suspected ectopic pregnancy with pro-laparoscopic ovarian cysts. The patient came to the fertility and reproductive endocrinology polyclinic at RSUP Dr. M Djamil Padang with complaints of abdominal and back pain which had been felt since 2 months ago. Previously the patient had a spontaneous abortion in February 2022 at the Tuapejat Mentawai Hospital, then the patient was treated and during treatment a complete abortion occurred with the discharge of lumps accompanied by tissue, the ultrasound findings at that time got a complete abortion. From laboratory results, hemoglobin was 6.5 g /dL and planned for blood transfusion, and treated for 3 days. After returning from the hospital, the patient again complained of abdominal pain and low back pain which he felt every day, and complained of discharge from the genitals, the patient decided to seek treatment at Dr. M. Djamil Hospital. Ultrasound examination showed a retroflexed uterus with a size of 4.58 x 3.41 x 5.86 cm, endline (+), multiple follicles in the right ovary, a hypoechoic mass was seen on the left side. Impression: complex mass suspected of prolonged ectopic pregnancy. Patient was planned for laparoscopic surgery. From the intraoperative findings, an ectopic pregnancy was found in the left ampullary tube, and it was decided to perform a left salpingectomy. Results Pathological anatomy of the removed tubal tissue is the remnants of conception in the tube with acute salpingitis

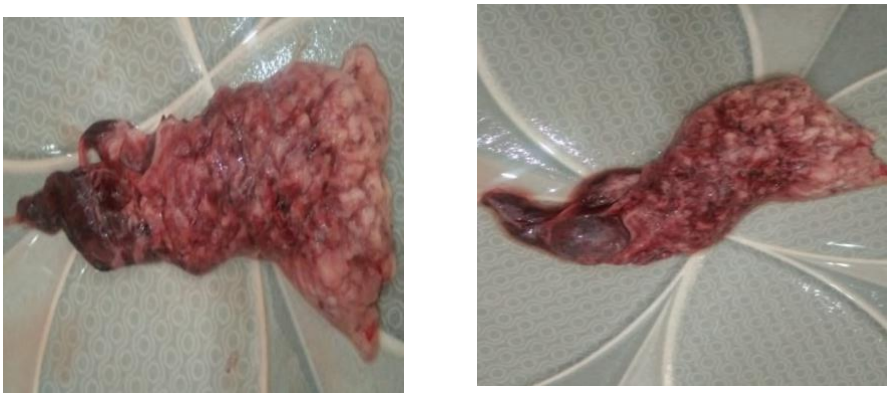


Figure 1. The tissue that comes out when the patient is treated at Tuapejat Mentawai Hospital, the arrow indicates a gestational sac

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
*Address for Correspondence:*
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
*Website:*
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

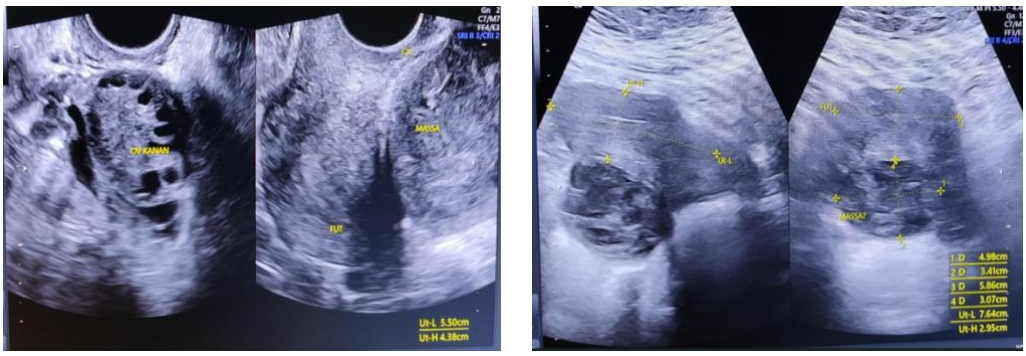



Figure 2. Transvaginal ultrasound shows a complex ec mass, suspected old ectopic pregnancy. Arrows indicate a complex mass that is suspicious of an old ectopic pregnancy

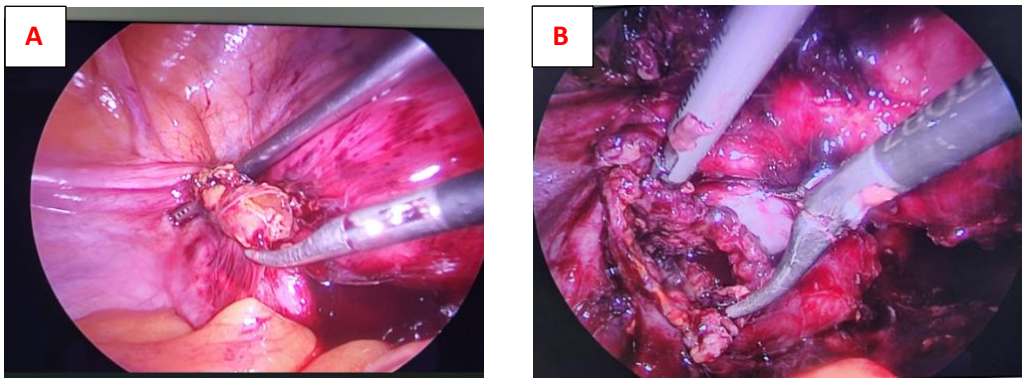
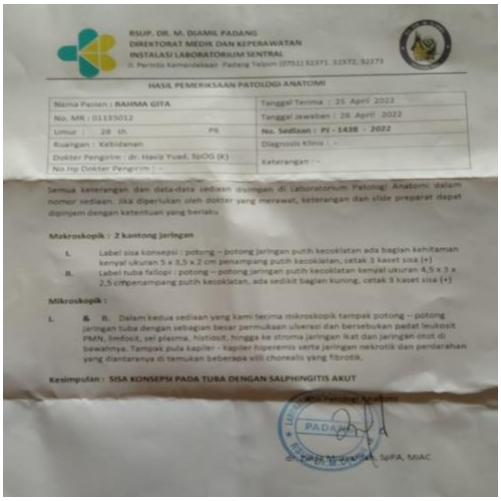



Figure 3. Laparoscopic left salpingectomy

An ectopic pregnancy is seen in the ampullary tube, Fig.A shows a gestational sac in the left ampullary tube, Fig.B is a salpingectomy process


RSUP. DR. M. DJAMIL PADANG
DIREKTORAT MEDIK DAN KEPERAWATAN
INSTALASI LABORATORIUM SENTRAL

HASIL PEMERIKSAAN PATOLOGI ANATOMI

Nama Pasien : RAHMA GITA
No. MR : 01135012
Umur : 28 th
Ruangan : Kebidanan
Dokter Pengirim : dr. Havis Yusd, SpOG (K)
No Hp Dokter Pengirim :
Tanggal Terima : 25 April 2022
Tanggal Jawaban : 26 April 2022
No. Sediaan : PI - 1438 - 2022
Diagnosis Klinis : -
Keterangan : -

Semua keterangan dan data-data sediaan disimpan di Laboratorium Patologi Anatomi dalam nomor sediaan. Jika diperlukan oleh dokter yang merawat, keterangan dan slide preparat dapat dipinjam dengan ketentuan yang berlaku

Makroskopik : 2 kantong jaringan

I. Label sisa konsepsi : potong – potong jaringan putih kecoklatan ada bagian kehitaman kenyal ukuran 5 x 3,5 x 2 cm penampang putih kecoklatan, cetak 3 kaset sisa (+)
II. Label tuba fallopi : potong – potong jaringan putih kecoklatan kenyal ukuran 4,5 x 3 x 2,5 cmpenampang putih kecoklatan, ada sedikit bagian kuning, cetak 3 kaset sisa (+)

Mikroskopik :

I. & II. Dalam kedua sediaan yang kami terima mikroskopik tampak potong – potong jaringan tuba dengan sebagian besar permukaan ulserasi dan bersebukan padat leukosit PMN, limfosit, sel plasma, histiosit, hingga ke stroma jaringan ikat dan jaringan otot di bawahnya. Tampak pula kapiler - kapiler hiperemis serta jaringan nekrotik dan perdarahan yang diantaranya di temukan beberapa vili chorealis yang fibrotik.

Kesimpulan : SISA KONSEPSI PADA TUBA DENGAN SALPHINGITIS AKUT

PADANG

SpPA, MIAC

Figure 4: Anatomical Pathology sheet with conclusions: residual conception in the tube with acute salpingitis

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
*Address for Correspondence:*
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
*Website:*
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

# DISCUSSION

Heterotopic pregnancies are pregnancies that occur at two different implantation sites simultaneously, most manifest as intrauterine and ectopic pregnancies (ampullary in 80%). Heterotopic pregnancies are rare and estimated to occur in about 1 per 30,000 spontaneous pregnancies while a higher prevalence may occur with assisted reproductive techniques which can reach up to 1 case per 100 in some literature. It is a challenge to diagnose heterotopic pregnancy because of its complex clinical and laboratory findings

Ectopic pregnancy requires early diagnosis and management to avoid the high probability of rupture. Heterotopic pregnancies may be asymptomatic in about 50% of cases; On the other hand, it can present with a variety of clinical presentations: primarily abdominal pain, adnexal enlargement which may be associated with vaginal bleeding, or even shock due to hypovolemia. Heterotopic pregnancy can be challenging to diagnose because it coincides with intrauterine pregnancy, so it is often diagnosed late. This can occur because the differential diagnosis between ectopic pregnancy and other conditions that can be associated with normal pregnancy such as corpus luteum bleeding or adnexal torsion.

Ultrasound features of heterotopic pregnancy may present as a cyst or adnexal complex mass which may be a hematosalphing, tubal ring, or embryo. Intraperitoneal free fluid may also be seen.4,6-9

In this patient, a heterotopic pregnancy occurred in an unusual presentation, where the patient had experienced an abortion in her intrauterine pregnancy and then an old ectopic pregnancy was detected which actually occurred together. In this patient, a prolonged ectopic pregnancy occurred, presumably because the patient had an abortion during her intrauterine pregnancy. This is as explained in the description above that in only viable intrauterine pregnancies, heterotopic pregnancies are often not diagnosed, especially if the intrauterine pregnancy has an abortion, it will further obscure the clinical presentation and suspicion of the possibility of an ectopic pregnancy which is also occurring simultaneously. In this patient, the ectopic pregnancy occurred in the ampullary part of the left fallopian tube. Based on the literature, more than 95% of ectopic pregnancies occur in the tube, with the ampulla being the most common location.

Management of heterotopic pregnancy requires laparoscopy and performed salpingectomy or salpingostomy. However, in cases of hemodynamic instability, urgent laparotomy may be required. Methotrexate is not useful in the management of heterotopic pregnancy due to the presence of a viable intrauterine pregnancy.,12,13,14,15

# CONCLUSION

Heterotopic pregnancy is a rare condition, any pregnant woman with clinical presentation of abdominal pain and adnexal abnormalities; Heterotopic pregnancy can be suspected as a possible differential diagnosis. Patients should undergo ultrasound and MRI examinations if necessary, to rule out this rare diagnosis so that appropriate management can be given in a timely manner. This case is one of the unusual clinical presentations of heterotopic

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL
*Address for Correspondence:*
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
*Website:*
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

pregnancy. This case highlights the importance of placing heterotopic pregnancy in the differential diagnosis, especially in patients with persistent abdominal and flank pain after abortion. A pre-existing intrauterine pregnancy can obscure and delay the diagnosis of potentially life-threatening concomitant ectopic pregnancy.

## REFERENCES

1. Fernandez H, Gervaise A (2004) Ectopic pregnancies after infertility treatment: modern diagnosis and therapeutic strategy. Hum Reprod Update 10(6):503–513

2. Callen PW Ultrasonography in obstetrics and gynecology. In: Levine D (ed) Ectopic Pregnancy, 5th edn. Saunders Elsevier, Philadelphia, pp 1020–1047

3. Xiao HM, Gong F, Mao ZH, Zhang H, Lu GX (2006) Analysis of 92 ectopic pregnancy patients after in vitro fertilization and embryo transfer. J Cent South Univ 31(4):584–587

4. Louis-Sylvestre C, Morice P, Chapron C, Dubuisson JB (1997) The role of laparoscopy in the diagnosis and management of heterotopic pregnancies. Hum Reprod 12(5):1100–1102

5. Jeon HS, Shin HJ, Kim IH, Chung DY (2012) A case of spontaneous heterotopic pregnancy presenting with heart activity of both embryos. Kor J Obstet Gynecol 55:339–342

6. Elito NAMD, Montenegro M, Costa Soares RDA, Camano L (2008) Unruptured ectopic pregnancy—diagnosis and treatment. State of art. Revista Brasileira de Ginecologia e Obstetricia 30(3):149–154

7. Dündar Ö, Tütüncü L, Müngen E, Muhcu M, Yergök YZ (2006) Heterotopic pregnancy: tubal ectopic pregnancy and monochorionic monoamniotic twin pregnancy: a case report. Perinatal J 14:96–100

8. Tamai K, Koyama T, Togashi K (2007) MR features of ectopic pregnancy. Eur Radiol 17(12):3236–3246

9. Li XH, Ouyang Y, Lu GX (2013) Value of transvaginal sonography in diagnosing heterotopic pregnancy after in-vitro fertilization with embryo transfer. Ultrasound Obstet Gynecol 41:563–569

10. Tankou CS, Sama C, Nekame JLG. Occurrence of spontaneous bilateral tubal pregnancy in a low-income setting in rural Cameroon: A case report. BMC Res Notes 2017;10:679

11. Damario, Ectopic Pregnancy. In: Rock Jr, Jones III. Te Linde's Operative Gynecology. 10th. Philadelphia: Lippincott Williams and Wilkins; 2011. 794-795.

**ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL**
***Address for Correspondence:***
Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127
***Website:***
*http://jurnalobgin.fk.unand.ac.id/index.php/JOE*
eISSN : 2579-8324 pISSN : 2579-8323

12. Li JB, Kong LZ, Yang JB, Niu G, Fan L, Huang JZ et al (2016) Management of heterotopic pregnancy: experience from 1 tertiary medical center. Medicine. 95:e2570

13. Baxi A, Kaushal M, Karmalkar H, Sahu P, Kadhi P, Daval B (2010) Successful expectant management of tubal heterotopic pregnancy. J Hum Reprod Sci 3:108–110

14. Deka D, Bahadur A, Singh A (2012) Neena Malhotra. Successful management of heterotopic pregnancy after fetal reduction using potassium chloride and methotrexate. J Hum Reprod Sci 5:57–60

15. Goldstein JS, Ratts VS, Philpott T, Dahan MH (2006) Risk of surgery after use of potassium chloride for treatment of tubal heterotopic pregnancy. Obstet Gynecol 107:506–508