

ECTOPIC PREGNANCY IN A 28-YEAR-OLD WOMAN WITH Cut IUCD IN SITU – A CASE REPORT

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Abstract

Background: There is a 3–4 percent chance of all pregnancies being ectopic in location. The risk of ectopic pregnancy to a woman using an Intrauterine Contraceptive Device (IUCD) is lower than that in a woman using no form of birth control. However if a woman gets pregnant while using the IUCD, the chances of having ectopic is more than 4 percent.

Data on the occurrence of ectopic gestation with IUCD in situ is scanty, with no report of any such case in Ghana or West Africa.

The objective of this report is therefore to contribute to knowledge on the subject with the view to bring it to attention among clinicians.

Case: A 28-year-old woman (G3P1A+1) who has had copper IUCD in situ for over two years, reported to a

health facility in Accra after missing her period for two weeks. She had performed a home-based urine pregnancy test on three separate occasions, and they were all positive. A trans-vaginal ultrasound scan showed a small cystic lesion in the right adnexa with moderate fluid in the pouch of Douglas. A right tubal abortion was found at laparotomy.

Conclusion: Ectopic pregnancy in women with an IUCD is an important major potential complication that can be life-threatening.

Adequate counselling by clinicians would create awareness among clients for early reporting of amenorrhoea and prompt intervention for desirable outcome.

Key Words: Ectopic, Pregnancy, Intrauterine, contraceptive, device

Introduction

An ectopic gestation is a pregnancy complication in which the embryo gets implanted outside the uterine cavity¹. Most ectopic pregnancies occur in the Fallopian tubes, termed tubal pregnancies, but implantation may also occur in the cervix, ovaries and abdomen. The condition is a potentially life-threatening gynaecological emergency and a major cause of maternal morbidity and mortality in many developing countries².

In a typical ectopic pregnancy, the embryo adheres to the lining of the fallopian tube and burrows into the tubal lining; commonly invading vessels to cause bleeding⁹. This intratubal bleeding (haematosalpinx) expels the implantation out of the tubal end as a tubal abortion. Tubal abortion is a common type of miscarriage. There is no inflammation of the tube and the pain is caused by prostaglandins released at the implantation site, and from irritation by free blood in the peritoneal cavity⁹.

In some cases the bleeding may be heavy and life threatening when diagnosis is made late or if implantation is in the proximal tube as this may invade the nearby Sampson artery of the round ligament.

There are a number of risk factors for ectopic

pregnancies, but in as high as up to 50% of cases, no risk factors can be identified.³ Risk factors include pelvic inflammatory disease (PID), assisted reproductive technology (ART), use of intrauterine contraceptive device (IUCD), previous ectopic, tubal surgery, intrauterine surgery and smoking^{3,5}.

The history of IUCD dates back to 1900s, and there were over 180million users worldwide as of 2007^{4, 5}. IUCDs primarily work by preventing fertilization. The progestogen released from the hormonal IUCDs may partially suppress ovulation in addition to thickening the cervical mucus so that sperm cannot reach the fallopian tubes. The copper IUCDs cause the uterus and fallopian tubes to produce secretions containing white blood cells, copper ions, enzymes, and prostaglandins, a combination that is toxic to spermatozoa⁵ and unfavourable to fertilization or implantation.

IUDs have many adverse effects such as expulsion, perforation, infection, cramping, heavier periods, irregular bleeding and spotting, string problems and pregnancy.

Approximately 50% of pregnancies in women using IUCDs will be located outside of the uterus. However, the total number of women becoming pregnant while using IUCDs is as low as 0.5 per 100 users in 5-year cumulative. Therefore, the overall number of ectopic pregnancies related to IUDs is very low⁶.

Data on the occurrence of ectopic gestation with IUCD in situ is scanty, with no report of any such case in Ghana or West Africa. The objective of this report is

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therefore to contribute to knowledge on the subject with the view to bring it to attention among clinicians.

Case Presentation

A 28year old woman (G3P1+1) with a previous spontaneous miscarriage presented at a health facility in Accra on 30/11/2013 with six weeks amenorrhoea (LMP 18/10/13), having had three consecutive positive readings on a self-conducted Urine Prognosticon Test (UPT).

Being very much aware of the implications of a confirmed pregnancy with the Intra-Uterine Contraceptive Device (IUCD), she requested a serum beta human chorionic gonadotropin (β -HCG) by herself and was awaiting the results. A pelvic ultrasound scan done prior to presentation had detected no abnormality.

She attained menarche at 9 years, and has had regular monthly cycles during which she bleeds for five days. She had a Spontaneous Vaginal Delivery two years earlier with no other significant medical or surgical history.

On examination, the young 54kilogram woman appeared anxious. She was fully conscious, alert and well oriented, afebrile, not pale, and not dehydrated.

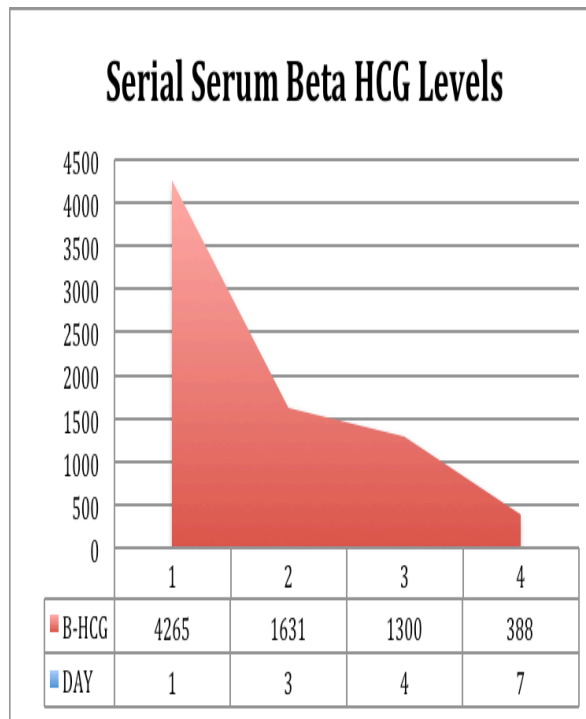
Her pulse was 80 beats per minute with regular and a good volume; blood pressure was 112/60mmHg. Her abdomen was flat, moved with respiration, had no masses palpable but mild tenderness in the right iliac fossa region. Other systems were normal.

A trans-vaginal ultrasound scan (TVS) performed revealed a normal size anteverted uterus with IUCD visualized but no intrauterine gestation sac noted. The left ovary was seen and appeared normal, but the right ovary was not visualized, neither was there any fluid in the rectouterine space. The initial clinical assessment was a most likely extra-uterine gestation with IUCD in situ. A β -HCG was requested, to repeat after 48 hours.

The patient developed sudden onset of severe lower abdominal pains after 16 hours with no associated spotting per vaginam. Her pulse was 94bpm, BP 130/60mmHg and there was marked tenderness and guarding in the right iliac fossa region. A repeat TVS showed a small cystic lesion in the right adnexa with moderate amount of fluid in the pouch of Douglas. A diagnosis of leaking ectopic gestation was finally made and the patient was admitted and prepared for theatre.

A single portal diagnostic laparoscopy was initially performed under general anaesthesia and found moderate haemoperitoneum that obscured good view of the Fallopian tubes. A minilaparotomy was then performed, at which 100mls blood clots were evacuated to see both tubes and ovaries clearly. These looked normal except for some bleeding from the fimbria end of the right tube. The bleeding was stopped and haemostasis achieved with the application of pressure using gauze swab-on-stick for a few minutes. The intra-operative diagnosis of tubal abortion was made. Abdomen was cleaned and closed in layers.

The patient remained stable post operatively with haemoglobin level of 10.7g/dl and a satisfactory wound healing. A follow-up transabdominal ultrasound scan showed a normal size anteverted uterus, clean and empty endometrium, with no fluid noted in the pouch of Douglas nor any adnexal masses.



The surgery was done on day-1, and patient was subsequently discharged on the third day and scheduled a review with day 10 and day 14 serum beta HCG results.

Discussion

The risk of ectopic gestation in women using IUDs is related to the duration of IUCD use; the longer the duration of use, the higher the risk of extra-uterine gestation⁷. The ectopic pregnancy rates were found to be higher after 2 years of use. The patient in the case above was at a relatively higher risk because she has used the IUCD for a little over two years¹¹

The risk of ectopic pregnancy to a woman using an IUCD is lower than the risk of ectopic pregnancy to a woman using no form of birth control. However, 50% of pregnancies that do occur during IUCD use are ectopic⁹. The prevalence of ectopic gestation or tubal pregnancies are therefore higher when a pregnancy occurs in a woman with the device in situ⁸.

The patient's presentation of missed period for two weeks, positive pregnancy test, as well as the sudden onset of lower abdominal pain on the second visit clearly demonstrates this phenomenon. The intra-operative findings of haemoperitoneum with oozing from the right fimbria end then confirmed tubal abortion.

The limited available literature and research publications on the relationship between IUCD and ectopic gestations have significant levels of inconsistencies.

The findings from case-control studies on the relationship between IUCD use and the risk of ectopic pregnancies also were not consistent¹¹ A meta-analysis of published literature from 1977 to 1994 reviewed 19 publications regarding 16 studies of ectopic pregnancy and IUCD use¹¹

The risk of tubal ectopic pregnancy has also been found to be lowest among copper IUD and highest among the progesterone-releasing IUCD users⁹. The patient in this case was using the copper IUCD.

Hers was a tubal pregnancy which aborted, indicating to some extent that indeed the presence of the devices offers some protection against interstitial pregnancies, which are usually the most difficult to manage^{10, 11}

Medical treatment of ectopic pregnancies commonly uses Methotrexate and this has reduced the need for surgery; but surgical intervention is still required in cases where the Fallopian tube has ruptured or is in danger of doing so. This patient may have benefitted from medical treatment if the diagnosis was confirmed earlier with laparoscopy. Surgery may be laparoscopic or a laparotomy. The patient needed laparoscopy because she presented in acute pain and the findings of haemoperitoneum necessitated the minilaparotomy enabled a full visualization appropriate intervention.

Intrauterine pregnancies occurring with the IUCD in place carry a higher risk of miscarriage¹². This patient had a tubal abortion. Should the pregnancy attain viability, there tends to be preterm delivery.

Conclusion

Ectopic pregnancy in women with an IUCD remains an important major potential complication that can be life threatening.

Clinical suspicion would be necessary for thorough investigation to confirm cases for appropriate treatment. Adequately counseling recipients about this risk especially at insertion would create the necessary awareness among users.

Ethical Issues

An informed consent was obtained from the client whose case is reported here before writing up for publication.

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