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## Unrecognized spontaneous bilateral ampullary pregnancy treated by laparoscopy

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**Abstract** We report on a 35-year-old woman with spontaneous bilateral tubal pregnancy. This is a rare and complex condition with uncertain etiology. Despite preoperative work-up that included clinical examination, serial ultrasound investigation, and serial quantitative beta human chorionic gonadotropin testing, the bilateral disease was not accurately diagnosed until laparoscopy. A bilateral laparoscopic linear salpingostomy was performed along with extraction of the conception products from both tubes. There were no intraoperative or postoperative complications, and the patient was discharged on the 1st postoperative day. Subsequent histopathology confirmed bilateral ectopic pregnancy. To avoid misdiagnosing bilateral ectopic pregnancy, we emphasize the need to combine clinical, sonographic, and laparoscopic investigation when the clinical picture is confusing.

**Keywords** Bilateral ectopic pregnancy · Ultrasound · Laparoscopy

### Introduction

The number of ectopic pregnancies has increased over the past 20 years [1]. After a first ectopic pregnancy, there is a seven- to thirteen-fold increased risk of a subsequent ectopic pregnancy; the chance that a subsequent pregnancy will be intrauterine is 50–80%, and the chance that the pregnancy will be tubal is 10–25%, while the remaining patients will be infertile [2–4]. Many contributing factors make accurate assessment of risk very difficult: size and location of the ectopic pregnancy, status of the contralateral adnexa, treatment method, and history of infertility. This paper presents an unusual case of a spontaneous bilateral tubal (ampullary) pregnancy that was treated laparoscopically.

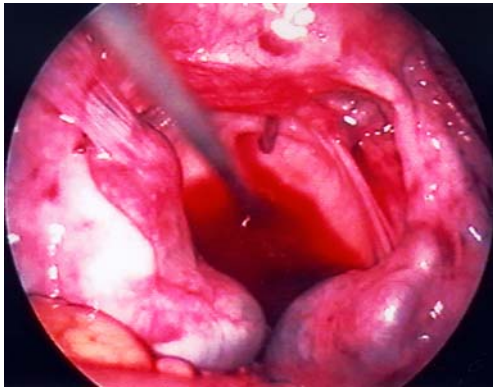
### Case history

The patient was a 35-year-old woman, gravida 5, para 1, with a history of one normal delivery, three miscarriages, and one ectopic ampullary pregnancy in the left tube that had been treated with direct transvaginal methotrexate injection. She reported lower abdominal pain and intermittent vaginal bleeding during the 7th week of amenorrhea. She had no previous history of pelvic inflammatory disease, no prior use of an intrauterine contraceptive device, and no current use of fertility drugs. A palpable tender mass on the left adnexa was revealed during bimanual gynecological examination. Transvaginal ultrasound examination showed no evidence of intrauterine pregnancy. However, a mass possibly indicative of ectopic pregnancy was noted on the left adnexa. The right tube appeared normal, and ultrasound also indicated fluid in the pouch of Douglas. The serum beta human chorionic gonadotrophin (beta-hCG) level was 18,000 mIU/ml, and the patient was stable hemodynamically. Laparoscopy revealed an unruptured ampullary ectopic pregnancy on the left tube and also an incomplete tubal abortion of an ampullary ectopic pregnancy on the right tube (unrecognized). The pouch of Douglas contained clots and blood (Fig. 1).

### Intervention

Although the left tube was extensively damaged, the patient did not consent to left salpingectomy. Consequently, a bilateral laparoscopic linear salpingostomy was performed along with extraction of the conception products from both tubes and without suturing the tubal incisions. For hemostasis purposes, bipolar coagulation forceps were used. There were no intraoperative complications, and the patient was discharged on the 1st postoperative day. Subsequent histopathology showed the presence of chorionic villi in each tube. Follow-up with serial measurements of serum beta-hCG levels, gynecological examination, and pelvic ultrasound was normal. Serum beta-hCG levels

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**Fig. 1** Unrecognized bilateral tubal pregnancy revealed by laparoscopy

declined rapidly a week after surgery and became negative the 15th postoperative day.

## Discussion

The incidence of bilateral tubal spontaneous ectopic pregnancy is extremely low, falling in the range of 1/1,580 to 1/125 of all ectopic pregnancies [5, 6]. Diagnosis of bilateral ectopic pregnancy is usually confirmed at the time of operation [7, 8]. Because the incidence of ectopic pregnancy has been increasing in recent years, mainly due to increased use of fertility medications, tubal surgery, and assisted reproductive techniques, it seems likely that bilateral ectopic pregnancies will also become more frequent.

The widespread availability of ultrasonography, with the combination of accurate and sensitive hCG assays, has dramatically facilitated the early detection of ectopic pregnancy. Laparoscopy is a useful adjunct to noninvasive methods of diagnosis, especially when the clarity provided by the classical approach (ultrasound and hCG measurements) is inadequate. Generally speaking, the fallopian tubes are easily visualized and evaluated during laparoscopy, although the diagnosis of ectopic pregnancy is missed in 3–4% of patients who have very small ectopic gestations. The ectopic gestation is usually seen distorting the normal tube architecture. With earlier diagnosis, there is

an increasing probability that a small ectopic pregnancy may not be visualized. Pelvic adhesions or previous tubal damage (as in our case) may compromise assessment of the tube. False positive results occur when tubal dilation or discoloration is misinterpreted as an ectopic pregnancy, in which case the tube can be incised unnecessarily and eventually damaged. Also, incomplete removal of trophoblastic tissue or peritoneal trophoblastic implantation after linear salpingostomy can occur rarely. Therefore, removal of all trophoblastic tissue with examination of the pelvis and the peritoneal and serosal surfaces is necessary.

As a conclusion, this case report emphasizes the need for a detailed clinical and sonographic investigation of patients with possible ectopic gestation, while the combination of these methods with laparoscopy, may represent a very effective approach in the diagnosis of unusual cases like the presence of bilateral ectopic pregnancy, reducing complications for these patients. Postoperative serum beta-hCG titres must be obtained to exclude persistent trophoblastic disease, especially after conservative surgical treatment for tubal ectopic pregnancy.

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