Ectopic Pregnancy after Tubal Sterilization

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Tubal sterilization is an increasingly common method of contraception. Although pregnancy after sterilization is uncommon, it can occur and may be ectopic. It is widely believed that any pregnancies after tubal sterilization will generally occur during the first year or two year after the procedure. Surprisingly, failures are not limited to the first year or two, but continued to appear at each year during follow-up. Younger women have higher risk for failure because of their greater fecundability.
In this paper, we report a case of ectopic pregnancy in a patient who had undergone bilateral tubal sterilization 8 years ago for contraception.

Case Report

A 32 year-old woman, gravida 4, para 2 presented with complaints of delayed menstrual period. She had previously undergone laparoscopic tubal sterilization by bipolar electrocoagulation. She had no vaginal bleeding and abdominal or pelvic pain. On presentation at our institution, physical examination identified a normal pelvic examination. Vital signs were stable. Pelvic sonography showed 10 mm endometrial thickness, normal ovaries and no adnexial mass and fluid in the cul-de-sac. The only positive finding was high ß-hCG level (700 lU/mi). She underwent dilatation and evacuation for a presumed incomplete abortion, without complications. Histological examination revealed chronic endometritis with no villi. The patient was followed with serial quantitative ß-hCG determination. The patient was admitted for diagnostic laparoscopy because of persistent high 13-hCG levels. The laparoscopy identified bilateral tubal damage possibly due to bipolar electrocoagulation (Figure 1).

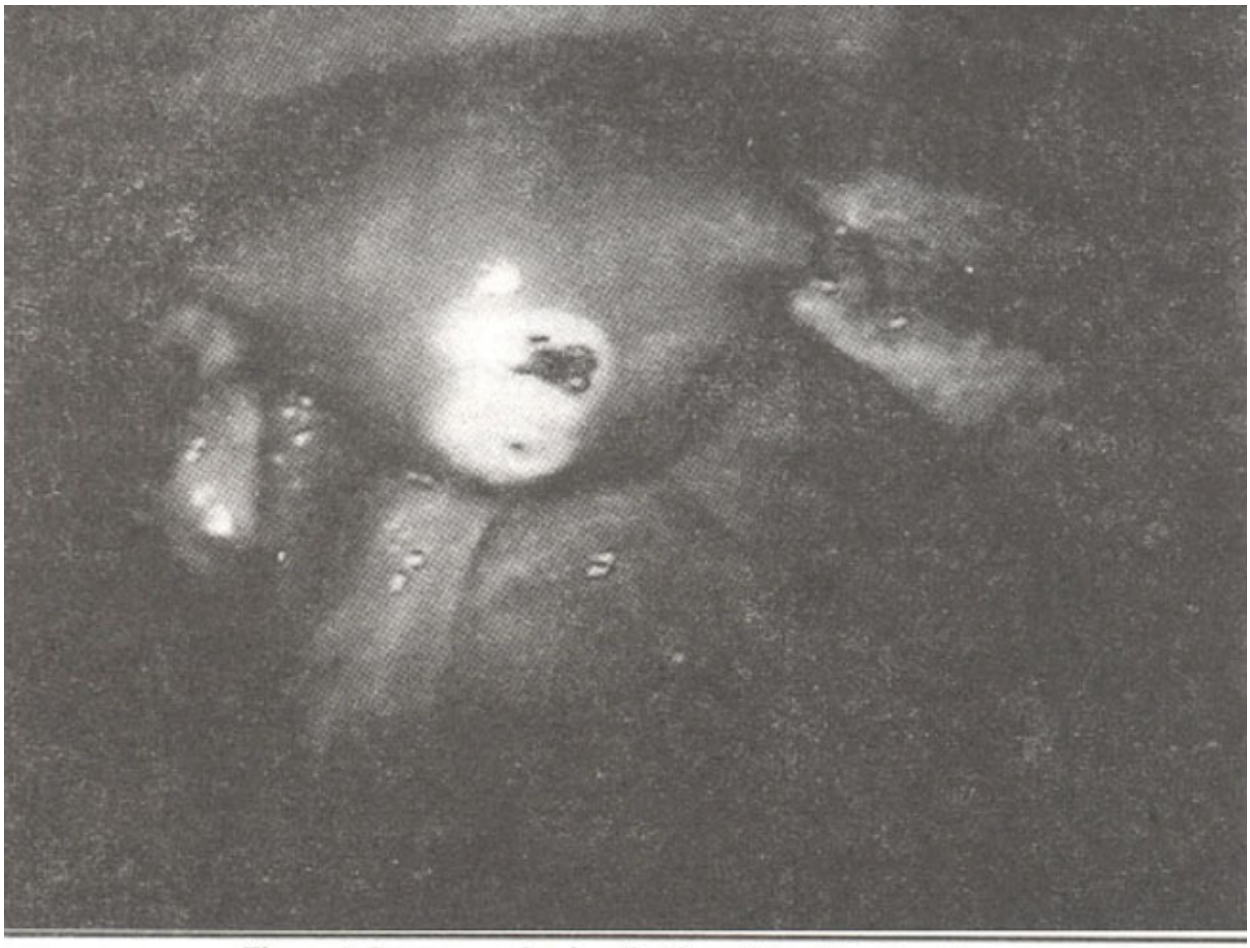

Figure 1. Laparoscopic visualization of the fallopian tubes.

The other parts of tubes were normal looking and there was no evidence of ectopic pregnancy. A prophylactic bilateral salpingectomy was performed. The post-operative course was uneventful and the patient was discharged on the first post-operative day. Histology revealed that the right salpingectomy specimen consisted of a displaced lumen and a tubular pregnancy which

contained several necrotic chorionic villi (Figure 2).

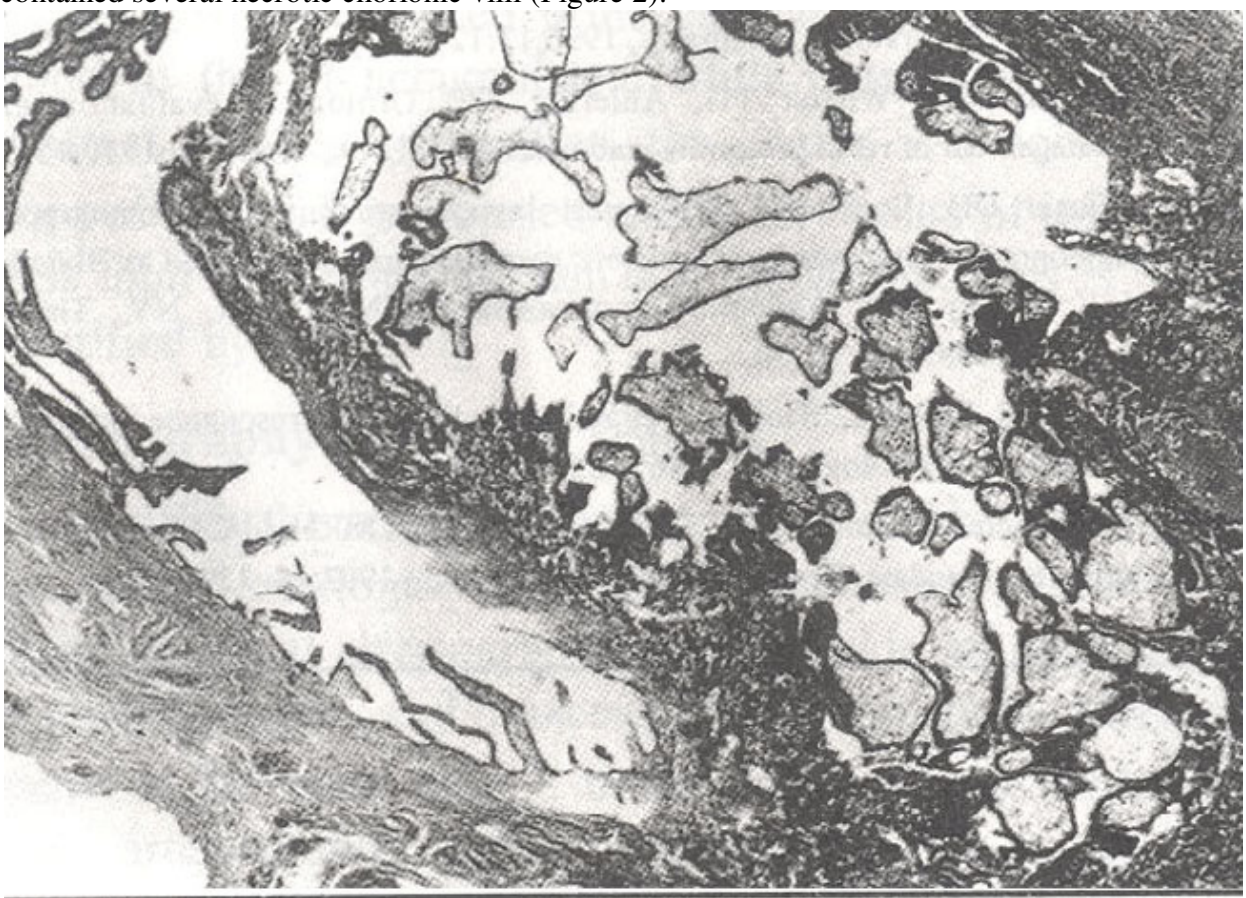

Figure 2. Histologic view of an area of the right fallopian tubes. Tubal lumen is present on the left and chorionic villi is present on the right side.

Discussion

When tubal sterilization fails, ectopic pregnancy is likely. The literature reports a 5-90% incidence of ectopic pregnancy after failed tubal sterilization[1]. Tubal ligation with resultant tubal damage carries a common odds ratio of 9.3 for ectopic pregnancy when compared with pregnant controls[2]. Although millions of women have undergone tubal sterilization and the procedure is widely regarded as a highly effective method of contraception, data regarding effectiveness are largely limited to case series of individual surgeons or institutions. In a large multicenter study the risk of ectopic pregnancy in women who had undergone the common types of tubal sterilization was found 7.3 per 1000 procedures. In the same study the annual rate of ectopic pregnancy for all methods combined in the 4th through 10th years after sterilization was no lower than in the first 3 years[3].

The risk of ectopic pregnancy depends on the type of tubal sterilization. Hulka reported the risk of ectopic pregnancy with sterilization failure was 59% with bipolar electrosurgery[4]. The risk of ectopic pregnancy may be higher after electrocoagulation procedures than after other forms of tubal sterilization, possibly resulting from tubal recanalization or uteroperitoneal fistula formation. Shah et al reported 13 cases of ectopic pregnancies following tubal ligation during a six-year period. They concluded that ectopic pregnancy must not be disregarded in women who

have undergone tubal ligation, especially if two or more years have elapsed since the sterilization[5]. Tubal recanalization or uteroperitoneal fistula, luteal pregnancy, or misapplication of surgery may be the causes of ectopic pregnancy in this case.
In fact, all methods of tubal sterilization are highly effective in reducing the risk of pregnancy, but they require proper surgical techniques to reduce failure rates. Also the sterilization procedure should be performed during follicular phase of the cycle. In conclusion, a history of tubal sterilization does not rule out the possibility of ectopic pregnancy even many years after the procedure and prophylactic bilateral salpingectomy may be considered in such cases that there is no obvious tubal lesion.

References

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