

Spontaneous pregnancy after bilateral salpingectomy

Shrikant S. Bollapragada, M.R.C.O.G.,^{a,b} Subhayu Bandyopadhyay, D.G.O.,^a
Elisabeth Serle, F.R.C.O.G.,^a and Clive Baird, F.R.C.O.G.^a

^aDepartment of Obstetrics and Gynecology, Ayrshire Central Hospital, Kilwinning Road, Irvine; and ^bDepartment of Obstetrics and Gynecology, Princess Royal Maternity Hospital, Alexandra Parade, Glasgow, United Kingdom

Objective: To report a rare case of spontaneous pregnancy following bilateral salpingectomy.

Design: Case report.

Setting: Maternity unit at a district general hospital in the United Kingdom.

Patient(s): A healthy 38-year-old woman with a history of bilateral salpingectomy.

Intervention(s): Ultrasound scan and serum β hCG used to diagnose the pregnancy and for follow-up.

Main Outcome Measure(s): Recognition and successful management of the pregnancy.

Result(s): The patient was diagnosed with a noncontinuing pregnancy that resolved spontaneously.

Conclusion(s): A MEDLINE search revealed that this is the first reported case of spontaneous pregnancy following bilateral salpingectomy in the English-language literature and possibly only the second in world literature. (Fertil Steril® 2005;83:767–8. ©2005 by American Society for Reproductive Medicine.)

Key Words: Spontaneous, conception, bilateral, salpingectomy, pregnancy, intrauterine, ectopic

When tubal sterilization fails, it is suggested that bilateral salpingectomy is the correct treatment. This must be very effective as there appear to be no reported cases of spontaneous conception following bilateral salpingectomy in the English language literature. We present the first case.

CASE REPORT

A 38-year-old, P3⁺², woman with history of lower abdominal pain of 3 days duration was seen in the Accident and Emergency Department. She had irregular periods and could not recollect her last menstrual period. A urine pregnancy test was positive, and her past history revealed a bilateral total salpingectomy.

The woman had three children. After her first two children, both of whom were spontaneous vaginal deliveries, she underwent laparoscopic tubal sterilization with filshie clips. This was reversed 4 years later at her request. Her next pregnancy was ectopic, for which she had a left total salpingectomy. Her following pregnancy was an intrauterine pregnancy, for which she had a cesarean section. She was seen 3 years later for chronic pelvic pain. Laparoscopy revealed right hydrosalpinx. The right tube was removed and this relieved her symptoms significantly.

The patient had her entire previous medical care within the same hospital trust. Her medical file was accessed and reviewed with particular emphasis on the operation notes of the salpingectomies and the histology reports. Review of the first operation room notes revealed that the patient had a

laparotomy and a left total salpingectomy for a left tubal ectopic pregnancy. Histology of the fallopian tube confirmed an ectopic pregnancy. Review of the patient's operation notes for chronic pain pelvic pain revealed that she had a laparoscopy, which showed a right hydrosalpinx. She subsequently had a laparotomy, when the left fallopian tube was noted to be absent, and the right fallopian tube was thickened and distorted. A right total salpingectomy was performed. Histology confirmed a dilated fallopian tube with no inflammatory changes.

When seen in the Accident and Emergency Department, the patient's vital signs were normal and physical examination revealed slight tenderness in lower abdomen with no guarding. Pelvic examination revealed a slightly tender uterus enlarged to 6 weeks size. There was no adnexal tenderness and no pain on cervical movement. Serum β -human chorionic gonadotropin (hCG) was 3,578 iu/L and transvaginal ultrasound scan showed a collapsed intrauterine gestational sac of 27 mm with a possible yolk sac with no definite contents. A repeat serum β -hCG after 48 hours dropped to 1,414 iu/L. It was assumed that this was a noncontinuing intrauterine pregnancy. The same day, she had significant vaginal bleeding, and it was thought that she had miscarried. Emergency ultrasound facilities were not available to confirm this. At her request, evacuation of uterus was carried out, but only scanty material was obtained. The patient was quite traumatized by the overall experience and wanted to go home as soon as possible. She was therefore discharged home the same day and advised to contact the unit directly if she had any pain or bleeding, so that she could be assessed and serum β -hCG or ultrasound scan repeated as deemed necessary. The histology of the uterine curettings, which was available a week later, showed hypersecretory endometrium with no chorionic villi or fetal parts.

Received January 5, 2004; revised and accepted July 29, 2004.

Reprint requests: Shrikant S. Bollapragada, M.R.C.O.G., Department of Obstetrics and Gynecology, Princess Royal Maternity Hospital, Alexandra Parade, Glasgow G31 2ER, United Kingdom (FAX: +44-141-2115200; E-mail: bsshrikant@yahoo.com).

In view of the histology, the patient was seen again in the clinic. She was clinically well, with no abdominal pain or abnormal vaginal bleeding. She was absolutely certain that she could not go through a similar experience in the future. Although the patient was informed that the likelihood of recurrence was very small, it was considered logical to offer her alternative contraception. She opted for the Mirena Levonorgestrel intrauterine system (Schering Health, Burgess Hill, West Sussex, UK).

DISCUSSION

Although tubal sterilization is very effective in preventing pregnancy, there is a cumulative failure rate of 18.5 per 1,000 for all methods combined (1). For individuals in whom sterilization fails, it has been suggested that bilateral salpingectomy is the correct treatment (2). This has been the traditional practice and indeed must be very effective because, based on a MEDLINE search in the English-language literature, there appears to be no reported cases of spontaneous pregnancy, intrauterine or ectopic, following bilateral salpingectomy. We believe this to be the first reported case.

In the preceding case, the history, examination findings, and ultrasound scan were highly suggestive of an intrauterine pregnancy. The presence of chorionic villi in uterine curettage sample is conventionally held as definite evidence of an intrauterine pregnancy. In this case, histology did not reveal chorionic villi, leaving the ongoing doubt as to whether this was an intrauterine or ectopic pregnancy. It may be that the patient had completely miscarried before she had the evacuation of uterus. Moreover, it is known that in complete miscarriages, the uterine curettings may sometimes

contain only endometrial fragments and histologic examination may not reveal chorionic villi (3). Similarly, chorionic villi have been occasionally found in uterine curettings of patients proven to have ectopic pregnancy (4). In such cases, it has been suggested that other signs of intrauterine implantation, such as an intermediate trophoblast, hyalinized vessels, and a fibrinoid matrix should be looked for. An intermediate trophoblast, however, is difficult to identify using conventional staining (4,5).

The possible explanation of a pregnancy in this patient is only from a patent cornual end. Fertilization may have occurred either inside the uterus or inside peritoneal cavity. One of the ways of confirming a patent cornual end would be by hysterosalpingography. We did not feel this was justified. Moreover, a fistulous tract may be so small that it may not be demonstrable on a hysterosalpingography (5).

REFERENCES

1. Peterson HB, Xia Z, Hughes JM, Wilcox LS, Taylor LR, Trussell J (U.S. Collaborative Review of Sterilization Working Group). The risk of pregnancy after tubal sterilization: findings from the U.S. collaborative review of sterilization. *Am J Obstet Gynecol* 1996;174:1161–70.
2. Chakravarti S, Shardlow J. Tubal pregnancy after sterilization. *Br J Obstet Gynaecol* 1975;82(1):58–60.
3. O'Connor DM, Kurman RJ. Intermediate trophoblast in uterine curettings in the diagnosis of ectopic pregnancy. *Obstet Gynecol* 1988;72(4):665–70.
4. Gruber K, Gelven PL, Austin RM. Chorionic villi or trophoblastic tissue in uterine samples of four women with ectopic pregnancies. *Int J Gynecol Pathol* 1997;16(1):28–32.
5. Fisch B, Peled Y, Kaplan B, Zehavi S, Neri A. Abdominal pregnancy following in vitro fertilization in a patient with previous bilateral salpingectomy. *Obstet Gynecol* 1996;88(4):642–3.