

CASE REPORT

Ruptured ectopic pregnancy on a tubal stump: A case report

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Abstract

Tubal stump ectopic pregnancy is a rare event. Early diagnosis and management can spare patients from significant morbidity; however, patients usually present with hemoperitoneum in developing countries. A long tubal stump might increase the risk for tubal stump pregnancy; hence, the length of fallopian tube should be minimized during salpingectomy.

KEYWORDS

case report, ectopic pregnancy, hemoperitoneum, tubal stump

1 | INTRODUCTION

Pregnancy occurring outside the normal uterine cavity is termed ectopic pregnancy. Its estimated incidence in the general population is 1%–2%.¹ A tubal stump pregnancy, a rare event with only a handful of cases described in the literature, occurs when a blastocyst implants within the remnant of fallopian tube following salpingectomy.² Ruptured ectopic pregnancy is a potentially life-threatening condition and continues to be a major cause of maternal morbidity, mortality, and early pregnancy loss despite major advances in its early diagnosis and treatment.^{3,4}

Here, we describe a case of ruptured tubal stump ectopic pregnancy in a 29-year-old female who had undergone salpingectomy previously for ectopic pregnancy.

2 | CASE REPORT

A 29-year-old married P0+1 woman presented to our emergency department with a history of amenorrhea for 6 weeks and severe lower abdominal pain for one day. She also complained of dizziness and generalized weakness but no vaginal bleeding. She was a regularly menstruating

lady with a past history of left salpingectomy done for ruptured ectopic pregnancy 1.5 years back, currently not using any contraceptive method. On examination, she was pale with normal blood pressure and pulse rate. Her abdomen was distended with generalized tenderness. Per speculum examination showed a healthy cervix with closed os without bleeding. Fullness was present over bilateral fornices with cervical motion tenderness on per vaginal examination.

On investigation, the urine pregnancy test was positive. Her total count was raised (20,700/cmm) and her hemoglobin was low (11.3 g/dl). Transabdominal sonography showed an empty uterine cavity with endometrial thickness of 6 mm and hetero-echoic collection in pelvic as well as abdominal cavity. Approximately 3.4 × 3.4 cm-sized thick-walled cystic structure was seen in the left adnexa toward the pouch of Douglas with a suspicious defect of approximately 6 mm on the lateral wall (Figures 1 and 2), so a provisional diagnosis of ectopic pregnancy was made, and she was planned for and underwent exploratory laparotomy.

Per-operatively about 1200 ml of clot and 800 ml of hemoperitoneum was noted and evacuated. Left tubal stump was visualized with suture materials at

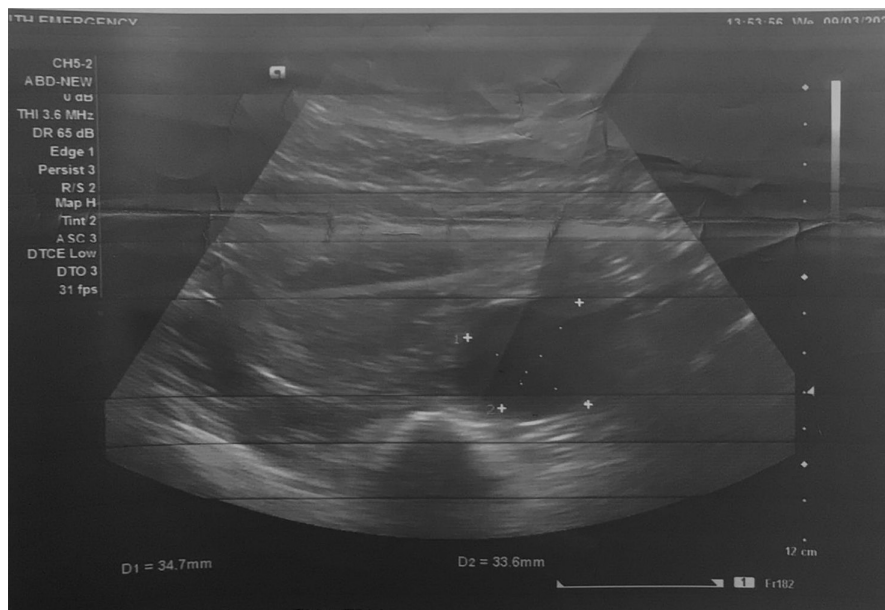


FIGURE 1 Thick-walled cystic structure of about 34×34mm in left adnexa

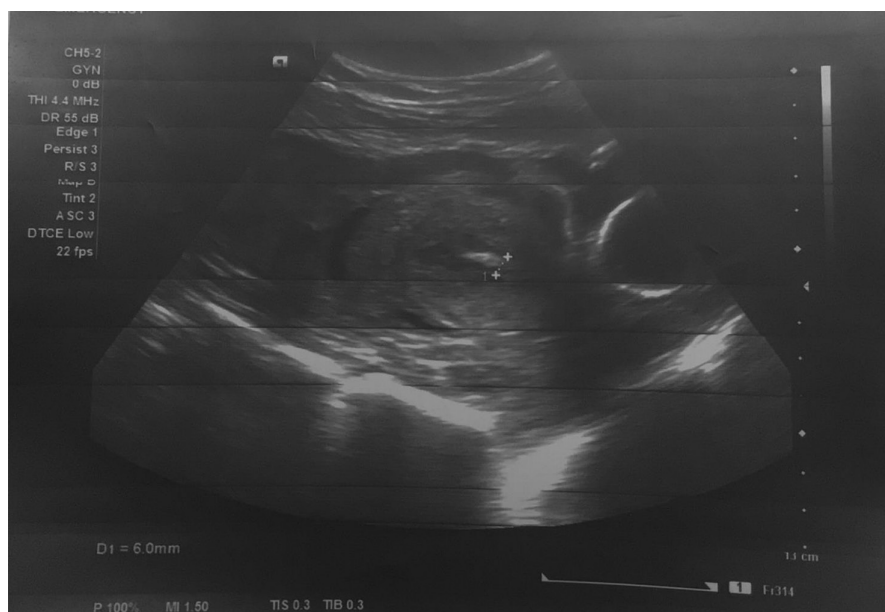


FIGURE 2 Suspicious defect of about 6 mm on the lateral wall of a cystic structure

the previous salpingectomy ligation site (Figure 3). A 2×2 cm rent was seen in the posterior surface of the left tubal stump from which blood was oozing (Figure 4). Product of conception-like material was noticed through the vent. Right fallopian tube, bilateral ovary, and uterus were normal. The stump was cut and ligated, and hemostasis was secured. On the cut section, the stump of the fallopian tube showed the product of conception material. It was sent for histopathological examination. She received two pints of packed cell transfusion intraoperatively due to intraoperative blood loss. Her postoperative hemoglobin level was 8.4 g/dl, and recovery was uneventful. She was discharged on the 4th postoperative operative day with contraceptive advice. The histopathological examination reported chorionic villi-like material lined

by trophoblastic cells in the fallopian tube suggestive of ectopic pregnancy with no features suggestive of molar pregnancy. (Figures 5 and 6).

3 | DISCUSSION

Ectopic pregnancy is a condition in which implantation of the developing embryo occurs at any site outside the normal endometrium of the uterus. Ectopic pregnancies are one of the common gynecological emergencies with an incidence of around 2% of all pregnancies.⁵ The most common site for an ectopic pregnancy is the ampullary region accounting for 92% of all ectopic pregnancies. The other less-common sites are interstitium, cornua, cervix, ovaries,

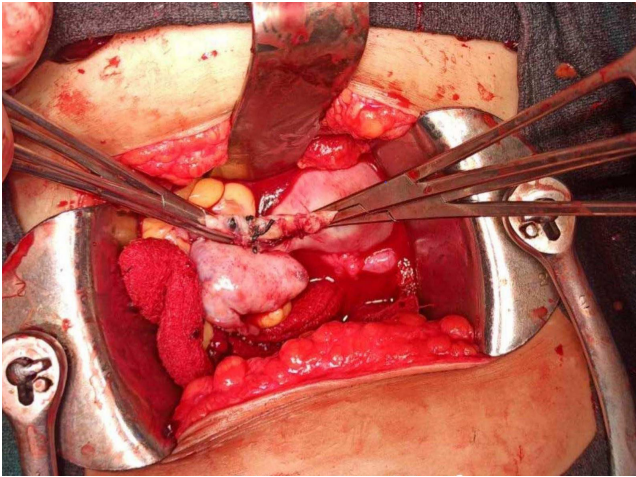


FIGURE 3 Left tubal stump with suture material in situ

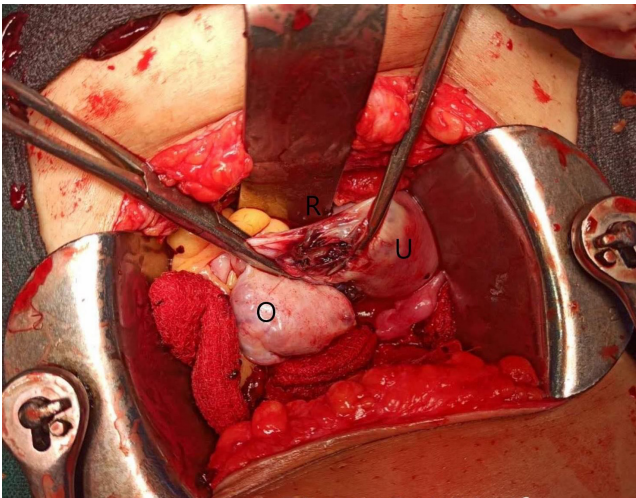


FIGURE 4 2×2 cm rent seen in the posterior surface of the left tubal stump. O, ovary; U, uterus; R, rent

and the peritoneum.⁶ A study by Ko et al. has reported that after tubectomy, incidence of tubal ectopic pregnancy is extremely rare around 0.4%.⁷ However, Takeda et al. reported an incidence of 1.16% in their department.⁶

The most significant risk factor for ectopic pregnancy is a history of previous ectopic pregnancy with a risk 10 times higher than the general population.^{8–10} Other risk factors include smoking,¹¹ age above 35 years, history of subfertility or treated subfertility, and pelvic inflammatory disease.¹² Other than prior ectopic pregnancy, our patient had none of the other risk factors.

The clinical presentation of ectopic pregnancy is a classical triad of amenorrhea, abdominal pain, and vaginal bleeding. However, there can be a wide spectrum of presentation and only 50% of the cases present with the triad. It has been described as a great masquerader.² Our patient had lower abdominal pain and amenorrhea, but

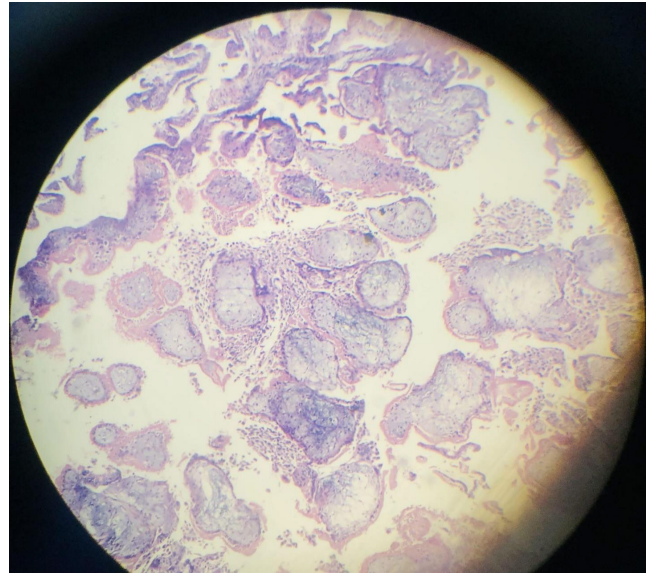


FIGURE 5 Chorionic villi lined by trophoblastic cells: low power

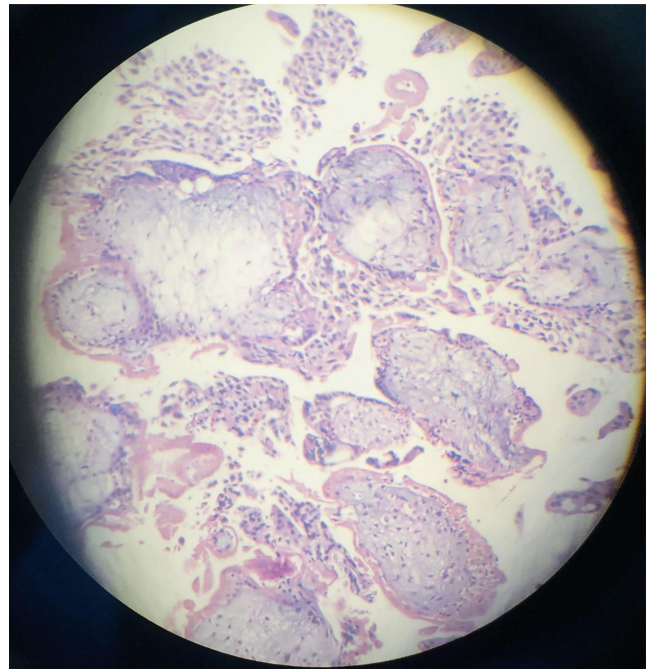


FIGURE 6 Chorionic villi lined by trophoblast cells: high power

no vaginal bleeding. Ruptured ectopic pregnancy, the most dreaded complication of ectopic pregnancy, is an important cause of first-trimester maternal mortality related to pregnancy.¹² In our case, the tubal stump had ruptured leading to hemoperitoneum. Although she was hemodynamically stable, delay in the diagnosis and management would have exacerbated her condition putting her life at risk.

There are various theories suggesting the pathogenesis of recurrent ipsilateral ectopic pregnancy. The external chemotactic theory has postulated that implantation at the tubal stump occurs by a fertilized ovum through a foramen formed at the stump.^{7,13} Another theory postulates that the implantation occurs by the fertilized ovum from the contralateral normal fallopian tube.^{14,15} Both theories seem plausible in our case.

Ultrasonographic evaluation is an effective investigation to diagnose tubal stump pregnancy. However, tubal stump ectopic pregnancy located near the ovary poses a diagnostic difficulty as ovarian follicles can be confused as one. On the contrary, stump ectopic pregnancy can be missed if less attention is paid to the tube in a patient who had a tubectomy before.¹⁶

Surgical management is the preferred option of management in cases of hemoperitoneum such as ours. Provided that the contralateral tube is normal, it is preferable to perform salpingectomy over salpingostomy as it is associated with lower rates of recurrence and persistent trophoblastic tumor with similar rate of intrauterine pregnancy.² The occurrence of tubal stump ectopic pregnancy although rare should compel us to think whether there is something that can be done during the initial salpingectomy to prevent stump pregnancy. Measures such as minimizing the remaining length of the fallopian tube along with peritonization the cornual incision have also been suggested.¹⁷ Our patient had already undergone salpingectomy during her previous ectopic pregnancy; however, as the stump was longer than usual, she might have undergone subtotal salpingectomy. Such long stumps may increase risk of stump ectopic pregnancy; however, there is no definitive evidence. Other measures such as resection of the cornua are also reported, but is a much more morbid surgery and is associated with similar rates of interstitial pregnancy, so performing cornual resection for every case of ectopic pregnancy in order to prevent stump ectopic lacks evidence and is unjustified.^{18,19}

4 | CONCLUSION

Stump ectopic pregnancy is a rare event. Long tubal stump might increase the risk of stump ectopic pregnancy; hence, the length of the tube should be minimized whenever possible.

AUTHOR CONTRIBUTIONS

Sushan Homagain and Nawaraj Kharal involved in collecting the data and writing the manuscript. Himal Khanal and Tejash Shahi involved in writing the manuscript. Jyoti Pandey and Neeta Katuwal directly involved

in patient care and finalizing the manuscript. All the authors read the finalized manuscript.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Available at reasonable request from corresponding author.

ETHICAL APPROVAL

The patient information is not revealed and written informed consent is taken from the patient.

CONSENT

A written consent form was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

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