

Original Article

Trend in the use of Intra-uterine Contraceptive Device (IUCD ,TCU 380A) ,in Enugu, Nigeria

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ABSTRACT

OBJECTIVE: To estimate the acceptance rate and trend of Intrauterine Contraceptive Device (IUCD) use in Enugu, Nigeria

PATIENTS AND METHODS: A review of all new acceptors of intrauterine contraceptive device (IUCD) over a nine year period(1999-2007) .

RESULTS: A total of 133,375 clients were seen at the UNTH family planning clinic between 1999 and 2007. Out of 6,947 users of IUCD, during the period, 1,659 were new acceptors. The IUCD acceptance rate was 5.21%. Majority of the clients (29.7%) were aged 40 years and above. Eight hundred and forty seven (51.4%) had attained post secondary education . Majority of the clients (99.4%) were married . Twenty-six percent(26.0%) had completed their desired family size. Majority 1,359 (82.4%) did not use any method of contraception prior to IUCD insertion.

The commonest complication was menorrhagia (5.8%) and this was responsible for removal in 3.0% of cases. Eight (0.5%) and nine(0.6%) requested for removal for fear of causing cancer and migration to the brain or heart respectively. Two (0.1%) became pregnant while having the IUCD in-situ. Majority of the clients (50.5%) had the knowledge of IUCD through friends.

Conclusion: This study has shown that IUCD (TCU 380A) is both safe and effective in Enugu, Nigeria. Its use is for both child spacing and limiting family size.

KEYWORDS: Intrauterine contraceptive device, acceptance rate, complications.

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INTRODUCTION

The population of the world is currently estimated at about 7 billion people with eighty percent of them living in the developing countries. Over 90% of the annual increases in world population occur in the developing countries. This has been attributed to poor uptake and utilization of various methods of contraception¹.

Similarly, in sub-Saharan Africa, owing to persistent high fertility, the rate of population growth at 2.8% is one of the highest in the world².

Nigeria according to the 2006 national census figure has a population of 140 million and ranks as the most populous country in Africa. Women of child bearing age constitute about 31 million and with a crude birth rate of 5.7, the population of Nigeria is expected to double in 24 years³.

Despite the availability of safe and affordable technologies, many women in developing countries still die from pregnancy related causes. Many deaths are due to unsafe abortions, inadequate obstetric care and short intervals between pregnancies.⁴ Family planning could reduce maternal mortality by 20% or more; and infants are twice as likely to survive if the previous birth interval is about two years⁵.

The concept of inserting a foreign body into the uterus to prevent conception or implantation is an old one. At the beginning of the twentieth century a number devices were designed, Grafenberg rings being probably the best known. Lippes published the first report on his plastic "loop" in 1962, although its use has declined in recent times. Other designs followed, and since the 1970's a series of copper carrying devices (intrauterine contraceptive device) has been produced with the wire wound around a silastic frame. There are two broad categories of IUCD: inert and copper based device. There are also hormonally-based devices that work by releasing a progestogen.

TCU 380A, which is now regarded as the "gold" standard against which other IUCD's are evaluated is probably the most effective currently available IUCD with a failure rate of less than 1%⁶.

The copper T intrauterine device is safe, effective, reversible and requires little effort on the part of the user once inserted⁷.

World wide, approximately 13 percent of all women of reproductive age use the IUCD. However most IUCD users are in a few countries, especially China, where in some areas, more than at least 50 percent of women of child bearing age have had an IUCD inserted⁸. Here in Nigeria IUCD use ranges from 47-66% of contraceptive acceptor in different family planning centres^{9,10}.

However, in spite of the effectiveness of IUCD's fears

about side effects, concerns about infection and infertility, lack of technical training for providers and the time and costs involved in providing services continue to discourage their use.

It is against this background that the study was undertaken to estimate the acceptance rate and trend of IUCD use, the associated complications, reasons for removal and offer suggestions on ways to improve uptake.

MATERIALS AND METHODS

A retrospective study was carried out at the family planning clinic of the University of Nigeria Teaching Hospital, Enugu, Nigeria between 1st January 1999 and 31st December 2007.

Enugu, an old regional capital is located in South Eastern Nigeria with a population of 3,257,298 according to the 2006 national census figure. The town is mainly inhabited by ethnic Ibos whose main occupations are civil service, trading and farming. There are pockets of the Hausa tribe who are mainly cattle rearers.

In 2006, the University of Nigeria Teaching Hospital moved to its permanent site a distance of about 22 kilometers from the city centre.

The family planning clinic is held daily except on weekends and most methods of contraception are available. The clients receive group counseling from the health sisters on all methods of contraception. The clinical service providers provide private counselling before final decision on the most appropriate and acceptable method.

Intrauterine contraceptive devices (IUCD) are inserted either by a doctor or a nurse after medical history was taken and general physical and abdomino-pelvic examinations were performed to exclude any abnormality. The clients are reviewed thereafter. During subsequent visits, four weeks complaints are recorded and general and pelvic examinations are performed to ensure that the tail of the device is visible and the presence of any discharge or tenderness is noted.

Women were excluded from IUCD insertion if they had any symptoms or signs of sexually transmitted disease, cervical or vaginal bleeding of unknown aetiology, had current or recurrent active pelvic infection, or a history of uterine or cervical malignancy or ectopic pregnancy.

The case files of those using IUCD during the nine year period were retrieved from the medical records department of the family planning unit and from these, the folders of new acceptors of IUCD were isolated and were further analyzed. The age, parity, occupation, and

educational status were extracted. Also the previous contraceptive practices, source of information, reason for removal as well as complications of IUCD were studied.

The medical records were reviewed by trained staff using pre-established and piloted data extraction forms. The data were analyzed using Epi-info.

RESULTS

A total of 133, 375 contraceptive acceptors were seen during the period of study. Six thousand nine hundred and forty seven clients had IUCD insertion out of which 1659 were new clients. The overall acceptance rate was 5.21%.

Table I: 3 yearly distribution of new acceptors of IUCD

<u>Years</u>	<u>No</u>	<u>%</u>
1999 – 2001	741	44.7
2002 – 2004	603	36.3
2005 – 2009	315	19.0
	1,659	100.0

Table I shows 3 yearly distributions of new acceptors of IUCD. There was a decline in acceptance between 2005 and 2007 which coincided with the relocation of the hospital to its permanent site.

Of the 1,659 new acceptors, only 1,649 (99.4%) case files could be retrieved for further analysis.

All the new acceptors had TCU 380A inserted. There was no other type of IUCD in the family planning clinic. Most of the clients 1,639 (99.4%) were married while 4(0.2%) and 6(0.4%) were single and divorced/separated respectively.

One thousand five hundred and sixty (94.6%) clients were Christians, 70 (4.2%) practiced traditional religion and 19(1.2%) were Muslims.

Table II shows the socio-demographic characteristics of the clients.

Most of the acceptors 490 (29.7%) were 40 years and above and only 18(1.1%) were less than 20 years of age. Nine hundred and seventy six (59.2%) of the clients were grandmultiparous (five or more previous viable babies) while 4(0.2%) were nulliparous. One hundred and eighty three (11.1%) had no formal education while majority 847 (51.4%) had post secondary education. Eight hundred and thirty three (50.5%) had knowledge of IUCD through friends, 85(5.2%) through Community Health Extension Workers (CHEW), media houses contributed 223(13.5%) and 6(0.4%) were informed by their husbands.

The clients reasons for attending family planning clinic were as follows: Child spacing 840 (50.9%), completed

family size 429 (26.0%), harsh economic condition 240 (14.6%) and schooling 140 (8.5%).

Majority 1,351 (81.9%) were resident in the urban area while 298(18.1%) were rural dwellers.

One thousand three hundred and fifty nine (82.4%) did not use any form of contraception prior to insertion while 67 (4.1%) and 4(0.2%) used barrier and withdrawal methods respectively.

Table II: Sociodemographic characteristics of new acceptors of IUCD (N=1649)

Age Distribution	
Age (Years)	No (%)
<20	18 (1.1)
20 – 24	41 (2.5)
25 – 29	201 (12.2)
30 – 34	460 (27.9)
35 – 39	439 (26.6)
40+	490 (29.7)
Total	1649 (100.0)

Parity Distribution	
Parity	No (%)
0	4 (0.2)
1-4	669 (40.6)
5	976 (59.2)
Total	1649 (100.0)

Educational level	No (%)
None	183 (11.1)
Primary	531 (32.2)
Secondary	88 (5.3)
Post Secondary	847 (51.4)
Total	1649 (100.0)

Source of Information	No (%)
Not Indicated	2 (0.1)
Self	4 (0.2)
Husband	6 (0.4)
Relative	9 (0.5)
Community Health Extension Workers (CHEW)	85 (5.2)
Media Houses	223 (13.5)
Other Health Workers	487 (29.5)
Friends	833 (50.5)
Total	1649 (100.0)

Place of residence	No (%)
Urban	1351 (81.9)
Rural	298 (18.1)
Total	1649 (100.0)

The commonest reason for changing the previous contraceptive method was menstrual disorder 98(5.9%). Sixty eight (4.1%) had difficulty in compliance while 35(2.1%) had unplanned pregnancies while using the previous methods. Twenty three (1.4%) clients changed their method on account of their husband's opposition.

Table III: Complications using IUCD

Complication	No (%)
Pregnancy while insitu	2 (0.1)
Pelvic Inflammatory Disease (PID)	2 (0.1)
Expulsion	4 (0.2)
Missing Thread	6 (0.4)
Frequent Urinary Tract Infection	7 (0.4)
Pains during Intercourse	43 (2.6)
Cramping Pains	55 (3.3)
Intermenstrual bleeding	57 (3.5)
Heavy Menstrual Flow	96 (5.8)
None	1377 (83.6)
Total	1649 (100.0)

As shown in table III, the commonest complications were heavy menstrual flow 96(5.8%), intermenstrual bleeding 57(3.5%) and cramping pains 55(3.3%). Pelvic inflammatory disease (PID) was recorded in 2(0.1%), while 4(0.2%) had expulsion of the device.

Table IV: Reasons for removal (discontinuation)

Reason	No (%)
Pregnancy while in-situ	2 (0.1)
Widowed	6 (0.4)
Causes cancer	8 (0.5)
Can move to the brain or heart	9 (0.6)
Desire for pregnancy	11 (0.7)
Other menstrual disorders	15 (0.9)
Menopause	17 (1.0)
In-situ > 5 years	25 (1.5)
Painful period	25 (1.5)
Husband's opposition	28 (1.7)
Menorrhagia	49 (3.0)
None	1454 (88.2)
Total	1649 (100.0)

Table IV shows the reasons for removal (discontinuation). The commonest reasons for removal were menstrual disorders 64(3.9%) and husband's opposition 28(1.7%). Two (0.1%) became pregnant while using the method and the devices were removed. In 25(1.5%) clients IUCD were insitu for 5 years while 17(1.0%) had menopause as reason for removal. 1454 (88.2%) expressed satisfaction with the device and did not want it removed.

DISCUSSION

The overall acceptance rate of 5.21% for intrauterine contraceptive device noted in this study showed a decline when compared with the rate of 77% recorded in a previous study in the same hospital¹¹. Such decline in

acceptance of modern contraceptive methods was also reported in Jos, Nigeria¹² from a rate of 37% in 1990-1991 to 9% in the year 2002-2003.

This may be attributed to economic barrier posed by transportation costs due to the relocation of the hospital to its permanent site. It is not unlikely that most clients who could not bear the economic burden turned to other providers or contraceptive methods available within the city.

Nine hundred and twenty nine (56.3%) of the clients were above 35 years of age and 59.2% of them were grandmultiparous. The older age of majority of the acceptors in this study is at variance with the observation in India¹³ where majority of the acceptors were within the age bracket 25 to 30 years. This is most likely due to the fact that majority (51.4%) in this study had post secondary education which has a way of delaying the women's age of marriage. Efforts should be made by family planning providers to reach vulnerable women early before the family size becomes unwieldy. Assistance offered after many women have had more than five children may be considered late.

Majority (88.9%) of the women had at least primary education. Education impacts positively on contraceptive use. This agrees with other reports^{11,14}. Education brings about attitudinal change through exposure to more information and thus better perception of the desire to use contraceptive.

The greatest awareness about IUCD was through friends (50.5%) and medical personnel (33.7%) of which Community Health Extension Workers (CHEW) had 5.2%. This agrees with Onwuhafua et al¹⁵ and shows that this cadre of health workers (CHEW) can be a useful vehicle for conveying information on family planning to the door steps of women especially those residing in remote rural areas.

The observation that 82.4% of these women used no form of contraception prior to acceptance of IUCD is consistent with contraceptive pattern in Nigeria which has shown a wide and unacceptable disparity between awareness (72%) of contraception and its use (8.9%)³. This has been attributed to fear of side effects and conflicts with religious beliefs¹⁶.

One of the reasons for changing from other methods of contraception to IUCD was difficulty in compliance (3.8%). This was not surprising since compliance is not a problem with this method (IUCD) of contraception as only a single act of motivation is required for a long term use⁷.

Heavy menstrual flow (5.8%), intermenstrual bleeding

(3.5%) and cramping pains (3.3%) were the commonest complications during first months of IUCD use. This is consistent with other reports^{7,9}. It has been shown that the cramping pains reduce with time, suggesting that the pain is unrelated to the IUCD type but an attempt to reject the IUCD as a foreign body¹⁷. In Bangladesh¹⁸, 40% of the 3678 users surveyed had their IUCD removed with about one fifth of the removals due to menstrual problems. Women should be counseled that some of these menstrual changes will usually diminish over time and the use of non-steroidal anti-inflammatory drugs (NSAID) may be helpful. Anderson and Rybo¹⁹ demonstrated that after one year of use, median blood loss fell to 10ml among 19 women with menorrhagia. However, where side effects are intolerable, the device should be removed and alternative method offered.

There was a low incidence of pelvic inflammatory disease (0.1%). This could be attributed to the aseptic technique adopted and proper patient selection which is a critical factor in successful IUCD use²⁰.

Twenty eight acceptors (1.7%) had their IUCD removed due to opposition from husband. This agrees with other reports^{21,22}. This is a reflection of the dominant role of men in family issues in sub-Saharan Africa. A study in Northern Nigeria¹⁴ found that 78% of the spouses among Hausa and Kanuri interviewed agreed that the wife has no say on family size. This calls for inclusion of men in family planning programme since it has been shown that their knowledge and attitude to family planning is still poorer than those of women¹⁰.

Eight (0.5%) and 9(0.6%) of the clients requested for removal of the device for fear of cancer and migration to other delicate organs in the body respectively. These are misperceptions which should be addressed by effective counseling.

Only 0.10% became pregnant while using the device and (1.3%) had the device in-situ for over 5 years. This affirms the fact that TCU 380A provides contraception as effective as that offered by sterilization²³. The Majority(88.2%) of the women had no reasons to remove the device and were satisfied.

This study has shown that IUCD (TCU 380A) is both safe and effective. Its use for both child spacing and limiting family size should be encouraged by stakeholders, government and Non-Governmental Organizations (NGOs). More efforts should be geared towards increasing the availability and accessibility of IUCD.

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