

## Unusual Case of Tubal Stump Pregnancy after Salpingectomy

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### Abstract

Ectopic pregnancy implantation on the tubal stump after salpingectomy is a rare location for extrauterine pregnancy, whose pathogenesis is still unknown. We report in this work the case of a 37 years old patient who had been operated 10 years ago for a right ectopic pregnancy and who was presented to the emergency department for a ruptured ectopic pregnancy and in the surgical exploration showed a ruptured pregnancy on a salpingectomy stump.

**Keywords:** Ectopic pregnancy, laparotomy, salpingectomy, stump pregnancy.

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### INTRODUCTION

Ectopic pregnancy occurs in around 1-2% of all pregnancies. The incidence of recurrent ectopic pregnancy is approximately 15 % after one ectopic pregnancy and rises to 30% after two ectopic pregnancies [6].

Ectopic pregnancy (EP) implantation on the tubal stump after salpingectomy is a rare location for extrauterine pregnancy. The diagnostic criteria are not well established; however, it usually refers to implantation in the isthmic portion of the remnant tube after previous salpingectomy [1]. The exact pathophysiology is still not understood.

This type of ectopic pregnancy is associated with increased mortality rates due to delay in diagnosis and treatment. We present a rare case of ipsilateral ectopic pregnancy occurring in the stump of a previous salpingectomy site in a 37-year-old woman, who presented to the emergency department of our hospital with lower abdominal pain.

### CASE REPORT

The patient was 37 years old with a history of ectopic pregnancy treated by right salpingectomy 10 years ago, G4P2, 2 deliveries by caesarean section.

She was admitted to the emergency room for diffuse pelvic pain associated with dark metrorrhagia with an amenorrhea of 10 weeks.

On clinical examination, blood pressure was 110/60 mmHg, tachycardia 105 beats per minute, mucocutaneous pallor, and right lateralized pelvic tenderness. Urinary and blood beta-HCG were positive and the abdominal ultrasound revealed an intra-abdominal effusion of moderate size with a 4x3 cm right latero-uterine mass in association with ectopic pregnancy.

Surgical exploration by laparotomy revealed a large effusion with a ruptured cornual pregnancy aborted by the old salpingectomy stump (Fig 1). The surgical treatment consisted of aspiration of the hemoperitoneum and the trophoblastic product; hemostasis was obtained by suturing the salpingectomy stump.



**Fig 1: A ruptured cornual pregnancy aborted by the old salpingectomy stump**

## DISCUSSION

Ectopic pregnancy has become a major health problem in reproductive age group women owing to increased prevalence of pelvic surgery, pelvic inflammatory disease and assisted reproductive techniques. It can have wide spectrum of clinical presentation and the classic triad of amenorrhea, abdominal pain and vaginal bleeding is present in only up to 50% of cases. It has been described as a “great masquerader”. The variation in clinical signs and symptoms suggests that different population of people with EP may present differently, especially with recurrent EP. It remains an important cause of morbidity and mortality in women of childbearing age [6].

Recurrent ectopic implantation on the residual tube after salpingectomy is unusual, and the sperm must reach the ovum through the stump (2). Various theories have been postulated for the mechanism of recurrent ipsilateral ectopic pregnancy. Reported hypotheses include transperitoneal migration of spermatozoa or embryo through the patent tube to the side of the damaged tube. Another hypothesis is that the oocyte from the normal ovary may be fertilized normally in the patent tube and then later implant in the stump via intrauterine migration. It is also possible that despite the surgical excision of the tube following salpingectomy there is some degree of patency in the remaining interstitial part. Recanalization of isthmic stump allows for fertilization and implantation within this portion of the remnant tube. In our case it is however difficult to prove which mechanism was responsible as there was no corpus luteum evident on ultrasound or laparotomy [7].

Although rare, the possibility of ectopic pregnancy even many years after salpingectomy, unilateral or bilateral, should be considered. In the laparotomy surgery the tube may have had inadequate or superficial fulguration and been resected on the proximal end leaving a short stump. If the stump was

less than 2 cm, endosalpingoblastosis might develop and increase the chances of subsequent fistula formation [3].

The possibility of a proximal tubal stump pregnancy should be borne in mind when there is no other obvious site of ectopic pregnancy, especially if a mass is seen on the side of the previous salpingectomy. In our case, this possibility was considered because on ultrasound the latero-uterine mass was on the same side as the old salpingectomy .

The risk factors for pregnancy on salpingectomy stump according to Talbot et al. (2011) are: assisted reproduction treatment, known damage to the Fallopian tubes, previous pelvic inflammatory disease, previous ectopic pregnancy (as in the case of ourpatient), periadnexal adhesions and endometriosis [4].

In our case the non-visualisation of an ectopic pregnancy at laparotomy, the bleeding tubal stump and the presence of trophoblastic material in the abdomen suggest the possibility of an aborted right tubal stump pregnancy.

Although total salpingectomy does not necessarily eradicate all ipsilateral stump ectopics or interstitial ectopics, it certainly decreases an ipsilateral tubal recurrence in proximal or distal stump. Given the rarity of occurrence and uncertain nature of the mechanism, selecting a method for prevention of stump ectopic is difficult. However, a few options may be suggested to decrease the probability of recurrence. When performing the salpingectomy, care should be taken not to leave a long stump. Generally, it is common practice to leave a small tubal stump to minimise the risk of bleeding associated with the isthmic portion of the fallopian tube. However, given the risk of recurrence in those with a history of ectopic pregnancy, most of the authors suggested that this remnant portion should be minimised. Adequate

fulguration of the residual stump is advocated to prevent endosalpingoblastosis and potential fistula formation in the stump through which sperm can reach the ovum [5, 8].

## CONCLUSION

Recurrence of ectopic pregnancy in the remnant tubal stump can have significant clinical consequences. Diagnosis of tubal stump ectopic is difficult and hence there should be high index of suspicion. Even in the near complete resection of the tube in total salpingectomy/ adnexectomy recurrence has been noted. Hence, partial salpingectomy is not recommended. It is not known if the recurrence of ectopic pregnancy in the remnant tubal stump can be prevented. However, all possible measure should be taken to avoid this situation.

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