

Spontaneous Ipsilateral Ectopic Pregnancy in the Tubal Stump of Previous Partial Salpingectomy

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ABSTRACT

We present an unusual case of recurrent ectopic pregnancy in the tubal stump of a previous partial salpingectomy. The patient presented with the classic triad of amenorrhoea, per vaginal bleeding and abdominal pain paired with a void uterus on ultrasonography. Her history was notable for a previous ectopic pregnancy resulting in a laparotomy and salpingectomy-oophrectomy. A positive B-hCG and echogenic areas in the right adnexa led to a diagnosis of recurrent ectopic pregnancy. On laparotomy, an ectopic pregnancy was found in the right tubal stump.

Keywords: Ectopic pregnancy, tubal stump

INTRODUCTION

Ectopic pregnancy is a major cause of first trimester maternal mortality and morbidity worldwide. Ectopic pregnancy was shown to account for the fourth leading cause of direct death in mothers by one report¹, with an estimate by the WHO of all maternal deaths at 4.9% caused by ectopics.² The problem is compounded in developing countries, where access to healthcare facilities is limited. The setting of this case was a central tertiary maternity and women's hospital in Nepal; Prasuti Griha. Nepal's maternal mortality rate is 539/100,000 births, despite government support of women's healthcare and comprehensive central services.³

We present an unusual case of recurrent ectopic pregnancy in the ipsilateral tubal stump of previous partial salpingectomy. In over 80% of cases, ectopic pregnancy occurs in the ampulla or isthmic regions. There is currently scant literature on the incidence of ectopic pregnancy situated in the tubal stump of previous salpingectomy; a Pubmed search revealed a handful of similar reported cases.^{4,5}

Management of ectopic pregnancy can either be conservative, medical or surgical. Current school of thought advocates laparoscopic intervention as the gold standard in surgical management.⁶ Debate exists in the literature about the relative risks and benefits of total salpingectomy versus partial salpingectomy, especially in relation to risk of recurrence and preservation of fertility. We wish to delineate issues raised by this case relevant to clinical practice, including long term sequelae of partial salpingectomy.

CASE

We report the case of a multiparous woman in her thirties presenting with a one week history of lower abdominal pain accompanied by burning sensation upon micturition. She had been amenorrhoeic for 6 weeks and reported vaginal spotting 4 weeks previously. On examination, a pulse rate of 88/min, blood pressure of 100/70 mmHg, respiratory rate of 18/min and afebrile status were noted. There were no abnormal findings on examination of the chest or cardiovascular system. An abdominal and vaginal examination illustrated a soft non tender abdomen, with no rebound tenderness and no cervical motion tenderness. There were no clinical signs of jaundice, anaemia, oedema or cyanosis.

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A previous obstetric history of gravida 6, parity 3+2 was notable for a right-sided ectopic pregnancy treated in a separate hospital, necessitating laparotomy and salpingo-oophorectomy. Two daughters, aged 19 and 11 years, and one son, aged 10 years, were born by spontaneous normal vaginal delivery with no known complications. The patient had been married for 16 years, and past medical history was unremarkable.

Urinalysis showed a positive result for β -hCG. Recurrent ectopic pregnancy was suspected, and an ultrasonographic assessment was ordered. Normal right-sided bowel was visualised, however a mild echogenic area was seen at the right adnexa. There was also free fluid reported in the pouch of Douglas, supporting a differential diagnosis of right-sided ectopic pregnancy. The patient was referred to the operating theatre but was considered haemodynamically stable and followed a nil by mouth regime until the next day. Two units of 'O' positive whole blood were cross-matched. Since the patient considered her family to be complete, consent was obtained to perform left sided tubal ligation.

With the patient in supine position, the previous laparotomy scar was used to create a Pfannenstiel incision. A haemoperitoneum of 350g clotted blood indicated total blood loss to be 2500mL for which she received 2 units of whole blood. Tubal pregnancy was found in the stump of previous right sided salpingectomy (fig 1). A clamp was applied to the isthmic remnant. The left ovary and fallopian tube appeared normal and patent. A left sided tubal ligation was then performed. Haemostasis was ensured before wash out and closure of the abdomen. Post-operative recovery was uneventful.



Fig 1. Intra-operative photo showing ectopic pregnancy in right tubal stump

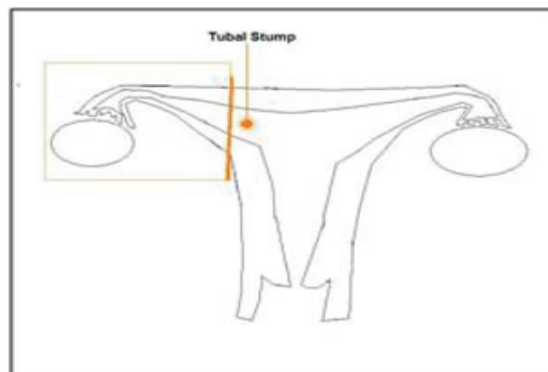
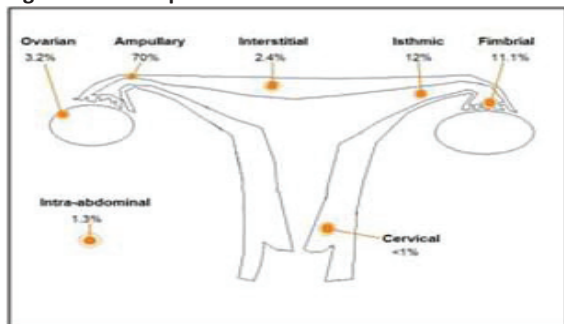


Fig 2. Schematic Diagram illustrating site of ectopic pregnancy

COMMENT

Ectopic pregnancy is a serious yet manageable condition. Between 1997-1999, 11.1 per 1000 estimated pregnancies in women in the UK were ectopic, and 0.4/1000 of these women died¹. This enquiry suggested most of which were missed in Accident and Emergency. Similar statistics were found in two retrospective studies specific to Nepal, with 7.3/1000 of all pregnancies and 10.2 out of 1000 deliveries reported as ectopic.^{7,8} This case report aims to highlight some of the issues surrounding unusual presentation of recurrent ectopic pregnancy.

Ectopic pregnancy can present atypically, for example mimicking gastrointestinal disease. It was fortunate that our patient conformed to the classic triad of amenorrhoea, vaginal bleeding and abdominal pain. Although this triad is only present in 50% of cases⁹, this allowed a correct diagnosis on clinical grounds. Indeed, one retrospective study performed in Nepal showed clinical evidence alone led to correct diagnosis in 85% of cases.⁷

A key tool in the diagnostic armamentarium is ultrasonographic imaging. A positive pregnancy test coupled with an empty uterus created a confusing clinical picture. The results showed features consistent with recurrent ectopic pregnancy in the tubal stump from previous salpingectomy. This is a rare occurrence, with the vast majority of ectopic pregnancies localising to the ampullary or isthmic regions.

Fertility is an important consideration when managing ectopic pregnancies. Due to risk of recurrence, once the family is complete, women are advised to use contraception. However, 70.6% of those suffering ectopic pregnancies were not using contraception at the time.⁸ Our patient had a normal left fallopian tube and ovary, presenting risk of future ectopic recurrence. She thus had tubal ligation because of risk of recurrence as well as failure to adhere to previously recommended contraception. These risks were therefore addressed by surgical sterilisation. In the literature, a previous similar case of 3 recurrent ipsilateral ectopics in partial salpingectomy, stump resection and finally removal of uterine cornua resulted in contralateral

resection to prevent further ectopics⁵. Although not common practice in the UK, contemporaneous sterilisation in emergency surgery in countries such as Nepal can be explained by poorer access to contraception and family planning services and access to tertiary centres such as Prasuti Griha in case of recurrence. It is situations such as these that drive up maternal mortality rates.

Estimates of ectopic pregnancy recurrence range from 9.8-9.9% after salpingectomy, 14.8-15.4% after salpingotomy, compared with 8% after medical treatment (methotrexate).^{10,11} Salpingotomy is more favourable for preserving fertility, however there is also a greater rate of ectopic pregnancy. In our patient, left sided total salpingectomy may have been more suitable to reduce risk of future recurrence. Salpingectomy is not a fail-safe method to prevent recurrence¹². Several authors have described bilateral salpingectomy, the contralateral side being prophylactic, only to suffer recurrence 6 years later.

Further to this, in performing partial salpingectomy, it is common to leave a long tubal stump. This decreases likelihood of bleeding associated with resection of the isthmic portion. Time consideration also plays a role in deciding between total and partial salpingectomy. However, this case and others⁴ have demonstrated ectopic recurrence in a patent tubal stump, indicating the need to obtain total tubal excision.

Several theories have been suggested for possible mechanism of action. Passage of the fertilised egg may have been transuterine from the contralateral ostia or transperitoneal migration through a patent stump.⁹ Examination of risk factors specific to Nepal may yield some clues. Retrospective studies showed a mean age of 30.1 years for ectopic pregnancies in mothers, but women were nulliparous in 49% of cases. Occurrence of previous ectopic pregnancy accounted for 16.7% of cases, and perhaps most significant is incidence of pelvic inflammatory disease (PID). Estimates range between 13.9% and 61% of ectopic pregnancy cases suffering from PID. An increasing trend in ectopic pregnancies has been associated with rising incidence of pelvic infections.⁸ Lastly, previous tubal surgery was cited as a risk factor, accounting for 13.9% of cases⁷, although this frequently occurs in the context of PID. A common thread between the latter two risk factors may suggest importance of the role of inflammation, subsequent fibrosis, damage to ciliary structures and adhesions in the aetiology of ectopic pregnancy.

A multitude of articles have highlighted the superiority of laparoscopic procedures in terms of length of hospital stay, adhesions and post-operative complications. However, other authors have accepted the important consideration of cost especially in countries with sparse healthcare funding and facilities available.¹³ A Cochrane review found no difference in repeat ectopic pregnancy rate between laparoscopy and laparotomy.¹⁰ Relevant to our case,

previous doctrine was that excessive haemoperitoneum precludes the use of laparoscopy. However some authors¹⁰, emphasise haemoperitoneum should not be considered a contraindication to laparoscopy provided the patient is clinically stable and sufficiently qualified staff perform the operation. The patient was clinically stable despite a large volume of blood loss, and indeed shock may not occur until 1L-1.5L blood loss. Whilst our patient was stable enough to warrant laparoscopy, facilities and funding could not permit this type of intervention.

CONCLUSIONS

Based on discussion of the issues surrounding this rare phenomenon, we put forward some suggestions for future best practice. Prudence would dictate total salpingectomy, thereby removing the tubal stump. Where facilities exist, laparoscopic intervention is preferred over laparotomy to improve post-operative recovery, although there is no evidence it lowers risk of recurrence.

REFERENCES

1. Deaths, Confidential Enquiry Into Maternal. Why Mothers Die 1997-1999 Executive Summary and Key Recommendations. London: Press RCOG, 2001.
2. Khan KS, Wojdyla D, Say L, Ulmezoglu AMG, van Look PF. WHO analysis of causes of maternal death: a Systematic Review 1066-1074, s.l. The Lancet. 2006;367:9516.
3. Poonam Y, Uprety D, Banerjee B. Ectopic pregnancy-Two years review from BPKHS, Nepal. KUMJ. 2005;3(4):365-9.
4. Pradhan P, Thapamagar SB, Maskey S. A profile of ectopic pregnancy at Nepal Medical College Teaching Hospital. Nepal Med Coll J. 2006;4:238-42.
5. Zuzarte R, Khong CC. Recurrent ectopic pregnancy following ipsilateral partial salpingectomy. Singapore Med J. 2005;46(9):476-8.
6. Agdi M, Tulandi T. Best Practice & Research Clinical Obstetrics and Gynaecology. 2009;23(4):519-27.
7. Stovall TG. Early pregnancy loss and ectopic pregnancy. In: Berek JS.
8. Milingos D, Black M, Bain C. Three Surgically Managed Ipsilateral Spontaneous Ectopic Pregnancies. Obstetrics & Gynaecology. 2008;112(2):458-9.
9. Cheong Y. Symposium: Tubal disease and fertility, Controversies in the management of ectopic pregnancies. Reproductive Biomedicine Online. [Online] 14 August 2007. [Cited: 22 November 2009.] www.rbmonline.com/Article/2872. 2007;15:396-402.
10. Faleyimu BL, Igberase GO, Momoh MO. Ipsilateral ectopic pregnancy occurring in the stump of a previous ectopic site: a case report. BioMed Central: Cases Journal. Open Access Article. 2008;1:343
11. Fischer S, Keirse MJNC. When Salpingectomy Is Not Salpingectomy— Ipsilateral Recurrence of Tubal Pregnancy. Obstetrics and Gynecology International. doi:10.1155/2009/524864.
12. Al-Sunaidi M, Tulandi T. Surgical treatment of ectopic pregnancy., Montreal : Seminars in reproductive medicine. 2007;25(2):117-22.
13. Yao M, Tulandi T. Current status of surgical and nonsurgical management of ectopic pregnancy. Fertility and Sterility. 1997;67(3):421-33.