

## Case Report

### Retained Intra Uterine Contraceptive Device in a thirty year old woman leading to secondary infertility

Ismaheel A. Azeez<sup>1</sup>, Lawrence A Adebuseye<sup>2</sup>, Jamiu A Lasisi<sup>3</sup>, Banke I. Yusuf<sup>4</sup>

<sup>1</sup>MB; BS (Ib), Cert Clin Epid(Utrecht), MSc Clin Epid(Ib) FWACP, Consultant Family Physician.  
Department of Family Medicine University College Hospital, Ibadan Nigeria.

<sup>2</sup>MB;BS (Ib) FWACP (FM), FMCGP (Nig). MSc. Epid MD. Consultant Family Physician. Department of  
Family Medicine University College Hospital Ibadan.

<sup>3</sup>MBBS, FWACS, Department of Obstetrics and Gynaecology, Adeoyo Maternity Hospital, Yemetu  
Ibadan, Nigeria

<sup>4</sup>BSc (II), MPH (Ib), Department of Environmental Health Sciences, College of Medicine, University of  
Ibadan, Nigeria.

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#### Abstract:

The use of Intra-Uterine contraceptive device (IUCD) had been found to be associated with several complications such as bleeding, perforation or migration into surrounding tissues or the omentum and retention. This is a case of a 30-year-old woman who had insertion of IUCD six years before presentation in the clinic which was believed to have been removed. However, uterine ultrasound showed that the IUCD was retained. She then presented with inability to achieve pregnancy of three years duration despite adequate unprotected sexual intercourse. She had Intra-Uterine contraceptive device inserted six years before presentation which she said a Doctor at a private hospital had removed two years after insertion. Her last confinement was about six years before presentation. However, uterine ultrasound showed a normal-sized uterus containing an Intra-Uterine contraceptive device. The retained IUCD was subsequently removed by dilatation and curettage and the patient became pregnant two months later. With appropriate investigation, in this case, accurate ultrasound, it was possible to locate the IUCD and subsequently removed it to solve the patient's problem.

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**Key Words:** Intra-Uterine Contraceptive Device, thirty years, woman, infertility

#### Introduction

The copper-releasing intra-uterine contraceptive device (IUCD) is a T-shaped polyethylene device with 380 mm<sup>2</sup> of exposed surface area of copper on its arms and stem. The released copper ions interfere with sperm mobility and incite a foreign-body reaction that results in a spermicidal environment. Barium sulfate has been added to the polyethylene substrate to make the device radiopaque. A 3-mm plastic ball is located at the base of the IUCD, through which the monofilament thread passes. Once inserted, the IUCD can remain in place for up to 10 years, it is an effective contraceptive for many women.<sup>1</sup> The use of IUCD has been found to be associated with several complications such as bleeding, perforation or migration into surrounding tissues or the omentum. For dislodged IUCD, removal is recommended because of the potential inflammatory responses that may cause obstruction or perforation. Salih et al reported that laparoscopy is a method of choice for the removal of the dislodged IUCD because it is comfortable for the patients.<sup>2,3</sup> In the case being presented, IUCD was removed by dilatation and curettage because it was inside the uterus but if it was abdominal, laparoscopy would have been the better method of

choice.

#### Case report

A case of a 30year old Para 3+<sup>0</sup> 3 alive, who presented on 05/04/09 with inability to achieve pregnancy of three years duration despite adequate unprotected sexual intercourse. She usually had sexual intercourse with her husband about three times in a week. She was not aware of her fertile period. There were no galactorrhoea and vaginal discharge. She had intra uterine contraceptive device inserted six years before presentation which she said a Doctor at a private hospital had removed two years after insertion. She had not been feeling the string of the IUCD in her vagina so she thought that it had been removed. No history of previous voluntary termination of pregnancy, history suggestive of sexually transmitted diseases, vaginal procedure, bleeding per vagina and urinary symptoms. She had ante-natal care for her three previous pregnancies at a private hospital and the deliveries at the same hospital were spontaneous vertex deliveries. The post-delivery conditions were uneventful. Her last confinement was about six years before presentation. She had three children, one in secondary school and two in primary school. However, she said the

reason why she wanted to remove IUCD was because she wanted a fourth child. She did not know the cause of her inability to achieve pregnancy. She thought that the inserted IUCD had been removed by the Doctor. She had been going to her work regularly and hoped that she would be pregnant again one day. She was being supported emotionally and financially by her husband who had taken her to two private hospitals for treatment of infertility. Examination showed a young woman not pale, anicteric, afebrile (37.3°C). Both breasts were normal and no galactorrhoea. Vaginal examination showed normal female hair distribution and vulva. On digital examination the vaginal wall was smooth, the cervical os was closed and anterior in position. There was no IUCD thread in the vagina. The pouch of Douglas was empty and the adnexa were free. No cervical excitation tenderness. The gloved finger was stained with normal vaginal discharge.

Uterine ultrasound done for the patient (06/04/2009) showed a normal-sized uterus measuring 35mm by 40mm by 32mm containing a contraceptive device (Copper T). The ovaries were normal and no adnexal masses were seen. She was told that the IUCD had not been removed and it might be responsible for her inability to achieve pregnancy.

A diagnosis of Retained Intra-Uterine Contraceptive Device leading to secondary infertility.

The patient was offered dilatation and curettage which she consented. The procedure was carried out under general anaesthesia,

**Findings:** The vulva, vagina and the cervix were normal. The uterus was normal sized anteverted and mobile. A Lippe's loop intrauterine device with intact strings was retrieved from the uterine cavity. The operation blood loss was minimal.

**The procedure:** The consent of the patient was obtained and the husband consulted about the procedure. The patient was placed in lithotomy position after emptying her bladder. The vagina was cleansed with chlorhexidine gluconate (8%) solution, the patient was draped and a vaginal examination was done to assess the size and position of the uterus. Then IV ketamine 90mg was administered. A Sim's speculum was introduced into the vagina to retract the posterior wall and anterior cervical lip grabbed with a volsellum forceps while an assistant was holding the speculum. A uterine sound was introduced to determine the length and direction of the uterus which also acts as the initial dilator. Cervical dilators were introduced gradually in increasing size until the curette could easily enter the uterus. The uterine curette was then introduced and the IUCD was brought out and shown to the patient after she regained consciousness.

**Post-operative management:** The patient was observed in the recovery room for three hours. Her vital signs were normal and she regained consciousness after an hour. The IUCD was then shown to her. She was subsequently discharged home on ciprofloxacin 500mg twice daily, metronidazole 400mg thrice daily, fersolate tablets two thrice daily and ascorbic acid 300mg twice daily for a week.

She was seen two weeks later at the clinic in stable condition. She became pregnant two months after the removal of the

IUCD and registered for ante-natal care at the hospital where she was treated.

## Discussion

It is a known fact that IUCD can perforate the uterus resulting in its subsequent relocation in other organs within the pelvis and the abdomen. Some authors found that more than 50% of clinically diagnosed cases of a missing IUCD are still located within the endometrial cavity an example of which is the case being discussed.<sup>4,5</sup> To determine the causes of IUCD discontinuation Khadar et al reported in a Jordanian study that the most common reason for voluntary IUCD removal was the women's desire to conceive.<sup>6</sup> This patient consulted a doctor for removal of the inserted IUCD because she wanted to be pregnant but the IUCD was not actually removed until the patient presented to our clinic. Mutahir et al also reported that the commonest indication for removal of IUCD was to restore fertility and that most patients use it for short periods.<sup>7</sup> Shorter lasting IUCD may need to be revisited if these will cost less for clients wishing to use the method only to postpone pregnancies. The other reasons for removal are excessive bleeding and pelvic inflammatory disease.<sup>7,8</sup>

Ismail and colleague emphasized the importance of skilled ultrasonography for the correct location of an IUCD lying within the uterine cavity where the threads are not found.<sup>9</sup> Accurate ultrasound examination can ensure the avoidance of unnecessary x-rays or surgery.<sup>10</sup> The IUCD in this patient's uterus was revealed by ultrasound. Ismail and colleague also reported that a missing thread of an IUCD does not imply that the device is misplaced.<sup>9</sup> This was corroborated by the fact that even though the thread was missing in this case, abdominal ultrasound showed that the IUCD was in the uterus. If abdominal ultrasound had not revealed the IUCD, abdominal X-ray would have been done, as copper devices have flexible side arms made from barium sulphate, which is detectable by X-ray examination. This case was in support of the findings of some literature that most of the missing IUCD are actually in the uterine cavity which will be shown by an ultrasound examination.

## Conclusion

This is a case of a 30year old Para 3<sup>+0</sup> 3 alive who had insertion of IUCD six years before presentation which was believed to have been removed. She however presented with inability to achieve pregnancy of three years duration. Uterine ultrasound showed a retained IUCD which was subsequently removed by dilatation and curettage and the patient became pregnant two months later. By taking a complete history, comprehensive examination and appropriate investigation in this case accurate ultrasound, it was possible to locate the IUCD and subsequently removed it to solve the patient's problem after she had visited other doctors who probably missed the diagnosis of a retained IUCD.

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