Case Report

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 3, July – September 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12324.4

Recurrence Ectopic Pregnancy in the Post Salpingectomy Stump: A Rare Case and Literature review

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How to cite this article:

Aditya Sarkar, Shweta Patel, K Pushpalatha. Recurrence Ectopic Pregnancy in the Post Salpingectomy Stump: A rare Case and Literature review. Indian J Obstet Gynecol. 2024;12(3):131-134.

Abstract

Ectopic pregnancies pose a formidable threat to the life and future fertility of women of reproductive age group.The risk of recurrence of such an event further increases in women who have an undergone a partial salpingectomy previously. We present in this paper, a case of a spontaneous recurrent ectopic pregnancy (REP) developed in a salpingectomy stump highlights the importance of performing a complete salpingectomy, as leaving a stump can pose a significant risk for REP.

Keywords: Ectopic Pregnancy; Salpingectomy; Recurrent; Stump; Post Salpingectomy.

INTRODUCTION

Ectopic pregnancies account for 1-2% of all pregnancies.[1] The risk of recurrence in women with a previous ectopic pregnancy is 10-27%.[2] Risk factors for recurrent ectopic pregnancy include tubal damage, evidence of infectious pelvic pathology, prior pelvic surgery, salpingostomy, salpingitis, infertility, lower annual income and absence of contraceptive use.[2] Ectopic pregnancy poses a serious threat to the child-bearing woman, accounting for the highest fraction of all pregnancy related first trimester deaths. This concern is amplified in those with a history of a previous ectopic pregnancy, as a history of salpingectomy might delude the clinician and contribute to a delay in diagnosis. Thus, a high index of suspicion is crucial and often life-saving in such patients. We here present one such case of a spontaneous recurrent ectopic pregnancy occurring in an ectopic salpingectomy stump.

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Received on: 07.09.2024

Accepted on: 05.10.2024

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CASE REPORT

21-year-old woman with two previous first trimester pregnancy losses, including one ruptured right sided ectopic pregnancy for which she had undergone laparotomy and right salpingectomy 3 years ago, presented to the emergency with complaints of amenorrhea for 2 months, lower abdominal pain and vomiting and fainting episode. Abdominal pain was of sudden onset, continuous, not radiating, and not relieved by oral analgesic. The pain was associated with nausea and vomiting and fainting episode. Her previous menstrual cycles were regular and she was not using any contraception. On examination, she was severe pale

and showed blood pressure was 90/52 mmHg, with a pulse rate of 128 beats per minute. The abdominal examination showed a transverse scar of previous laparotomy. Abdomen was generalized distended with tenderness and muscle guarding were present on deep palpation. On per speculum examination, cervix was normal with minimal bleeding through cervical os. Her vaginal examination revealed normal size uterus, cervical motion and right sided forniceal tenderness with fullness in the Pouch of Douglas. Her urinary pregnancy test was positive. Bedside transabdominal ultrasonography revealed a2.9x2.1x1.9cm in homogeneousmassadjacent to the right ovary with empty uterine cavity. There was moderate free fluid was noted in the pelvic cavity. Findings were confirmed with transvaginal sonography.

With written, informed consent decision of emergency laparotomy was taken in a view of shock with severe anaemia. Laparotomy revealed anormal uterus, bilateral ovaries and left fallopian tube. The right siderevealed a salpingectomy stump measuring approximately 2.5 cm in length which showed arupturedadnexalmass of 2x2 cm within it. Bleeding was seen through the raw surface of salpingectomy stump (Fig. 1). Nearly 1500cc of blood mixed with clots filled the abdomen. Theproximal end of right fallopian tube remnant was excisedfully. Post-operatively, she needed three units blood transfusion with an otherwise uneventful recovery. Histo-pathological examination confirmed right sided ruptured fallopian tube containing tissue consistent with products of conception.

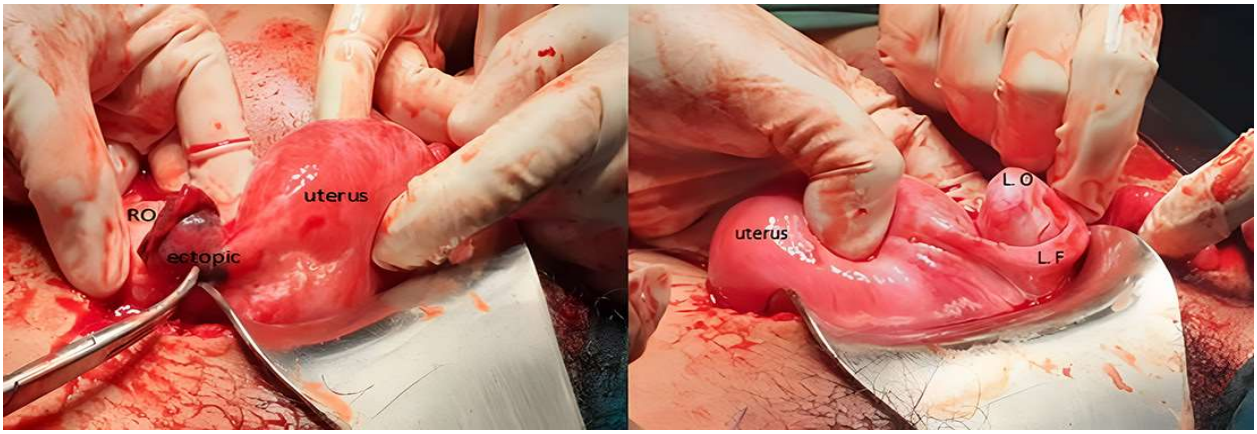

Fig 1. Intraoperative image showing Ectopic pregnancy (E) in the remnant of right fallopian tube with intact left fallopian tube (LF). Right ovary (RO) and Left ovary (LO) were normal

Table 1: Description of recurrent ectopic pregnancy in literature with identified risk factors and management options used

S.no.	Author	Year	Case Description	Risk Factor Identified	Treated With
1	Tabitha Boykin[8]	2017	Left tubal stump ectopic pregnancy following laparoscopic partial salpingectomy	Previous partial salpingectomy	Left laparoscopic salpingectomy
2	Lakhotia S, Yussof SM, AggarwalL[9]	2016	Right tubal stump ectopic pregnancy following total salpingectomy	Previous total (?) salpingectomy	Laparoscopic excision of ectopic
3	Bahareh Samiei-Sarir, Christopher Diehm[10]	2013	Right ruptured ectopic pregnancy following right salpingectomy	Previous salpingectomy	Diathermy of ectopic and left tubal ligation
4	Agarwal[11]	2012	Left tubal stump ectopic pregnancy following laparoscopic partial salpingectomy	Previous salpingectomy	Partial salpingectomy
5	Malhotra[12]	2011	Right ruptured ectopic pregnancy following right partial salpingectomy	Previous right partial salpingectomy	Partial salpingectomy
6	Mohiyiddeen[13]	2010	Right sided ectopic pregnancy following 2 previous ipsilateralsalpingectomies	Previous 2 partial salpingectomy for right sided ectopic	Excised with needle diathermy
7	Anwar[14]	2010	Right ectopic pregnancy following right partial salpingectomy	Previous right partial salpingectomy	Partial salpingectomy

DISCUSSION

Ectopic pregnancy in the proximal segment of the salpingectomised tube recurs more commonly compared to the distal segment. The mechanism of recurrent ectopic pregnancy in the proximal segment has been explained by a few hypotheses includingpassage of spermatozoa through the patent tube into the Pouch of Douglas to fertilise the ovum on the side of the damaged tube.[1] An oocyte from the left ovary may be fertilised normally in the patent tube and then later implant in the stump via intrauterine migration.[3] Another hypothesis claims that some degree of patency is maintained within the tube despite salpingectomy, or that recanalization takes place in such a tube, following which usual events of fertilization take place.[4] Despite these hypotheses, the exact mechanism of implantation in REP remains unknown. That being said, irrespective of the mechanism, the severity of the condition, its outcome and treatment options remain unchanged. Table 1 depicted similar cases of recurrent ectopic pregnancy over the past decade.[5-11] The review of literature highlights several cases of recurrent ectopic pregnancies in the salpingectomy stump, an uncommon but significant complication. Previous salpingectomy, whether partial or total, emerged as the primary risk factor across all cases. Management involved surgical interventions, typically laparoscopic excision or partial salpingectomy, and in some cases, diathermy of the ectopic mass. Notably, patients with previous partial salpingectomy appeared to have a higher risk of recurrence. Another hurdle in managing REP is that most risk factors responsible for its causation such as previous surgery, pelvic inflammatory diseases (PID) or sexually transmitted diseases (STD) are non-modifiable. Partial salpingectomy for management of ectopic pregnancy runs as a common risk factor through these cases, which is known to significantly increase the risk of recurrence. Plausibility of risk factors such as cigarette smoking or history of intra uterine contraceptive devices insertion is yet to be confirmed. On the other hand, risk factors such as history of PID seem to be vague and difficult to implicate in causation. Possible measures to diminish such recurrences include performing a total ipsilateral salpingectomy, which may not always be performed by the surgeon for apprehension of inadequate haemostasis and the use of barrier contraceptives to prevent STIs.

Ectopic pregnancy stays a difficult conclusion in an emergency division setting. Accordingly, biochemical evaluation (Beta hCG) and sonographic assessment of the pelvis in a patient with suspected recurrent ectopic pregnancy can confirm the diagnosis and prove life-saving. Thus, it is crucial to reiterate that salpingectomy doesn't exclude similar events in the future as surgical repair may leave the remanent tube and that a high degree of suspicion remains imperative in such cases.

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