

Missing Intrauterine Contraceptive Device amongst Clients in Enugu, Nigeria

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Abstract

Background

Missing intrauterine contraceptive device (IUCD) is a known complication of IUCD use.

Objective

To examine the methods of diagnosis and Management modalities of missing IUCD at the University of Nigeria Teaching Hospital, Enugu.

Materials and Method

This was a retrospective review of the records of all clients who presented with complaints of missing IUCD over an 11 year period, from 1st January 1990 to 31st December 2000. Relevant information on biodata, methods of diagnosis and removal were extracted and analysed using tabulations and simple percentages.

Results

A total of 44,975 clients were seen at the family planning clinic within the period under review. Twenty two thousand , one hundred and sixty eight clients used IUCD, giving a 55.96% of total contraceptive use. Of these, 20 IUCD missed, giving the incidence of missing IUCD as 0.08%.

The mean age of clients with missing IUCD was 38±2.18 years and the mean parity was 6.00 ± 0.54. Majority (30%) were asymptomatic. Twenty five percent presented with lower abdominal pain. One client had a co-existing pregnancy of about 10 weeks.

The commonest mode of diagnosing missing IUCD was the use of plain abdominal x-ray with a marker in-utero (50%) and retrieval hook was used for removal in 45% of the cases.

Three patients had exploratory laparotomy for removal of the missing IUCD.

Conclusion

IUCD is a method of contraception most commonly used in UNTH, Enugu . Plain abdominal x-ray with a marker in-utero is a simple and reliable diagnostic technique for missing IUCD.

Keywords: intrauterine Contraceptive device, missing, Enugu

Introduction

Intrauterine contraceptive devices (IUCDs) are an important element of modern contraception. Approximately 128 million women are using it all over the world¹. The use of this device is a popular form of contraception among clients in developing countries². In Nigeria, the level of acceptance ranges from 39.7% - 64%^{2,3}.

It is inexpensive, effective, can be used for a long period of time and most importantly, is reversible⁴. A failure rate of 1-2% each year has been reported⁵.

Missing IUCD is one of the setbacks associated with the use of the device. Missing IUCD strings occur in 5-25% of all insertions and require a safe and correct diagnostic technique⁶.

A missing IUCD string does not necessarily indicate perforation since it may occur when the device has been expelled unnoticed, rotation of the device within the uterine cavity, enlargement of the uterus by pregnancy, separation of the tail from the device, insertion into one horn of a uterine didelphys or retraction of the string into the cervical canal⁷. It has also been suggested that complete extrusion of IUCD through the myometrium may be assisted by spontaneous uterine contraction and hydrostatic negative pressure differences between the low intraperitoneal pressure and relatively higher intrauterine pressure⁸.

The risk factors for missing IUCD are the time of its insertion, type, size and configuration of the IUCD

used as well as the skill and experience of the inserter⁹.

In most cases, there are no associated symptoms and the diagnosis of displaced IUCD is made when the string of the device cannot be identified.

This study examines the clinical presentation, method of diagnosis and management modalities of missing IUCD at the University of Nigeria Teaching Hospital, Enugu.

Materials and Method

The study was carried out at the family planning clinic of the University of Nigeria Teaching Hospital, Enugu, Nigeria over an 11 year period (1st January 1990 to 31st December 2000).

Enugu is located in south-eastern part of Nigeria and has a population of 717,291 according to the 2006 national census.

The medical records of all clients who presented with missing ICD were reviewed by trained staff using designed and piloted data extraction forms.

The socio-demographic data, complaints at the time of presentation, timing of insertion, method of diagnosis, mode of retrieval and type of IUCD removed were extracted. The provider of the IUCD was also recorded.

The data were analysed using tabulations and simple percentages.

Results

The total contraceptive users at the family planning clinic during the study period was 44,975. IUCD users accounted for 25,168 (55.96%). Of the IUCD users, twenty cases of missing IUCD were diagnosed and managed giving an incidence of 0.08%.

All the missing IUCD were Cu T 380A. Majority (45%) of women with missing IUCD were between the ages of 31 and 40 years. The mean parity was 6±0.54 and all were married.

Eighteen (90%) of the missing IUCD were inserted during menstruation, one patient had post abortal insertion and another had insertion during the puerperium.

Nurses inserted 16(80%) of the missing IUCD, while doctors inserted 3(15%). In one of the clients, the provider was not stated.

Fourteen (70%) clients had not used any form of contraceptive before, while others had either used withdrawal method, depot provera or contraceptive pill. Two patients (10%) had Bilateral tubal ligation after retrieval of the missing IUCD.

Table 1 shows the presenting complaints. The most common presenting complaints were lower abdominal pain 5(25%) and string not felt 4(20%). Six (30%) clients were asymptomatic.

Table 1: Presenting complaints in 20 clients.

Symptoms	No	%
Asymptomatic	6	30
Lower abdominal pain	5	25
Thread not felt or visible	4	20
Irregular vaginal bleeding	2	10
Vaginal discharge	2	10
Pregnancy	1	5
Total	20	100

Table 2 shows the diagnostic methods. Plain abdominal x-ray with a marker in-utero was the most commonly used diagnostic method (50%). This was followed by pelvic examination with uterine sound (35%). Plain abdominal x-ray complimented with hysterosalpingogram (HSG) was used in 2 patients while diagnosis with abdomino pelvic ultrasound accounted for only 5% of the diagnostic tool used. No patient had laparoscopy or hysteroscopy.

Table 2: Method of Diagnosis.

Method	No	%
Plain abdominal x-ray with a marker in the uterus	10	50
Pelvic examination with uterine sound	7	35
Hysterosalpingogram (HSG)	2	10
Abdomino-pelvic ultrasound	1	5
Total	20	100

In management of missing IUCD, retrieval hook was used alone in 45% of the cases, while dilation and retrieval was used in 35%. Three patients had exploratory laparotomy. One patient had partial expulsion through the external os and the IUCD was picked out with artery forceps.

Table 3: Methods of Management.

Method	No	%
Retrieval hook	9	45
Dilatation and retrieval	7	35
Laparotomy	3	15
Partial expulsion: picked out with artery forceps	1	5
Total	20	100

Discussion

In this review, the intrauterine contraceptive device was accepted by 55.96% of women, thus making it the single most commonly used method of contraception in this environment. This is similar to the findings of Abasiattai et al² in Uyo, Nigeria.

The incidence of missing IUCD within the period under review was 0.08% which is in agreement with the figure of less than 10% quoted in other studies^{1,2}.

The low incidence of missing IUCD in the hospital may be due to good patient selection.

Majority (45%) of the patients were between 31 and 40 years old. This is probably because most women in this environment start their obstetric career early and by 30 years have completed their families and start use of contraceptives.

Most 85%) of the patients who presented with missing IUCD were grandmultiparous. This is not surprising as several studies in this country have shown that majority of the IUCD acceptors were grandmultiparous^{10,11}. Complications are therefore likely to be higher in this group of women.

In this study, 70% of the clients with missing IUCD had never used any form of contraceptive before this experience which thus constitute a barrier to contraceptive use in future. There is need for adequate pre-insertion counseling.

Though majority of our clients were asymptomatic (30%), lower abdominal pain (25%) was the commonest complaint. In other studies, this symptom varied from 9.6% to 44.8%¹². The pain is related to the degree of endometrial compression and myometrial distention, infection and complication of pregnancy. Within the peritoneal cavity copper bearing devices excite a lot of tissue response (inflammation) which could cause pain¹³. Lower urinary tract symptoms (LUTS) of dysuria, frequency and urgency have been reported on migration of the device into the urinary bladder¹⁴.

The commonest mode of diagnosis in this study was the use of plain abdominal x-ray with a marker in the uterus (50%). Plain abdominal x-ray with uterine sound in-utero is a reliable, popular, simple technique which does not require special skills. In a review of this method in 104 women presenting with a history of missed IUCD, EL kady et al⁶ reported an accuracy of 95.23%. The technique is feasible, has the advantage of reduced hospital stay and is particularly suitable in medical centres where other diagnostic facilities are lacking. In other studies, ultrasound was the main modality of diagnosis¹⁵. However, sonogram is not reliable if the IUCD is surrounded by the omentum and loops bowel¹⁶. Ultrasound is effective when used early particularly in high risk patients and when IUCD insertion causes

severe pain probably indicating perforation¹⁷. Hysterosalpingogram (HSG) was the only invasive method used for diagnosis in this study (10%). This will show clearly if the device is inside or outside the uterus but the x-ray may be taken in two planes. However, hysteroscopy is of great value not only for precise locating of the IUCD but also for it's removal under direct vision, particularly in the management of patients with broken and/or embedded IUD pieces¹⁸.

This study showed that 80% of the missing IUCD were still within the uterine cavity. This agrees with the findings of Ibitoye et al¹⁹ which suggested that a clinical diagnosis of missing string be made until adequate radiological investigations such as ultrasonography, plain x-rays and computerized tomography, have been carried out.

Retrieval hook was the first line of management and it was successful in 45% of the cases. In Ilorin Nigeria¹⁵, It was effective in 64.29% of the patients. Three patients had laparotomy due to non-availability of operating laparoscope. When available, laparoscopy is preferred, since it is less traumatic and carries less post operative morbidity²⁰. The diagnostic accuracy of laparoscopy can be enhanced by fluoroscopic guidance²⁰. The current recommendations require that all extrauterine devices should be removed from the peritoneal cavity to prevent intestinal obstruction, viscus perforation and peritonitis²¹. In the three patients that had laparotomy in this study, the copper T 380A devices were found lying free in the peritoneal cavity. Probably the diagnosis of the translocated devices was done early before peritoneal reaction could set in. In order to avoid perforation, uterine size, consistency and position must be established before insertion²².

One patient had a 10 week pregnancy with missing IUCD. This was similar to the report from Ilorin, Nigeria¹⁴. Where the pregnancy is allowed to continue, the incidence of spontaneous miscarriage is around 50% compared with only 12% in the general population⁹. This high incidence of spontaneous miscarriage could be reduced to only 20-25% if the IUCD is removed.

Missing IUCD is a known complication of IUCD use and requires a safe and correct diagnostic technique. There is need for service providers to regularly update their skills on the technique for IUCD insertion. Plain abdominal x-ray with a marker in-utero is an inexpensive and reliable diagnostic method that is particularly suitable in a low resource

setting. Undue traction on the thread while cutting to length (3cm) during insertion should be avoided to prevent iatrogenic partial expulsion. During pre-insertion counseling, the importance of regular self-examination for missing strings which is vital for early detection of intrauterine device, should be stressed.

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