Recurrent Ectopic Pregnancy in the Ipsilateral Oviduct After Prior Laparoscopic Partial Salpingectomy

Yung-Liang Liu, Kwei-Shuai Hwang, Po-Wei Chu, Dah-Ching Ding[1]*

Department of Obstetrics and Gynecology, Tri-Service General Hospital, National Defense Medical Center, Taipei, and [1]Department of Obstetrics and Gynecology, Buddhist Tzu Chi General Hospital, Tzu Chi University, Hualien, Taiwan.

Ectopic pregnancy occurs in approximately 2% of all pregnancies, and over 95% of ectopic pregnancies involve the oviduct. Ectopic pregnancy remains the major cause of first-trimester maternal death [1]. Tubal surgery is reported to be the greatest risk factor for ectopic pregnancy. Other important risk factors include a previous ectopic pregnancy, *in utero* diethylstilbestrol exposure, pregnancy with an intrauterine device *in situ*, documented tubal pathology, infertility, previous genital tract infection, and a history of multiple sexual partners [2]. Transvaginal ultrasonography has proven to be indispensable in the early diagnosis and localization of ectopic pregnancies [3]. Even in the absence of abnormal symptoms, patients with a history of prior ectopic pregnancies should undergo thorough transvaginal ultrasonography examinations when the confirmed pregnancies are detected.

Here, we report a rare case of a patient with a recurrent ectopic pregnancy in the ipsilateral oviduct after prior laparoscopic partial salpingectomy.

A 28-year-old, gravida 1, para 0, woman using no contraception presented to the emergency department, complaining of severe lower abdominal pain and vaginal bleeding that had lasted 5 hours. Five years earlier, the patient had undergone laparoscopic left partial salpingectomy for an ectopic gestation. The patient's blood pressure was 97/55 mmHg and her pulse was 97 beats/min. Her abdomen was diffusely tender with rebound. A urine pregnancy test result was positive and her hemoglobin was 10.0 g/dL. A transvaginal sonogram demonstrated a 2 × 3 cm heterogeneous left adnexal mass with abundant cul-de-sac and no intrauterine gestational sac (Figure 1).

The patient consented to laparoscopy based on a presumptive diagnosis of ectopic pregnancy. A ruptured pregnancy with active bleeding was visualized in the left proximal tubal remnant (Figure 2). Approximately 1,000 mL of bloody fluid and clots were located within the pelvic cavity. Removal of the gestational products and resection of the proximal left fallopian tube were performed laparoscopically, and hemostasis was assured. The postoperative recovery was uneventful and postoperative human chorionic gonadotropin was 1,630 U/L. Products of conception were confirmed based on histopathologic analysis (Figure 3). One year later, the patient delivered a healthy baby from a subsequent pregnancy.

We report here on a rare case of same-sided recurrent tubal implantation following partial salpingectomy. The Table shows the results of a literature review of previously reported cases from the last 10 years [4–10].

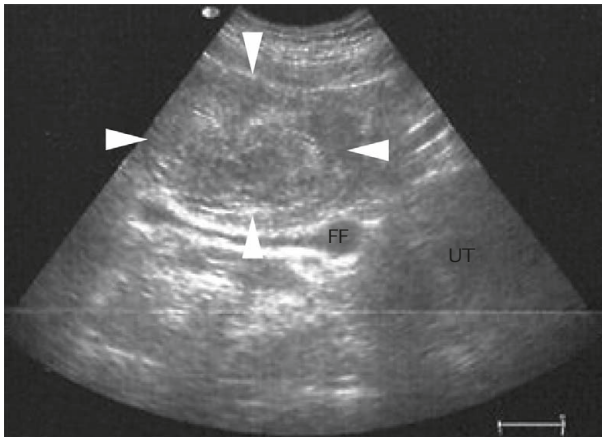

Figure 1. Transvaginal transverse image showing the uterus (UT) and heterogeneous adnexal mass (left) about 3 × 2 cm (arrowheads), with free fluid (FF) in the pelvis.

*Correspondence to: Dr Dah-Ching Ding, Department of Obstetrics and Gynecology, Buddhist Tzu Chi General Hospital, Tzu Chi University, 707, Chung-Yang Road, Section 3, Hualien 970, Taiwan.
E-mail: dah1003@yahoo.com.tw
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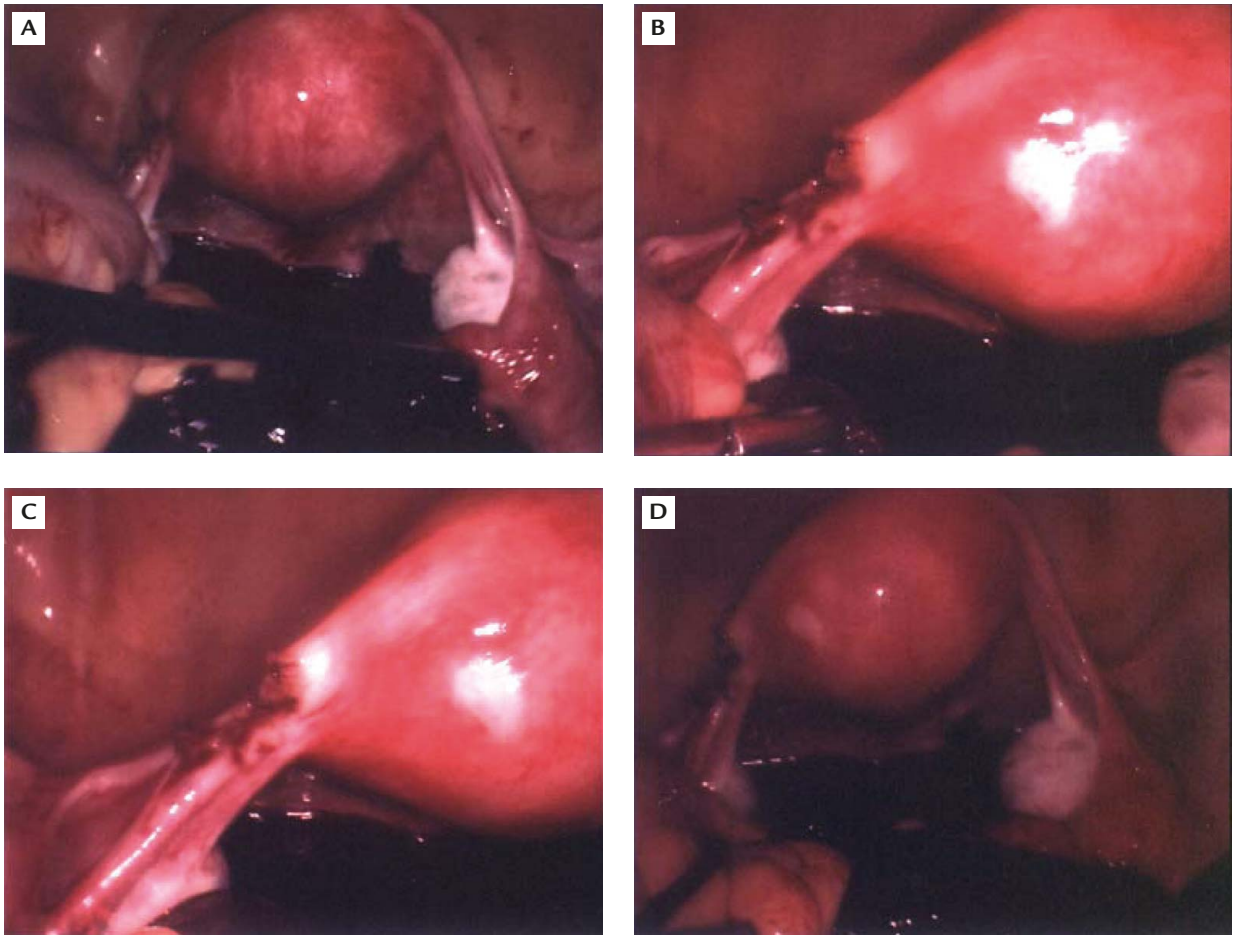

Figure 2. (A–D) A ruptured pregnancy with active bleeding was visualized in the left proximal tubal remnant. Approximately 1,000 mL of bloody fluid and clots were located within the pelvic cavity.

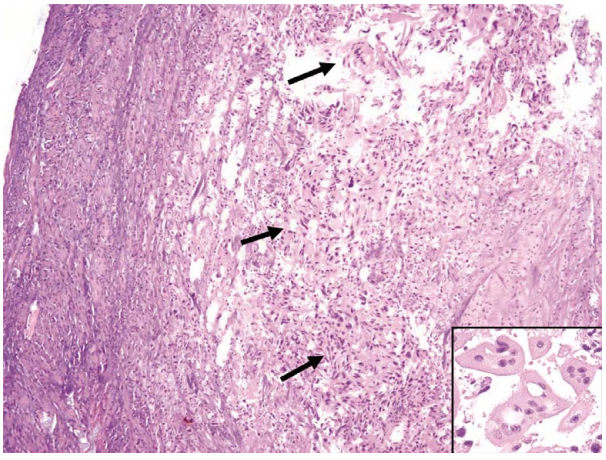

Figure 3. Section of the specimen showing an ectopic pregnancy, composed of areas of trophoblasts aggregated in the wall of the fallopian tube (arrow; hematoxylin and eosin, 100×). Inset exhibiting sloughing syncytiotrophoblasts (hematoxylin and eosin, 400×).

It is possible that this condition could result from either a contralateral fertilization that ascended the left proximal tube prior to uterine implantation or, alternatively, an ovum having transmigrated and passed through a fistula into the tubal stump where successful sperm fertilization and implantation occurred [11].

Subsequent fertility after ectopic pregnancy and rates of repeat ectopic pregnancy are unaffected by the mode of surgery (conservative or radical) [12]. Previous ectopic pregnancies, previous tubal surgery and documented tubal pathology are the strongest risk factors associated with the occurrence of ectopic pregnancies [13]. Early diagnosis of ectopic pregnancy allows timely intervention before the onset of catastrophic events. The management protocol utilizes an initial screening ultrasound examination followed by serum human chorionic gonadotropin monitoring and repeat ultrasonography.

Salpingectomy is preferable to salpingotomy when the contralateral tube is healthy. Salpingectomy is associated with a lower rate of persistent trophoblast and subsequent repeat ectopic pregnancies than salpingotomy (10.3% *vs*. 12.9%), while having a similar intrauterine pregnancy rate [8,14].

Adequate counseling regarding obstetric procedures is needed for women who are interested in maintaining future fertility after recurrent ectopic pregnancies [7].

Table. Literature review of recurrent ipsilateral ectopic pregnancies during the past 10 years

Author	Year	Age (yr)	Parity	Conditions of ectopic pregnancy	Surgery performed
Lema [4]	1995	31	0	Three consecutive ipsilateral tubal pregnancies	Milking ectopic pregnancy (first, second); partial salpingectomy (third)
Adebamowo and Fakolujo [5]	2000	NA	NA	Recurrence in stump of the cornua 3 years after total salpingectomy due to ectopic pregnancy	Total salpingectomy; resection of cornual portion
Vilos [6]	2001	31	1	Two ipsilateral interstitial pregnancies	Endoloop resection; resected and suture ligation via laparoscopy
Mathew et al [7]	2002	25	2	Three consecutive ipsilateral tubal pregnancies in the left tube	Partial salpingectomy (first); resection of tubal stump (second, third)
Rizos et al [8]	2003	33	0	Recurrent ectopic pregnancy in the ipsilateral fallopian tube after endoloop salpingectomy	Endoloop total salpingectomy
Zuzarte et al [9]	2005	32	0	Recurrent ectopic pregnancy following ipsilateral partial salpingectomy	Partial salpingectomy
Tan et al [10]	2007	27	1	Recurrent ipsilateral tubal pregnancy following partial salpingectomy	Partial salpingectomy
Present case	2009	28	0	Recurrent ipsilateral ectopic pregnancy following a partial salpingectomy for ectopic gestation	Partial salpingectomy

NA = not applicable.

In the current case, the patient successfully delivered a baby 1 year after the recurrent ectopic pregnancy.

In conclusion, recurrent ectopic pregnancy following ipsilateral salpingectomy is a rare occurrence. Physicians should be aware that ectopic pregnancy can present atypically and can occur repeatedly. When salpingectomy is warranted, complete salpingectomy should be attempted to eliminate the risk of recurrent ipsilateral ectopic pregnancies and the associated potential for morbidity and death.

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