

# Tubal ectopic pregnancy following bilateral salpingectomies

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## ABSTRACT

**The reported incidence of ectopic pregnancy after bilateral salpingectomies is very low. We present a 31-year-old woman, who had an ectopic pregnancy after bilateral salpingectomies for previous ectopic pregnancies. A high index of suspicion for pregnancy is prudent to avoid missing an ectopic pregnancy despite a history of bilateral salpingectomies. Not all cases of ectopic pregnancies present with the classical triad of abdominal pain, vaginal bleeding and a period of amenorrhoea. A urine pregnancy test is a simple and inexpensive test, which should always be done to rule out pregnancy in a woman of reproductive age presenting with a period of amenorrhoea and abdominal symptoms.**

**Keywords: bilateral salpingectomies, ectopic pregnancy, pregnancy, salpingectomy**

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## INTRODUCTION

The reported incidence of ectopic pregnancy after bilateral salpingectomies is very low. A high index of suspicion is prudent in order to avoid missing the diagnosis of an ectopic pregnancy despite a history of bilateral salpingectomies.

## CASE REPORT

A 31-year-old woman with one previous vaginal birth, one caesarean section and two previous ectopic pregnancies, presented with amenorrhoea at seven weeks. She gave a history of bilateral salpingectomies for her ectopic pregnancies. Her latest ectopic pregnancy occurred in 2002 and was managed by our institution. The operative findings then confirmed a previous left salpingectomy, and a right tubal ectopic pregnancy for which another salpingectomy was performed. Her main complaint at this presentation was a three-day history of colicky epigastric and suprapubic pain that was not associated with vaginal bleeding. She denied the possibility of pregnancy in view of her past surgical history. Her vital parameters were stable at presentation. Abdominal examination revealed



**Fig. 1** Intraoperative photograph shows bilateral salpingectomies, left corpus luteal cyst (A) and right ectopic pregnancy in remnant fimbriae stump (B).

tenderness over the suprapubic region. There was no rebound tenderness or guarding. Pelvic examination was essentially normal; no masses were palpable but cervical excitation was positive.

Despite the history of bilateral salpingectomies, a urine pregnancy test was performed. The result was positive. Subsequent pelvic ultrasonography revealed a complex mass measuring 6.1 cm × 4.2 cm × 3.3 cm in the right adnexa. It contained a 1.6 cm × 1.4 cm echogenic ring consistent with an ectopic pregnancy. There was no foetal pole seen within the complex mass and the uterine cavity was empty. Echogenic fluid was also noted in the pouch of Douglas. The serum beta-human chorionic gonadotrophin ( $\beta$ -hCG) measured 7,257.0 IU/L and the haemoglobin level was 11.9 g/dL.

A diagnostic laparoscopy was subsequently undertaken and an unruptured right adnexal mass (measuring 6 cm) was found adjacent to the right ovary. A corpus luteal cyst was seen in the left ovary. There were no other identifiable tubal structures at either cornual ends of the uterus (Fig. 1). The right adnexal mass was excised and the histological examination confirmed the presence of chorionic villi in a remnant fallopian tube. The patient recovered uneventfully after the surgery and was discharged the following day.

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## DISCUSSION

This case illustrates two important points, namely: that pregnancy is possible despite bilateral salpingectomies; and a high index of suspicion must always be adopted in the assessment of a woman in a reproductive age group presenting with a period of amenorrhoea. The paramount question of "how did a pregnancy occur" can only be explained by the presence of a patent uterine cornual end. Through this patent cornual end, a communication exists between the endometrial and peritoneal cavity, allowing the migration of spermatozoa and consequent pregnancy. As the corpus luteum was on the contralateral side of the ectopic pregnancy, the possibility of transperitoneal migration of the embryo into the remnant right fallopian tube can be assumed. Insunza et al reported that tubal pregnancy contralateral to the ovulating ovary was found in 28% of cases and concluded that tubal pregnancy is associated with a significant increase in the occurrence of transmigration of the egg.<sup>(1)</sup>

There have only been two similar case reports of pregnancy occurring after bilateral salpingectomies. Bollapragada reported a case of a nonviable intrauterine pregnancy diagnosed by  $\beta$ -hCG levels and transvaginal ultrasonography.<sup>(2)</sup> Unfortunately, the patient developed vaginal bleeding, and subsequent endometrial curettage did not reveal the presence of chorionic villi. Sangal and Kotwal reported on a third ectopic pregnancy associated with a previous right partial salpingectomy and left total salpingectomy/cornual resection.<sup>(3)</sup> The ectopic implantation was in the right fimbrial stump.

In this preceding case, a review of the operation prints from the last ectopic pregnancy revealed a small right fimbriae stump left attached to the ovary. This case confirms the possibility of a pregnancy occurring even in a remnant fimbrial end. Partial salpingectomy or segmental isthmic salpingectomy is still practised

in certain cases of ectopic pregnancy. The primary aim is to preserve the option of future tubal reanastomosis. As tubal ectopic pregnancy is still possible in these cases, the patient should ideally be forewarned. When total salpingectomy is performed, it is prudent to occlude the cornual ends with coagulation diathermy and remove all the fimbriae structure from its attachment to the ovary. This should then reduce the risk of recurrence of another ectopic pregnancy.

A high index of suspicion for pregnancy despite a history of bilateral salpingectomies is thus prudent in order to avoid missing an ectopic pregnancy. This is especially so in a woman of reproductive age presenting with a period of amenorrhoea. The classic triad of amenorrhoea, abdominal pain and vaginal bleeding is only present in 50% of women with ectopic pregnancy.<sup>(4)</sup> This case clearly exemplifies that ectopic pregnancy can occur, despite the absence of vaginal bleeding, sometimes mimicking urinary tract or gastrointestinal disease.<sup>(5)</sup> A urine pregnancy test was the key to clinch the diagnosis in this case. This simple and inexpensive test should always be done to exclude pregnancy in a woman of reproductive age presenting with a period of amenorrhoea and abdominal symptoms.

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