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Article · January 2011

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BLADDER PERFORATION BY AN INTRAUTERINE CONTRACEPTIVE DEVICE

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Abasiattai AM, Utuk NM, Ukpong A, Akaiso O, Ikpe M. Bladder perforation by an intrauterine contraceptive device. Case Study Case Rep. 2011; 1(4): 192 - 195.

ABSTRACT

Intrauterine contraceptive devices (IUCDs) are among the most effective forms of contraceptives available. They provide safe, long term yet quickly reversible protection from pregnancy and are currently the most popular and widely used reversible contraceptive method. Uterine perforation is the most dangerous complication associated with IUCD insertion and erosion into the bladder is very rare. We report the case of a nulliparous lady who had a copper T IUCD inserted for the treatment of intrauterine synaechiae in our hospital and later presented with the device in the urinary bladder.

Key words: Intrauterine contraceptive device, bladder perforation, Uyo

INTRODUCTION

Intrauterine contraceptive devices (IUCDs) are among the most effective forms of contraceptives available. They provide safe, long term yet quickly reversible protection from pregnancy and are currently the most popular and widely used reversible contraceptive method 1. Globally, about 153 million married women of reproductive age or 13% of all such women use an IUCD and the most popular device is the copper T380A which is effective for at least 12 years and has an annual pregnancy rate of 0.4 per 100 women years. 2.

Modern copper IUCDs are associated with few side effects. Those reported include pelvic infection, menstrual complaints, missing IUCDs, ectopic pregnancy, septic abortion and uterine perforation 3. Uterine perforation though rare is the most dangerous complication associated with IUCD insertion 4. In about 80% of the perforations, the devices are located freely in the intra-peritoneal space 5. Erosion into the bladder is very rare 6 . We report the case of a nulliparous lady who had a copper T IUCD inserted for the treatment of intrauterine synaechiae in our hospital and later presented with the device in the urinary bladder. This case report which is the first of such in our hospital seeks to remind practising clinicians about this very rare complication that may follow IUCD insertion.

CASE REPORT

A 37 year old primiparous teacher presented at the gynaecological clinic of the University of Uyo Teaching Hospital (UUTH) on the 28th of October 2011 with

secondary infertility of two years duration. Her last confinement was in 2007 and she was delivered by an emergency lower segment caesarean section in a local general hospital due to prolonged obstructed labour. The baby, a male was alive and well. She last menstruated on the 5th of October 2010 and the quantity of her menstrual flow had gradually reduced. She was a teacher married to a civil servant and had regular unprotected sexual intercourse with her husband.

On examination, she was healthy looking and well nourished. There was a healthy subumbilical midline scar and no organs were palpable. The vulva and vagina were normal. The uterus was normal sized, anteverted and mobile and there were no adnexal masses. A tentative diagnosis of secondary infertility with hypomenorrhoea probably due to intrauterine synaechaie was made.

Results of her seminal fluid analysis were essentially normal. Hysterosalpingiogram (HSG) suggested intrauterine synaechaie. She had adhesiolysis and insertion of a copper T 380A under general anaesthesia by a resident doctor on the 7th of December 2010 with subsequent hormonal therapy. She however presented 3 months later with severe dysuria, haematuria and perineal pain and on vaginal examination the strings of the IUCD were not visible. A trans-abdominal ultrasound scan (USS) showed a foreign body (copper T) at the posterior aspect of the urinary bladder. The stem of the device pierced through the bladder wall casting posterior acoustics shadows (Figure I). A plain abdominal X-ray with a sound in the uterine cavity showed a copper T IUCD in the lower aspect of the pelvis with the stem extending into the superior part of the pubic symphysis. An intravenous urogram (IVU) showed a filling defect caused by the arms of a copper T seen close to the base of the urinary filled bladder.

Microscopy of a midstream urine specimen revealed numerous leucocytes and red blood cells while culture revealed a moderate growth of E. coli sensitive to ceftazidime. Haemoglobin estimation did not reveal any abnormality. She was started on intravenous ceftazidime and analgesics. A laparotomy was offered and she consented. Under a sub-arachnoid block, the abdomen was opened through the old scar. The urinary bladder was opened and the IUCD which was found lying in its cavity was removed (Figure 1). The bladder was then repaired and the abdomen closed in layers. Her post-operative progress was satisfactory. Sutures were removed on the 7th post-operative day and the wound had healed well. She was discharged on the 14th post-operative day after removal of the catheter.

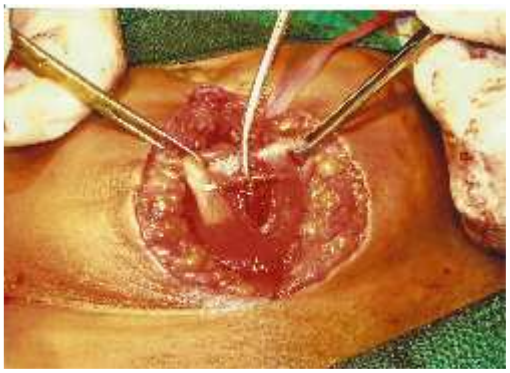

Figure 1. Operative finding.

DISCUSSION

Perforation of the uterus by an IUCD was first described in 1930 by Murphy and Andrews independently 7. Its incidence is reported to vary between 0.5-1.0/1000 insertions 2. Uterine perforation almost always occurs during insertion of the IUCD and its incidence is related to the timing of insertion, type of device, the anatomy of the uterus and most importantly the skill and experience of the clinician performing the insertion 8. Available evidence indicates that only about 15% of perforations lead to complications in adjacent visceral organs principally the intestines, omentum, appendix and bladder 4. Intravesical migration of an IUCD is uncommon and the devices can either be embedded in the bladder wall or float freely in it 9. About half of these cases have resulted in bladder calculus formation 10. An IUCD could enter the bladder through several ways; direct introduction into the bladder via the uterus, partial perforation of the uterine wall at insertion and gradual expulsion into the bladder due to action of the uterus and direct trans- urethral insertion 11. As documented in the case presented, the presenting features of bladder perforation by an IUCD are irritative voiding symptoms, dysuria, and suprapubic pain 6. Others include haematuria, menouria, urinary tract obstruction secondary to urolithiasis and urinary incontinence 6. Persistent or recurrent urinary tract infections are reported to be the most frequent presentation 12. Inability to visualize the strings of the IUCD in our patient and the typical presentation led to suspicion of translocation of the device and the performance of plain abdominal radiography, intravenous urography and ultrasonography all of whom confirmed the presence of the device in the bladder. All IUCDs are radio-opaque 13, therefore, plain X-ray of the pelvis and ultrasonography help to locate a missing IUCD.

All IUCDs in the bladder must be removed because of potential complications such as pelvic abscess, bladder rupture, adhesions, and fistulae formation (vesicouterine and vesicoenteric) 14 and this can be achieved through cystoscopy if the device is free floating or cystotomy if the device is adherent or broken 14. Cystoscopy is regarded as the method of choice but unfortunately was not available in our center at the time the patient was managed hence; the device in our patient was successfully removed by laparotomy.

Perforation of the bladder by an IUCD though very rare can occur. Once patients with missing IUCD also present with lower urinary tract symptoms, bladder perforation by the device should be excluded. Prompt diagnosis and timely intervention resulted in a good outcome in our patient. In an environments like ours where fear of side effects and previous bad experience had been documented to be the common reasons given by women who do not want to practice contraception 15 , and where contraceptive use rates are abysmally low 15, it is imperative that the importance of proper insertion techniques should be emphasized when training health staff to insert IUCDs and periodic retraining should be organized to refreshen skills in order to minimize complications that may occur following insertion of the devices.

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