Scientific Research Publishing

Open Journal of Obstetrics and Gynecology, 2025, 15(8), 1293-1298
https://www.scirp.org/journal/ojog
ISSN Online: 2160-8806
ISSN Print: 2160-8792

Spontaneous Bilateral Tubal Ectopic Pregnancy: A Case Report from the Gynecology and Obstetrics Department at the Teaching Hospital of Angre/Abidjan

Okoin Paul José Loba[1,2], Yapo Privat Akobé[1,2], Ndrin Denis Effoh[1,2], Eleonore Gbary-Lagaud[1,2], Soh Victor Koffi[1,2], Ramata Kouakou-Kouraogo[1,2], Souleymane Soumahoro[1,2], Claudia Michelle Gadji[1,2], Roland Adjoby[1,2*]

[1]Gynecology and Obstetrics Department, Teaching Hospital of Angre, Abidjan, Ivory Coast
[2]Department of Maternal and Child Health, Félix Houphouët Boigny University, Abidjan, Ivory Coast
Email: *r.adjoby@yahoo.fr

How to cite this paper: Loba, O.P.J., Akobé, Y.P., Effoh, N.D., Gbary-Lagaud, E., Koffi, S.V., Kouakou-Kouraogo, R., Soumahoro, S., Gadji, C.M. and Adjoby, R. (2025) Spontaneous Bilateral Tubal Ectopic Pregnancy: A Case Report from the Gynecology and Obstetrics Department at the Teaching Hospital of Angre/Abidjan. *Open Journal of Obstetrics and Gynecology*, **15**, 1293-1298.
https://doi.org/10.4236/ojog.2025.158105

Received: July 5, 2025
Accepted: August 15, 2025
Published: August 18, 2025

Abstract

Bilateral tubal ectopic pregnancies (ETs) are an extremely rare entity in their spontaneous form. It is a condition that a gynecologist may encounter only once during his or her entire career. We report the case of a 24-year-old nulliparous woman whose bilateral ectopic pregnancy was discovered during laparotomy performed for hemoperitoneum associated with secondary amenorrhea of 9 weeks' gestation. To avoid missing such a potentially life-threatening situation, we recommend always exploring the contralateral fallopian tube using endovaginal ultrasound.

Keywords

Bilateral Ectopic Pregnancy, Pelvic Pain, Hemoperitoneum

1. Introduction

Bilateral ectopic pregnancy is very rare, especially when it occurs spontaneously. It is estimated to occur in 1 out of every 750 to 580 ectopic pregnancies, or approximately 1 in 200,000 pregnancies [1]. The number of cases has been increasing due to the rising demand for assisted reproductive technologies (ART) [2] [3]. The tragedy lies in the resulting bilateral tubal infertility, which can only be managed through *in vitro* fertilization (IVF). We report a case observed at the Teach-

ing Hospital of Angré (Abidjan), Côte d'Ivoire, which had a favorable outcome after bilateral salpingectomy.

2. Case Presentation

We present the case of a 24-year-old primigravida, nulliparous woman with no significant medical history except for a mildly myomatous, asymptomatic uterus. She was referred for management of metrorrhagia complicated by severe anemia (hemoglobin level of 5.6 g/dL) without decompensation. She had experienced about two weeks of minor dark vaginal bleeding, initially mistaken for menstruation. She also reported mild abdominal pain. Her last menstrual period remained unknown, and she stated she was taking combined oral contraceptives. Upon admission, physical examination revealed a stable hemodynamic status, with deep abdominal tenderness but no guarding or rebound tenderness. On speculum examination, there was evidence of dark blood from the endometrial cavity. Bimanual examination showed a mid-length, firm, closed cervix, a small-sized uterus, lateral fornix tenderness, but no palpable adnexal mass. A complete blood count confirmed severe anemia with a hemoglobin level of 4.7 g/dL without signs of decompensation. She received a transfusion of 500 mL of packed red blood cells matching her blood group and Rh factor. The plasma beta-HCG level was 12,000 IU/ml. Pelvic ultrasound showed an empty uterus with decidualized endometrium, and a heterogeneous adnexal mass on the right side, suggestive of an embryo without cardiac activity. The left adnexa could not be visualized. There was moderate free fluid in Morrison's pouch and paracolic gutters (**Figure 1**). Emergency laparotomy was indicated for suspected ruptured right tubal ectopic pregnancy. Intraoperatively, a hemoperitoneum of approximately 1500 cc was found, which was aspirated and bilateral ruptured tubal ectopic pregnancies were found, including, ampullary on the right and cornual on the left (**Figure 2** and **Figure 3**).

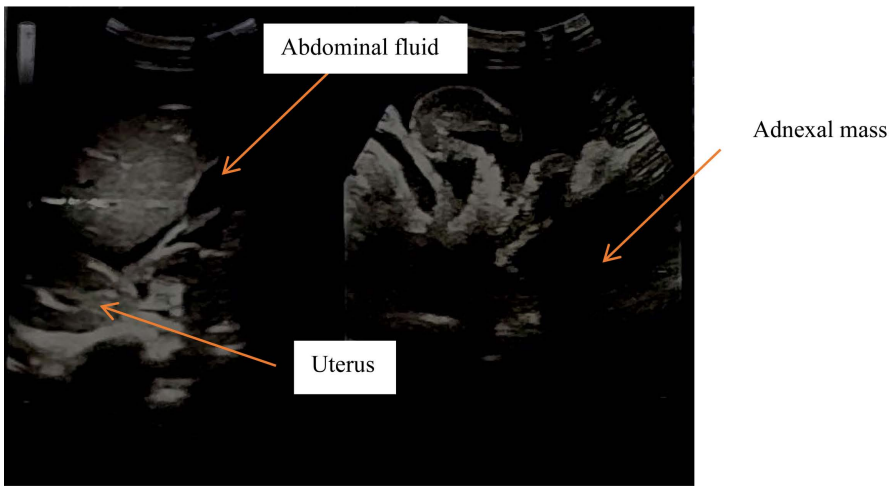

Figure 1. Ultrasound appearance of an empty uterus, abdominal fluid, and an adnexal mass without cardiac activity.

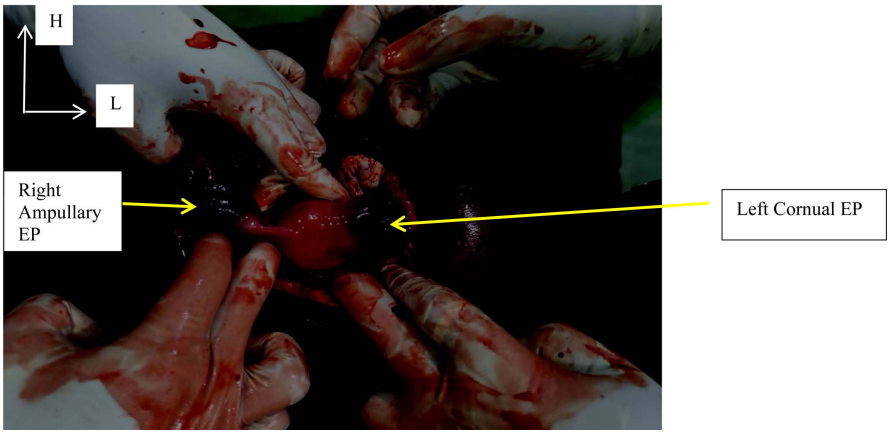

Figure 2. Operative view showing ruptured bilateral tubal ectopic pregnancies (right ampullary and left cornual).

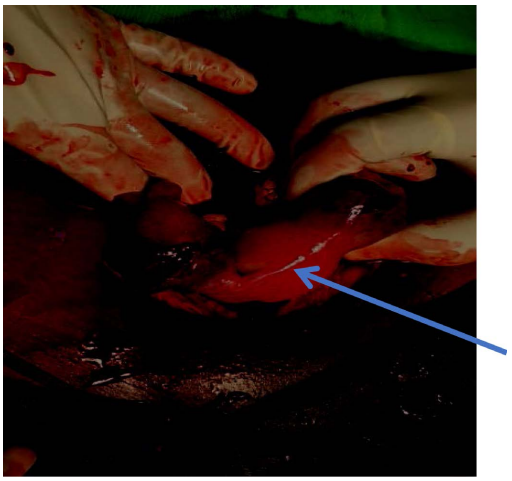

Figure 3. Small-sized, slightly myomatous uterus.

A bilateral salpingectomy was performed, and histopathological analysis of the specimens confirmed the diagnosis of ectopic pregnancy. Histopathological examination was in favor of chronic salpingitis dotted with chorionic villi. Postoperative recovery was uneventful, and the patient was discharged after three days of postoperative care.

3. Discussion

Bilateral tubal ectopic pregnancies are a rare and potentially life-threatening gynecological condition. Their true incidence remains unknown, although recent reports suggest an increase. These pregnancies are classified as primary when occurring spontaneously, as in our case, or secondary following assisted reproductive techniques [2] [3]. Risk factors include predisposing conditions for ectopic pregnancy, twin-predisposed populations, and use of fertility-enhancing medications [4] [5]. In the literature, risk factors for bilateral ectopic pregnancy are similar to those for unilateral ectopic pregnancy, including pelvic inflammatory disease, prior ectopic pregnancy, ovulation induction, *in vitro* fertilization, and tubal

surgery [1].

Four theories have been proposed to explain the mechanism of bilateral ectopic pregnancy:

Spontaneous or induced multiple ovulations increase the likelihood of bilateral implantation [6].

Ijland *et al.* [7] described rhythmic endometrial wave-like movements in healthy women with normal cycles. A normally implanted intrauterine embryo might migrate into the fallopian tube via retrograde endometrial action or uterine contractions, even without ART or ovulation stimulation.

Women using progestin-only pills or intrauterine devices containing progestin, leading to high progesterone concentrations, may experience impaired tubal motility, increasing the risk of ectopic implantation [8].

During *in vitro* fertilization with embryo transfer (IVF-ET), transferring more than one embryo directly into the fallopian tubes may lead to bilateral ectopic pregnancy; this may be influenced by transfer media properties and volume [9].

The main risk factor identified in our patient was the use of combined hormonal contraception, which is not specific to this clinical scenario. Some meta-analyses studies have shown that oral contraceptive pills (OCPs), intrauterine devices (IUDs), and female sterilization can increase the risk of EP to varying degrees in women of contraceptive failure [10].

Mechanisms behind spontaneous bilateral ectopic pregnancy remain poorly understood in current literature. Some authors suggest theories such as transperitoneal migration of trophoblastic cells, double ovulation with fertilization of two oocytes followed by implantation in damaged tubes, or superfetation [11].

Diagnosis of bilateral ectopic pregnancy is usually made intraoperatively [1] [9]. Clinical presentation and serum beta-hCG levels cannot distinguish between unilateral and bilateral ectopic pregnancies. Preoperative ultrasound rarely detects bilateral tubal ectopic pregnancies, even when viable embryos are present in both tubes [12]. Ultrasound could suspect a bilateral ectopic pregnancy from the observation of bilateral solid adnexal masses separate from the ovary. Thus, systematic exploration of the contralateral tube is essential during surgery when unilateral ectopic pregnancy is suspected [12]-[14]. Therapeutic options for bilateral tubal ectopic pregnancies are varied. Management can involve medical treatment with methotrexate or surgical interventions, either conservative or radical. In some cases, a combination of both modalities may be required. The choice depends on several factors, including the patient's clinical condition and future fertility wishes. For patients desiring future fertility, conservative management with methotrexate after spontaneous expulsion of one ectopic pregnancy, or unilateral salpingectomy in case of rupture, may be considered reasonable [12]-[15].

Access to laparoscopic procedures remains limited in under-resourced countries, justifying open laparotomy as the initial approach. We opted for bilateral salpingectomy, the only feasible option given the bilateral tubal rupture. The major challenge remains psychological support and assessing the obstetric prognosis,

particularly for nulliparous women like in our case. In view of bilateral salpingectomy, the obstetric prognosis can be improved through assisted reproductive technology (ART). *In vitro* fertilization remains the technique of choice with a success rate essentially linked to age [16]. However, access to ART remains problematic in sub-Saharan African countries due to cost and availability. In the case of a bilateral ectopic pregnancy in a patient who highly desires future fertility, conservative treatment with methotrexate after spontaneous expulsion of unilateral ectopic pregnancy and a unilateral salpingectomy for a rupturing ectopic pregnancy is reasonable [12] [17].

4. Conclusion

Spontaneous bilateral ectopic pregnancy is rare. Diagnosis is often incidental because its clinical presentation closely resembles that of unilateral ectopic pregnancy. The challenges posed by this condition are threefold: first, managing the life-threatening emergency; second, providing counselling to help the patient accept potential tubal infertility following bilateral rupture; and third, addressing the limited access and high cost of assisted reproductive technologies in developing countries.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper. Written informed consent was obtained prior to publication.

References

[1] Andrews, J., Farrell, S. and Andrews, J. (2008) Spontaneous Bilateral Tubal Pregnancies: A Case Report. *Journal of Obstetrics and Gynaecology Canada*, **30**, 51-54. https://doi.org/10.1016/s1701-2163(16)32713-x

[2] Martinez, J., Cabistany, A.C., Gonzalez, M., Gil, O., Farrer, M. and Romero, J.A. (2009) Bilateral Simultaneous Ectopic Pregnancy. *Southern Medical Journal*, **102**, 1055-1057. https://doi.org/10.1097/smj.0b013e3181b67378

[3] Bettocchi, S., Nappi, L., Ceci, O., Vimercati, A., Selvaggi, L., Cormio, G., *et al.* (2004) Simultaneous Bilateral Tubal Pregnancies and Intrauterine Pregnancy with Five Fetuses. *The Journal of the American Association of Gynecologic Laparoscopists*, **11**, 195-196. https://doi.org/10.1016/s1074-3804(05)60198-3

[4] Demircioglu, F., Steiner, P.H., Rosendal, B.M., Winther, L.P. and Khalil, M.R. (2023) Bilateral Tubal Pregnancy in a Woman without Risk Factors. *Ugeskrift for Læger*, **185**, V04230229.

[5] Eze, J.N., Obuna, J.A. and Ejikeme, B.N. (2012) Bilateral Tubal Ectopic Pregnancies: A Report of Two Cases. *Annals of African Medicine*, **11**, 112-115.

[6] Funamizu, A., Fukui, A., Fukuhara, R., Kobayashi, A., Chiba, H., Matsumura, Y., *et al.* (2017) A Case of Bilateral Tubal Pregnancy. *Gynecology and Minimally Invasive Therapy*, **6**, 191-192. https://doi.org/10.1016/j.gmit.2017.05.003

[7] Ijland, M.M., Evers, J.L.H., Dunselman, G.A.J., van Katwijk, C., Lo, C.R. and Hoogland, H.J. (1996) Endometrial Wavelike Movements during the Menstrual Cycle. *Fertility and Sterility*, **65**, 746-749. https://doi.org/10.1016/s0015-0282(16)58207-7

[8] Marion, L.L. and Meeks, G.R. (2012) Ectopic Pregnancy: History, Incidence, Epidemiology and Risk Factors. *Clinical Obstetrics & Gynecology*, **55**, 376-386. https://doi.org/10.1097/grf.0b013e3182516d7b

[9] Klipstein, S. and Oskowitz, S.P. (2000) Bilateral Ectopic Pregnancy after Transfer of Two Embryos. *Fertility and Sterility*, **74**, 887-888. https://doi.org/10.1016/s0015-0282(00)01566-1

[10] Schultheis, P., Montoya, M.N., Zhao, Q., Archer, J., Madden, T. and Peipert, J.F. (2021) Contraception and Ectopic Pregnancy Risk: A Prospective Observational Analysis. *American Journal of Obstetrics and Gynecology*, **224**, 228-229. https://doi.org/10.1016/j.ajog.2020.10.013

[11] Hoffmann, S., Abele, H. and Bachmann, C. (2016) Spontaneous Bilateral Tubal Ectopic Pregnancy: Incidental Finding during Laparoscopy—Brief Report and Review of Literature. *Geburtshilfe und Frauenheilkunde*, **76**, 413-416. https://doi.org/10.1055/s-0041-110394

[12] Masten, M. and Alston, M. (2022) Spontaneous Bilateral Ectopic Pregnancy Treated with Combination of Methotrexate, Unilateral Salpingectomy, and Unilateral Expulsion of Pregnancy. *Cureus*, **14**, e29031. https://doi.org/10.7759/cureus.29031

[13] Nyakura, M., Mhlanga, F.G., Madziyire, G. and Matshalaga, S. (2021) Spontaneous Bilateral Tubal Ectopic Pregnancy: A Case Report. *Pan African Medical Journal*, **38**, Article 395. https://doi.org/10.11604/pamj.2021.38.395.28771

[14] Sentilhes, L., Bouet, P., Jalle, T., Boussion, F., Lefebvre-Lacoeuille, C. and Descamps, P. (2009) Ultrasound Diagnosis of Spontaneous Bilateral Tubal Pregnancy. *Australian and New Zealand Journal of Obstetrics and Gynaecology*, **49**, 695-696. https://doi.org/10.1111/j.1479-828x.2009.01081.x

[15] Belinga, E., Ngono, A.V., Tompeen, I., Kasia, Y.B., Nyebe, F., Edimo, W., *et al.* (2022) Spontaneous Bilateral Ectopic Pregnancy: A Case Report. *Health Sciences and Disease*, **23**, 122-123.

[16] Jamard, A., Turck, M., Pham, A.D., Dreyfus, M. and Benoist, G. (2016) Fertility and Risk of Recurrence after Surgical Treatment of an Ectopic Pregnancy (EP): Salpingostomy versus Salpingectomy. *Journal de Gynécologie Obstétrique et Biologie de la Reproduction*, **45**, 129-138. https://doi.org/10.1016/j.jgyn.2015.08.005

[17] Xiromeritis, P., Margioula-Siarkou, C., Miliaras, D. and Kalogiannidis, I. (2015) Laparoscopic Excision of Coexisting Left Tubal and Right Pseudotubal Pregnancy after Conservative Management of Previous Ectopic Pregnancy with Methotrexate: An Unusual Clinical Entity. *Case Reports in Surgery*, **2015**, Article ID: 645826. https://doi.org/10.1155/2015/645826