

Left tubal ectopic gestation coexisting with right pyosalpinx: A case report

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Abstract

Ectopic pregnancy is one of the commonest gynaecological emergencies in the developing world and represents a significant proportion of maternal mortality. A common aetiological factor is Pelvic Inflammatory disease, which leads to tubal damage that can predispose to ectopic pregnancy. Both conditions tend to be differential diagnosis of each other. However, they are rarely believed to co-exist

The clinical case is of a 33-year-old nulliparous woman who presented with lower abdominal pain and vaginal bleeding following 8 weeks of amenorrhoea. She had previously attempted a surgical termination of the pregnancy and ultrasound scan showed a left adnexal mass. She had an exploratory laparotomy with findings of a left tubal ectopic and right pyosalpinx.

Although, pelvic inflammatory disease is generally believed not to co-exist with pregnancy, in uncommon circumstances such as these, it can occur. Dilemmas exist, particularly as to management decisions regarding surgical options for both the tube with the implantation and that with the infective inflammation. Clinicians need to be aware that coexistence is possible and management strategies perhaps need to be discussed to maximize potential fertility preservation.

Key words: Ectopic Pregnancy, Pelvic Inflammatory disease, Pyosalpinx

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Introduction

Ectopic pregnancy is one of the most common gynecological emergencies,¹ with an incidence ranging from 10 – 20 per 1000 pregnancies.² At the Jos University Teaching Hospital, the prevalence has been reported to be 17.4 per 1000 deliveries.³ This is particularly concerning because it has a mortality rate of 0.1 – 0.3% in the developed world, and 1 – 3 % in the developing world.⁴ It is responsible for a significant proportion of maternal mortality in our environment.

There has been strong association between ectopic pregnancy and pelvic inflammatory disease (PID), as PID is a known risk factor for ectopic pregnancy.⁵ A confirmatory diagnosis of PID is often by laparoscopy in which the findings of salpingitis or pyosalpinx is diagnostic.⁶

Pelvic inflammatory disease coexisting with pregnancy is rare. This is believed to be due to the ongoing inflammatory process in PID preventing sperm motility and fertilization, thus preventing pregnancy.⁷ In addition, pregnancy itself prevents the ascension of infection which results in PID, this mechanism is not fully understood but the cervical mucus plug is believed to play a role.⁷ Though, it is not clear if this protection occurs in the case of an ectopic pregnancy, but the

cervical mucus plug is present in ectopic pregnancies, so it is presumed that its protective effect should be present.⁸ Ectopic pregnancy and PID are the main differential diagnosis of each other, as both can present with lower abdominal pain, vaginal bleeding, cervical motion tenderness, adnexal tenderness and an adnexal mass, with the major differentiating factor being a positive pregnancy test.⁷

Thus, on the rare occasion that these two occur together, it can be very difficult to diagnose. This diagnosis is of significant impact as bilateral tubal disease can result in infertility, which would require expensive Assisted Reproductive Technique (ART) interventions for pregnancy. Management modalities in cases such as these are not widely discussed.

Clinical Case

A 33-year-old Gravida 4 Para 0⁺³ with 8 weeks 6 days history of amenorrhoea presented to the gynecological Emergency with complaints of lower abdominal pain of 2 weeks duration and spotting blood per vaginum of a week's duration.

Abdominal pain started about 2 weeks prior to presentation. It was insidious in onset, more around the periumbilical region, dull, radiating to the left and right flanks with occasional pain freedays and temporarily relieved by analgesics.

About a week later, she noticed she was spotting blood per vaginum, with passage of small blood clots and no passage of fleshy materials or grapelike substances. There was no significant abdominal swelling, no history of dizziness, palpitations or fainting spells and no

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significant findings on systemic review. She had not used any contraceptive methods and had no previous abdomino-pelvic surgeries. There was a positive history of previous vaginal discharge with lower abdominal pain. About a month prior to presentation, she attempted a surgical termination of the index pregnancy after about 5 weeks amenorrhoea by manual vacuum aspiration after she confirmed the pregnancy with a urine pregnancy test. She subsequently had passage of dark brown malodorous vaginal discharge which temporarily stopped after taking oral antibiotics. She had had 3 previous induced 1st trimester abortions for which manual vacuum aspirations were done. The prior pregnancies were undesired and surgical terminations were done with no post-abort complications. She was single, a trader and a university graduate.

On examination, she was a young woman in painful distress, afebrile with a temperature of 37°C, anicteric, not dehydrated with no pedal oedema. Her pulse rate was 96 bpm, blood pressure was 110/70mmHg and the heart sounds were S1 and S2 only. Her abdomen was full, moved with respiration, with marked periumbilical tenderness and lower abdominal tenderness. There was no palpable organomegaly and the uterus was not palpable per abdomen. On sterile vaginal speculum exam, a creamy malodorous discharge was noticed in the cervix and vagina and the cervical os was closed. She had cervical motion tenderness and bilateral adnexal tenderness on digital vaginal examination.

An urgent packed cell volume was done which was 26%. Serum urea, electrolytes and creatinine were within normal ranges while serum β HCG was positive. An abdomino-pelvic ultrasound showed features of a slow leaking left tubal pregnancy at 8 weeks of gestation.

She had an emergency exploratory laparotomy with left total salpingectomy and right cuff salpingostomy. The intra operative findings were a bulky uterus of about 10 weeks size, left fallopian tube containing a ruptured gestational sac in the ampullary portion, right pyosalpinx, normal ovaries bilaterally and haemoperitoneum of about 500mls.

Specimens were sent for histology which confirmed a left tubal ectopic gestation with no evidence of inflammation and suppurative inflammation of the right fallopian tube. She had 2 units of blood transfused post operatively with a post transfusion packed cell volume of 32%. She also had intravenous antibiotics (Amoxicillin-Clavulanate and Metronidazole) for 48 hours and subsequently converted to oral antibiotics for a week.

Her vital signs post operatively were stable and she was discharged on post-operative day 5 and counseled on contraception, details of surgical intervention carried out, chances of pregnancy, potential management options and sex practices. She was followed up in the

gynaecological clinic for two weeks and subsequently discharged from the clinic and told to present early whenever she becomes amenorrhoeic and has a positive pregnancy test.

Discussion: The index patient presented with complaints of lower abdominal pain and vaginal bleeding which occurred 8 weeks after her last normal menstrual period. These symptoms can be present in ectopic pregnancy and PID.⁹ However, she had a pregnancy test done at home which was positive thus early pregnancy complication was foremost in our clinical diagnosis. She had attempted to surgically terminate the index pregnancy by manual vacuum aspiration, thus her clinical picture suggested a possibility of ruptured ectopic pregnancy or a septic unsafe abortion.

She had multiple risk factors for both ectopic pregnancy and PID which include, being within the reproductive age range, a history of prior STIs, 3 previous surgical terminations of pregnancies and non-use of barrier contraception.⁹ All these put her at risk of both conditions, though, since PID is the major risk factor for ectopic pregnancy, the risk factors tend to overlap. However, it is worthy to note that many patients presenting with an ectopic pregnancy have no identifiable risk factors.^{9,10}

An unruptured/slowly leaking ectopic pregnancy often presents with stable vitals and lower abdominal pain as was seen in this patient.² There was lower abdominal tenderness and cervical motion tenderness, which are features of ectopic pregnancy, septic abortion and pelvic inflammatory disease. However, the presence of malodorous vaginal discharge would suggest a septic abortion or PID.¹¹

The abdomino-pelvic ultrasound scan done which showed features suggestive of a slow leaking ectopic pregnancy and a positive pregnancy test led to the conclusion that ectopic pregnancy was the likely diagnosis. Though, the malodorous vaginal discharge suggested an ongoing infection.

The options of management of pyosalpinx include antibiotic therapy, salpingectomy and salpingostomy.¹² The choice of procedure for the patient was based on the fact that the left tube was already damaged and needed to be removed, the level of inflammation required intervention and she had given consent for removal of just one of her tubes. This also, might leave her with some potential for fertility, since pregnancy rates of 21.2% have been reported, 12 months after salpingostomy,¹³ though a pooled ectopic pregnancy rate of 10% has been reported¹³ and she was counseled to that effect. She was told to report immediately, if she misses her menstrual period and has a positive pregnancy test. The surgical decision for a salpingectomy for the left tube despite the

diseased right tube was due to the degree of damage of the tube, and preservation of the tube did not seem feasible. There are several surgical options for ectopic pregnancy. These are intraoperative decisions that need to be made on several occasions, as a study in this facility showed that in 26.9% of cases of ectopic pregnancy, the contralateral tube was not grossly normal.³

This case presents a rare occurrence in which salpingitis and pyosalpinx coexists with an ectopic pregnancy. Whether this occurred primarily cannot be known with certainty, but there is a possibility that the attempted surgical termination of pregnancy could have introduced the infection that led to the pyosalpinx which occurred in this case. Despite that, it is important to consider the possibility of multiple tubal pathologies, such as in this case, coexisting. This would aid in diagnosis, preoperative decision making and proper patient counseling and consent to ultimately maximize patient outcome and satisfaction.

Conclusion

Ectopic pregnancy and Acute Pelvic Inflammatory disease have been strongly related with the latter being a strong risk factor for the former. However, they are rarely found to coexist at the same time. When these coexist, it needs to be identified and various surgical options need to be considered, particularly tubal conservative options. This is particularly important since assisted reproductive techniques remain unaffordable to most women in our environment.

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