Case Report

Case Report of Ectopic Pregnancy Occurring in the Tubal Stump after a Previous Salpingectomy

Maradona E. Isikhuemen, Weyinmi E. Kubeyinje

Department of Obstetrics and Gynaecology, University of Benin Teaching Hospital, Benin City, Nigeria

Abstract

Tubal stump ectopic pregnancy is rare but a potentially life-threatening condition. A high index of suspicion is required for early diagnosis and effective treatment, thereby minimising morbidity associated with this type of abnormal pregnancy. The aim of this report was to document a rare case of repeat ectopic pregnancy in the tubal stump following previous salpingectomy. We report a 35-year-old para 1+1 with one living child who had one previous right salpingectomy for ruptured right ectopic pregnancy. She presented with complaint of abdominal pain of one-day duration following a five-week history of absent menstruation. On presentation, she was in shock and there were features of intra-abdominal fluid (blood) collection. Abdominopelvic ultrasound scan demonstrated intraperitoneal fluid collection with floating loops of bowel. She was resuscitated, had salpingectomy for ruptured tubal stump ectopic pregnancy, and remained stable on follow-up. In conclusion, tubal stump ectopic pregnancy is a rare but possible complication of a previous salpingectomy. A high index of suspicion is required for early diagnosis and effective management.

Keywords: Ectopic pregnancy, salpingectomy, tubal stump

Introduction

Ectopic pregnancy is a remarkable cause of maternal mortality and fetal wastage. It occurs in about 2% of pregnancies.[1] The incidence of recurrent ectopic pregnancy is 15%, and in women who have had salpingectomy, ectopic pregnancy in the tubal remnant is rare, occurring in 0.4% of all pregnancies.[2,3] There are risk factors for tubal stump ectopic pregnancy including previous tubal surgery, assisted reproductive techniques, and pelvic inflammatory disease.[1,4] A high index of suspicion is required so as to minimise morbidity and mortality associated with this condition. The mortality associated with tubal stump ectopic pregnancy is 10–15 times higher than other types of ectopic pregnancy.[5] It is often challenging to make a diagnosis of tubal stump ectopic pregnancy. Treatment could be medical or surgical.

The aim of this report was to document a rare case of repeat ectopic pregnancy in the tubal stump following previous salpingectomy.

Case Report

We report a 35-year-old para 1+1 with one living child who had laparotomy and right salpingectomy for ruptured right ectopic pregnancy three years before presentation. She also had a previous caesarean section two years before presentation. She presented with complaint of abdominal pain of one-day duration following a five-week history of absent menstruation. She was not on any progesterone-containing contraceptive. There was a history of generalised abdominal pain before presentation. She gave no history of dizziness, fainting spells, or shoulder-tip pain.

On examination, she was pale. Her pulse rate was 104 beats/min and blood pressure was 80/60 mmHg. The abdomen was distended, and there was a well-healed Pfannenstiel scar. There was guarding and rebound tenderness.

Abdominopelvic ultrasound scan demonstrated intraperitoneal fluid collection with floating loops of the bowel. It also

Address for correspondence: Dr. Maradona E. Isikhuemen, Department of Obstetrics and Gynaecology, University of Benin Teaching Hospital, Benin City, Nigeria.
E-mail: maradona4real2002@yahoo.com

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showed a paraumbilical mass with heterogeneous echotexture measuring 9.9 cm × 6.5 cm × 10.7 cm. The uterus was not gravid. Her haematocrit was 28%.

Following a suspicion of ruptured ectopic pregnancy and resuscitation, the patient was counseled on the need for emergency exploratory laparotomy for which she gave her consent. A midline infraumbilical incision was used to enter the abdominal cavity. Findings at surgery were haemoperitoneum of 900 ml, right bleeding tubal stump (approximately 5 cm), normal left tube, and bilaterally normal ovaries. The total blood loss was 1 L. She had right total salpingectomy [Figure 1]. Two units of blood were transfused. She remained stable in the postoperative period. Her packed cell volume on the second day following surgery was 31%. She was counselled and discharged on the third postoperative day and remained stable at follow-up.

Discussion

Ectopic pregnancy occurring in the tubal stump after salpingectomy is not a common finding in routine clinical practice. It is rare with a few cases reported in literature. The index report showed ectopic pregnancy occurring in the tubal stump after a previous salpingectomy.

Although the mechanism regarding the etiopathogenesis of tubal stump ectopic pregnancy is not clear, several theories have been postulated.[1,4,6] Spermatozoa may pass through the patent tube and fertilise the ovum on the side of the damaged tube. There may be intrauterine emigration whereby the oocyte is fertilised normally in the patent tube and later implanted in the tubal stump. Another hypothesis is that there may be some degree of patency following a previous salpingectomy, allowing communication between the endometrial and peritoneal cavities, which subsequently allows for fertilisation and implantation in the tubal stump.[1,4,6]

Risk factors for ectopic pregnancy include previous ectopic pregnancy, previous tubal surgery, previous abdominopelvic surgery, assisted reproduction, use of progesterone-containing contraceptives, smoking, and pelvic inflammatory disease.[4,5,7] The clinical presentation may depend on the location of the pregnancy within the fallopian tube. Usually, ectopic pregnancy in the tubal stump will occur in the isthmic or interstitial part of the tube. While those in the isthmic part of the tube tend to rupture early, interstitial tubal ectopic pregnancy may grow larger in size before rupture.

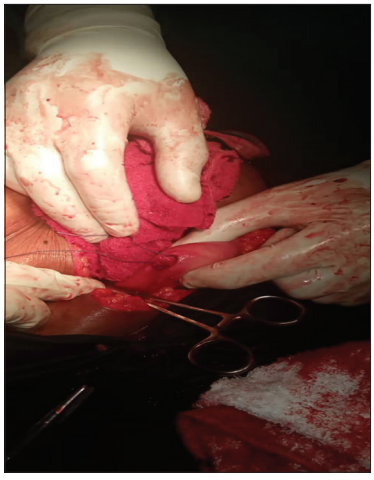

Figure 1: Bleeding right tubal stump just before total salpingectomy

Transvaginal ultrasonography is a particularly useful investigation for both intrauterine and extrauterine pregnancies. It may show a suspicious adnexal mass or haemoperitoneum when the ectopic pregnancy has ruptured. Despite its effectiveness, it may be difficult to make a diagnosis of tubal stump ectopic pregnancy on ultrasound scan. This may be because the sonologist would not pay much attention to the adnexa in which salpingectomy was previously done. Furthermore, following salpingectomy, the tubal stump is close to the ovary and the ovarian follicle may then be mistaken for a tubal stump ectopic pregnancy.[4] A pregnancy test may be all that is required in a patient with overwhelming clinical features and anaemia.

Treatment for tubal stump pregnancy could be surgical or medical. The use of methotrexate and surgical treatment has been associated with good outcomes. Methotrexate is for unruptured ectopic pregnancy and was, therefore, not suitable for the index patient. Laparoscopic surgery is also an option although this may be challenging.

Bearing in mind that the pathogenesis of tubal stump ectopic pregnancy is not well understood, it is, therefore, difficult to prevent its occurrence. Reducing the tubal remnant left behind during salpingectomy may be helpful in reducing the incidence of tubal stump ectopic pregnancy. Some authors have advocated the use of hysterosalpingography to assess tubal patency following salpingectomy. Occlusion of the remnant fallopian tube following salpingectomy may also be achieved using Essure.[1] There is, therefore, a need to counsel patients who have had salpingectomy on the possibility of an ipsilateral tubal stump or contralateral ectopic pregnancy. Permanent contraception may also be offered to women who have been managed for ectopic pregnancy if they have completed family size.[8]

In conclusion, tubal stump ectopic pregnancy is a rare but possible complication of a previous salpingectomy. Diagnosis may be quite challenging, hence a high index of suspicion is required for early detection and effective management. There is a need to give particular attention to the clinical presentation of patients with suspected ectopic or tubal stump pregnancy. This is very important in averting the potential mortality associated with failure of early recognition of such an abnormal pregnancy. Initial salpingectomy for tubal pregnancy should be total and the remaining stump should be reduced as much as possible.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her

consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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