

Ectopic pregnancy in tubal stump after ipsilateral salpingo-oophorectomy: An unusual and rare case report

Ranjan Agrawal*, Parbodh Kumar

Department of Pathology, Rohilkhand Medical College & Hospital, Bareilly (UP); India

Abstract:

A 35-years-old female presented with severe abdominal pain, vomiting and spotting per vaginum since one day following 2 months amenorrhoea. Ultrasound abdomen revealed right sided tubal pregnancy. She gave a history of right sided salpingo-oophorectomy 15 years back. The case is unusual due to the ectopic occurring on the same side of salpingectomy and also since the ectopic occurred after such a long interval.

Keywords: Ipsilateral, Ectopic pregnancy, Tubal stump, Salpingo-oophorectomy

1. Introduction

Ectopic pregnancy occurs in around 1-2% of all pregnancies. It is still the most common cause of first trimester maternal death, accounting for 73% of early pregnancy mortality. The incidence of ectopic pregnancy has increased markedly over the last three decades, probably due to multiple factors. Ipsilateral ectopic pregnancy following salpingectomy is rare, with less than a dozen cases reported in the English literature in the last 10 years (1). To the best of our knowledge, this is the first case where ipsilateral ectopic pregnancy occurred after salpingo-oophorectomy. The present case is further unusual because of ectopic pregnancy occurring after a long duration of 15 years after salpingo-oophorectomy.

2. Case Report:

A 35 years old lady G8 P4 L4 A3 was admitted in the emergency following complaints of amenorrhoea of 2 months, severe pain in abdomen associated with 4-5 episodes of vomiting, giddiness and spotting per-vaginun for one day. Her urinary pregnancy test was positive.

Her obstetrics history was of last child birth 3 years back and last missed abortion 1 year back at 2½ months period of gestation. She had a past history of exploratory laprotomy 15 years back for right sided?

Dermoid cyst. No records were available with her. There was no history of contraception. On examination the patient had a low general condition with marked pallor, B.P 88/50 mm Hg, pulse 118/min, respiratory rate of 38/min. she was put on dopamine drip. There was no oedema, temperature was 100.60C. Other systemic examination was within normal limits.

On inspection the abdomen was distended, with umbilicus in normal shape and position with no visible veins. Per-speculum examination showed mild bleeding through OS. Cervix and vagina were healthy. The exact uterine size could not be assessed. All the fornices were full. Culdocentesis was positive. Exploratory laparotomy revealed around 2 litres blood present in the peritoneal cavity. Right Ovary and fallopian tube were absent. There was a bulbous swelling on right fallopian tube stump which was bleeding. Uterus was bulky around 8 week's size. Left ovary and fallopian tube was normal. The interstitial part of right fallopian tube was excised and homeostasis achieved by interrupted sutures. Left sided tubectomy was done by modified Pomeroy's method. She was transfused 2 units each of packed RBCs and Fresh frozen plasma. Histopathology of the specimen showed patent lumen and normal wall of the fallopian tube. Attached to the wall were numerous chorionic villi alongwith trophoblastic cells (Figure 1 and 2). The patient was discharged in a good healthy condition. Regular follow-up was normal.

***Corresponding author:** Professor Ranjan Agrawal, Department of Pathology, Rohilkhand Medical College & Hospital, Bareilly (UP); India. Email: drranjan68@gmail.com

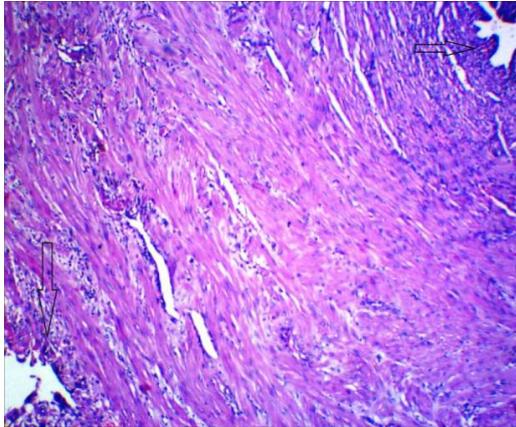


Figure 1. Photomicrograph showing lumen of fallopian tube (→) and products of conception attached to the wall of the tube (↓) [H&E X 40].

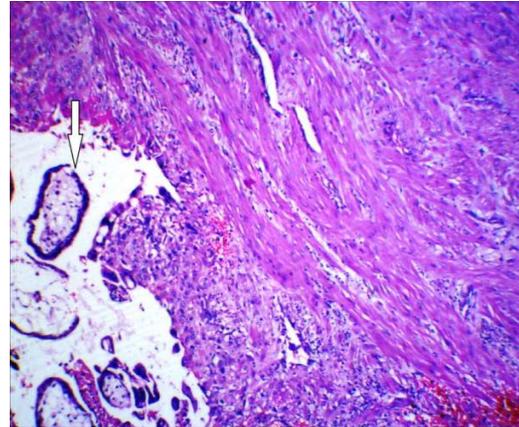


Figure 2. Photomicrograph showing wall of fallopian tube with attached chorionic villi (↓) [H&E X 40].

3. Discussion

When tubal sterilisation fails, ectopic pregnancy is likely. A 5-90% incidence of ectopic pregnancy has been reported in the literature after failed tubal sterilisation (1). Although millions of women have undergone tubal sterilisation and the procedure is widely regarded as a highly effective method of contraception, data regarding effectiveness are limited. The risk of ectopic pregnancy in women who had undergone tubal sterilisation was found to be 7.3 per 1000 procedures. The risk depends on the type of tubal sterilisation especially after electrocoagulation as compared to other forms of sterilisation, possibly resulting from tubal recanalisation or uteroperitoneal fistula formation. Also the sterilisation procedure should be performed during the follicular phase of the cycle.

Risk factors for ectopic pregnancy include previous ectopic pregnancy, tubal corrective surgery, tubal sterilisation, use of intrauterine devices, documented tubal pathology, infertility, assisted reproductive technology, smoking, previous genital infections, prior abortions, multiple sexual partners, prior caesarean delivery etc. Ectopic pregnancies after tubal sterilisation are known to occur during the first or second year after the procedure.

Wherever there is tubal rupture in the first few weeks i. e. 6-8 weeks then the pregnancy is situated in the isthmic portion of the tube. This is due to the poor ability of this portion of the tube to distend as well as the increased vascularity of the area due to anastomosis of the uterine and ovarian vessels. When the fertilised ovum is implanted in the ampullary

portion of the tube, rupture usually occurs at 8-12 weeks. When the fertilized ovum is implanted well within the interstitial or cornual portion, rupture usually occurs late i. e. 12-16 weeks. Rupture is usually spontaneous, but it may follow coitus or bimanual examination.

Approximately 92% of ectopic pregnancies occur in the ampullary region of the fallopian tubes, 2.5% as interstitial/cornual ectopic pregnancies, while less-common forms include cervical, ovary, and peritoneal. Ectopic pregnancy occurring in the isthmic portion of the remnant tube after salpingectomy is even less common especially following spontaneous conception. The exact incidence of ectopic pregnancy in the remnant stump following salpingectomy is not currently known (2).

The mechanism by which ectopic pregnancy occurs in the remnant tube after salpingectomy is not clear. Reported hypotheses include spermatozoa pass through the patent tube, into the Pouch of Douglas, and travel to fertilise the ovum on the side of the damaged tube. An oocyte from the other ovary may be fertilised normally in the patent tube to be later implanted in the stump via intrauterine migration.

Another possibility suggested is that, despite the ligation of the tube following salpingectomy, some degree of patency or recanalisation still remains which provides a communication between the endometrial and peritoneal cavities allowing for fertilisation and implantation within the isthmic portion of the remnant tube (3). With no possibility of further transportation into the uterine cavity, rupture

of the stump must have occurred. The other possibility is occurrence of injury during the ligation of the tube in the previous ectopic pregnancy and a fistula being formed as a result of the stitch cutting through, which might have allowed the passage of sperm into the peritoneum. Similarly, a fistulous tract could have developed in the stump, even without a stitch cutting through the tube, allowing the passage of the sperm. In both instances, the fertilised ovum gets entrapped in the stump because of the narrow tubal isthmic portion.

Females with previous ectopic pregnancy have a risk of repeat ectopic pregnancy as high as 30- to 50-fold. The incidence of ectopic pregnancy following sterilisation failures has been reported to be as high as 15% to 30%, or even higher. Concomitant bilateral tubal ectopic pregnancies after bilateral partial salpingectomy for sterilisation have also been reported (4). The incidence of tubal pregnancy distal to the site of sterilisation is five fold higher than in the segment proximal to the site of sterilisation (5).

When performing salpingectomy, care should be taken not to leave a long remnant stump as is usually practiced so as to minimise the risk of bleeding associated with the isthmic portion of the fallopian tube. However, in those with a history of ectopic pregnancy, it may be suggested that this remnant portion should be minimised. Additionally, adequate diathermy of the proximal portion or ligation with clips may be done. Another suggestion in management includes performing Hysterosalpingography to evaluate the patency of the fallopian tubes after salpingectomy and ligation (6). In addition to salpingectomy insertion of flexible commercially available microinserts into the remnant tube is also suggested. These devices are effective in occluding the fallopian tubes providing greater protection. Alternatively, if the woman has completed her family and has a history of previous ectopic

pregnancy, effective contraception counseling may be given, or permanent contraceptive measures should be implemented.

5. Conclusion

Clinicians should be aware that one ectopic is a risk factor for further ectopic pregnancies and that salpingectomy does not exclude ipsilateral ectopic pregnancy. When performing salpingectomy, it is suggested that the length of the remnant should be minimised with adequate diathermy applied. Finally, assessment of remnant stump patency (via hysterosalpingography) should be considered and tubal occlusion devices may be used to interrupt any remaining patency.

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