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Case Report

# Spontaneous Unruptured Bilateral Tubal Pregnancy: A Case Report

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## Abstract

Bilateral spontaneous tubal ectopic pregnancy is the rarest form of extra uterine pregnancy. The diagnosis is usually made intraoperatively and levels of serum BHCG and ultrasound has not been useful in the diagnosis of bilateral tubal ectopic pregnancy. A 33-year-old woman with 8 weeks amenorrhea and sever lower abdominal pain was admitted. A transvaginal pelvic ultrasound revealed left adnexal mass and massive fluid collection in the pelvis and abdomen. The serum BHCG was 5,700 mIU/ml and in laparotomy bilateral unruptured tubal pregnancy was noted. Left salpingectomy and right salpingostomy were performed. The diagnosis of bilateral spontaneous tubal ectopic pregnancy is usually made intraoperatively. Both tubes at the time of surgery should be closely examined in order to prevent maternal morbidity and mortality.

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## Introduction

In the first trimester of pregnancy, ectopic pregnancy is one of the important causes of morbidity and mortality. Recently, the incidence of ectopic pregnancy, which was 4.5-16.8 per 1,000 has increased because of using assisted reproductive techniques.[1] Bilateral tubal pregnancy is a rare disease, which occurs in 1 per 200,000 pregnancies.[2] The incidence of bilateral tubal pregnancy has been reported to be increasing as a result of increased use of induction ovulations. However, bilateral tubal pregnancy in the absence of preceding induction of ovulation is a rare condition with an estimated incidence of 1 in 725 to 1 in 1,580 ectopic pregnancies.[3]

The rarest form of ectopic pregnancy is bilateral tubal pregnancy, which occurs spontaneously.[3] Most patients with bilateral tubal pregnancies have similar risk factors to those with unilateral ectopic pregnancy, including tubal corrective surgery, tubal sterilization, intrauterine device, documented tubal pathology, infertility, assisted reproductive technology, previous genital infection, smoking, prior abortion, multiple sexual partners, and prior cesarean delivery.[4,5]

According to the World Health Organization (2007), 5% of maternal mortality in the developed countries is due to ectopic pregnancy. Hemorrhage and infection cause half of the deaths associated with ectopic pregnancy.[6,7] There has been an increase in the number of published case report of

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bilateral tubal pregnancies following the use of induction ovulation, but spontaneous bilateral unruptured tubal pregnancy remains a rare event. Here we report a 33-year-old woman (primigravida) with a spontaneous unruptured bilateral tubal pregnancy who underwent laparotomy.

## Case Report

A 33-year-old primgravid was admitted with complaints of severe abdominal pain and spotting. She had 8 weeks amenorrhea and spotting 20 days prior to admission and pelvic and abdominal pain of 48 hours duration. She had been married for 7 months. She had no history of contraception use, sexually transmitted infections or previous abdominopelvic surgery and use of induction ovulation drugs.

General examination revealed pulse rate=80/min, BP=110/70, temperature 37ºC and pallor. Her abdomen was tender on palpation, right lower quadrant and left lower quadrant and hypogaster with positive rebound tenderness. On pelvic examination, there was spotting, the uterus was bulky and both adnexa were tender on palpation. Hematological evaluation showed, white cell count 5400/mm$^3$, hemoglobin 11 g/dl, hematocrit 33% and BHCG was 5700 IU/l.

Transvaginal ultrasound revealed a 30×30 mm left adnexal mass suggestive of ectopic pregnancy, uterine cavity was empty and a large amount of fluid was seen in the pelvis. Because of abdominal pain and report of fluid in pelvis, laparotomy was performed. Laparotomy revealed bilateral unruptured tubal pregnancy with hemoperitoneum.

The left tube contained a mass measuring approximately 5×6 cm in ampullar portion and was intact (Figure 1). The right tube contained an intact mass, measuring 1×2 cm in ampullar portion and there was active bleeding from fimbrial portion (Figure 1). Left salpingectomy and right salpingostomy were performed. The postoperative course was uneventful and the patient was discharged 3 days after operation and serum BHCG levels declined to an undetectable level during 10 days.

The pathology report confirmed the diagnosis of ectopic tubal pregnancy in left tube measuring 5.5×2.5 cm in ampullar portion and blood clot and chorionic villi in the tissue removed from the right tube (Figure 2).

Informed consent was obtained from the patient to report in an article.

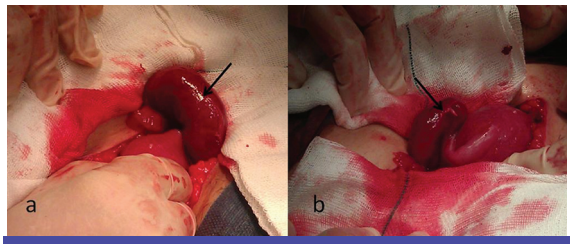


**Figure 1:** Shows (a) Intact left tubal pregnancy (arrow), (b) Intact right tubal pregnancy (arrow).

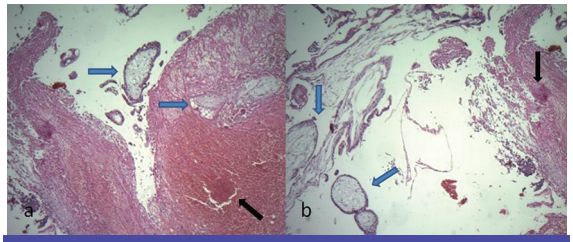


**Figure 2:** Shows (a) Pathology image of left tube. Chorionic villi among blood clot and fibrin deposition (Blue arrows: Chorionic villi, Black arrow: Blood), (b) Pathology image of right tube content. Chorionic villi among blood clot and fibrin deposition (Blue arrows: Chorionic villi, Black arrow: Blood).

## Discussion

The rarest form of ectopic pregnancy is bilateral tubal pregnancy, which occur spontaneously.[3] We report a very rare case of spontaneous unruptured bilateral tubal pregnancy. On left tube gestational sac and on right tube, chorionic villi were observed. Two hundred case reports of bilateral tubal ectopic pregnancy have been observed in the literature, in which most cases occurred after using assisted reproductive techniques.[8] Usually, in these cases diagnosis was made intraoperatively.

Ultrasonography in our case failed to make a diagnosis of bilateral tubal pregnancy. In cases reported by Andrewes et al., Campo et al., and Brady et al., they also failed to make a diagnosis based on ultrasonography.[3,9-11] One case of preoperative diagnosis according to ultrasonographic findings was reported by Martinez et al.[12]

Andrews et al. reported a case of spontaneous bilateral tubal pregnancy that a transvaginal pelvic ultrasound only revealed an empty uterus with a right adnexal mass.[3] Also, Al Quraan et al. reported a case of bilateral ectopic pregnancy that an ultrasonography failed to make such a diagnosis.[10] In most cases of bilateral ectopic pregnancy, laparoscopy or laparotomy is necessary to make a diagnosis.

Our patient, because of her acute pain and extensive blood within the peritoneal cavity was not suitable for either medical management with methotrexate or laparoscopic surgery. Therefore exploratory laparotomy was performed.

In published case reports of bilateral tubal pregnancies, one tube was intact and the other was ruptured, but in our case report both tubes were unruptured. Al Quraan et al. and Brady et al. reported bilateral ectopic pregnancy with one tube ruptured and the other intact.[10,11]

Most patients with bilateral tubal pregnancy have similar symptom and sign, and risk factors to those with a unilateral ectopic pregnancy.

The most frequent findings are triad of vaginal bleeding, abdominal pain, and amenorrhea.[3]

Ultrasonography also has not been always useful for diagnosis of bilateral tubal pregnancy, and levels of serum BHCG and the discriminatory zone are not reliable for identification of patients with bilateral tubal pregnancy. Laparoscopic conservative surgery is the management of choice for bilateral tubal pregnancies. However, the diagnosis of bilateral tubal pregnancy is usually made intraoperatively, therefore identifying and closely examining both tubes at the time of surgery is necessary.[12]

Martinez et al.[13] explained three possible reasons for a bilateral ectopic pregnancy.

1. Simultaneous multiple ovulation
2. Sequential impregnation
3. Transperitoneal migration of trophoblastic cells from one extra uterine pregnancy to the other tube with implantation

Treatment of bilateral tubal pregnancy is controversial and it ranges from bilateral salpingectomy to the conservative approach such as salpingostomy and salpingotomy.[3]

Andrews et al.[3] reported bilateral tubal pregnancy that laparoscopic salpingectomy was used in ectopic pregnancy and the patient was subsequently treated with methotrexate because of persistent ectopic pregnancy. Mandal et al.[14] reported a case with bilateral tubal pregnancy in which bilateral salpingectomy was done.

Since the diagnosis of bilateral tubal pregnancy is usually made at the time of surgery, there are no case reports of successful primary medical treatment with methotrexate.

Walter et al.[15] reported a case of bilateral chronic and acute tubal pregnancies where treatment with methotrexate was failed. When the exploratory laparotomy or laparoscopy is undertaken for ectopic pregnancy, close inspection of both adnexae is necessary to prevent maternal morbidity and mortality.

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**Conflict of Interest:** None declared.

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