FIVE YEAR REVIEW OF INTRAUTERINE CONTRACEPTIVE DEVICE USE IN FEDERAL MEDICAL CENTRE OWERRI, NIGERIA

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ABSTRACT

Background: *Unplanned pregnancy poses a major public health challenge in women of reproductive age, especially in developing countries. The intrauterine device contraceptive (IUCD) is a widely used method of contraception.*

Objective: *This study aimed to determine the contraceptive prevalence at this centre, the socio-demographic characteristics and other parameters among clients that accepted intrauterine contraceptive device insertion.*

Materials/Methods: *This was a five year retrospective study of the period January 2010-December 2014. The family planning register of the department of Obstetrics and Gynaecology, Federal Medical Center (FMC) Owerri was used to trace the case records of the clients who had accepted intrauterine contraceptive devices over the 5-year period. Statistical package for Social Sciences version 17 for Windows was used to analyze the data. Chi-squared tests were used and differences were considered significant if $P < 0.05$*

Results:

During the period under review 900 clients out of 2511 acceptors of family planning method in FMC had IUCD insertion giving an a prevalence of 35.8%. About 65.3% were para > 5. The total percentage of clients that had at least primary education was 90.49% while 92.7% of the women were married in a stable relationship. The main indication for IUCD use in FMC was completion of family size in 82.9%. Over the five year period, the uptake of emergency IUCD insertion was however low (0.67%). There was no statistically significant difference in the uptake of IUCD (p=0.16)

Conclusion: *Utilization of IUCD in our centre is high; therefore there is a need for continuous reinforced counselling of clients, training of personnel in insertion and its use in other situations like emergency contraception.*

Key words: *Contraceptive, IUCD, prevalence.*

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INTRODUCTION

Many women of reproductive age are at risk of unintended pregnancy (112million worldwide with unmet needs).[1] When this is coupled with the lack of a perfectly ideal, reversible contraceptive, dilemmas are created for women who have certain risk factors or concerns about possible complications. An Intrauterine Contraceptive Device is a device inserted into the uterine cavity and left for varying periods of time for the purpose of contraception.[2,3,4]

Intrauterine contraception is safe and highly effective. In most instances it has been shown that infection rates are not increased with long term use and there are definite benefits to using a contraceptive that does not have unwanted hormonal effects, It is however dependent on health care providers for insertion and removal.[2,5,6-8] The commonest indication for IUCD use in Nigeria is completion of family size.[9] Other indications include child spacing, multiple caesarean sections (usually after 3 or 4), hypertension, sickle cell disease, psychiatric illness and for emergency contraception.[2] IUCD can be inserted after a vaginal or operative delivery or immediately following an aseptic abortion.[2,6,7]

Complications encountered during the procedure depend on the experience of the care giver and the characteristics of the woman.[10-11] The complications could include

pains at insertion in a woman with a small cervical opening, uterine perforation, haemorrhage, menorrhagia, dysmenorrhoea and risk of pelvic infections in women who are not in monogamous relationships.[2,8,10] The long-term complication may include failure of the device, expulsion, transmigration, and extrauterine pregnancies.[11,12-13]

MATERIALS AND METHODS

Methodology: The clients register of the family planning clinic in Federal medical Centre, Owerri was used to trace the case records of all clients who had accepted the IUCD over the 5-year period under review (January 1, 2010-December 31, 2014). The information extracted from the case files included age, parity, awareness of other contraceptive methods, interval between last delivery /abortion and IUCD insertion and the yearly trend. Other parameters included the indications for acceptance or refusal of

TABLE I:SOCIODEMOGRAPHIC CHARACTERISTIC.

AGE (YEARS)	NUMBER	%
25 – 29	150	16.7
30 – 34	164	18.2
35 – 39	217	24.1
40 – 44	203	22.6
≥ 45	166	18.4
Total	900	100.00
PARITY		
2-4	373	41.14
5-7	439	48.78
≥ 8	88	9.78
Total	82	100.00
Mean parity ± SD= 4.9 ± 1.8		
EDUCATIONAL LEVEL		
None	86	9.51
Primary	318	35.37
Secondary and Higher	496	55.12
Total	900	100.00
MARITAL STATUS		
Married	834	92.67
Widowed	66	7.33
Single	-	-
Total	900	100.00

Mean age ± SD= 36.5 ± 4.3

FIGURE 1: TIMING OF IUCD INSERTION

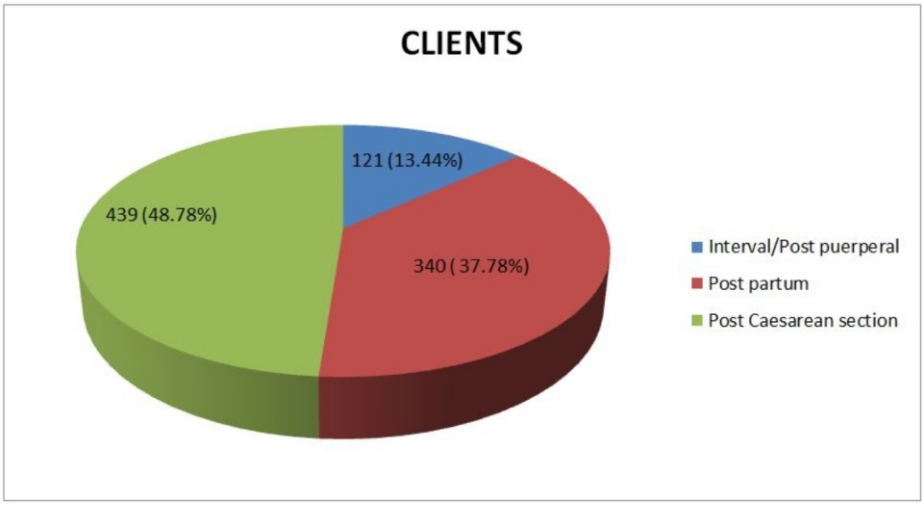

FIGURE 2: REASONS FOR ACCEPTING IUCD INSERTION

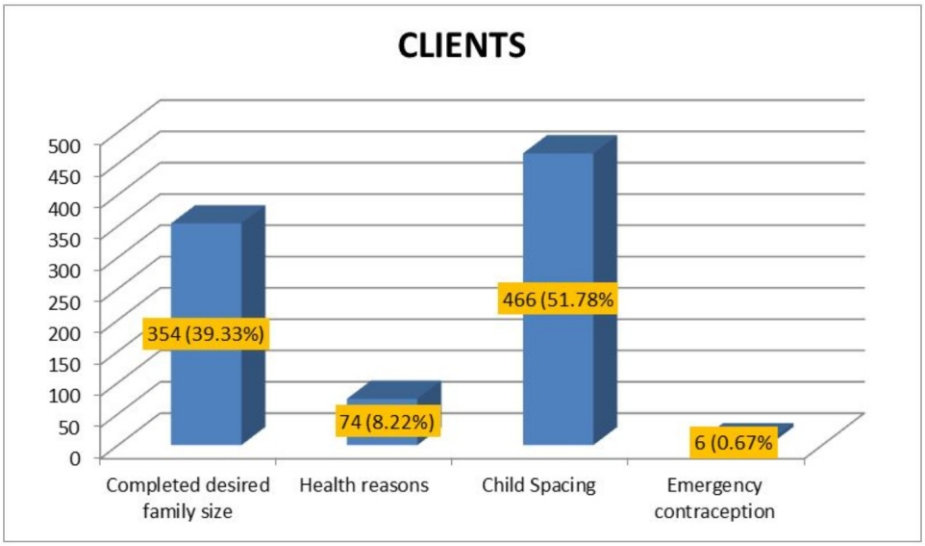

FIGURE 3:REASONS FOR IUCD REMOVAL

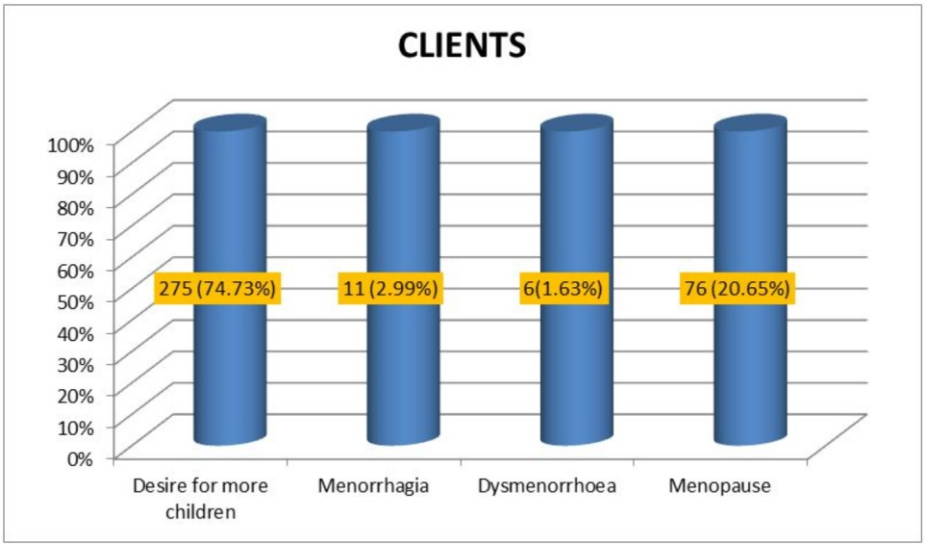

TABLE 2: LENGTH OF TIME INSITU FOR EACH REASON FOR REMOVAL

REASON FOR REMOVAL	TIME (MONTHS)	LENGTH (MONTHS)
Desire for more children	24 - 36	30
Menorrhagia	8 - 18	13
Dysmenorrhea	6 - 24	15
Menopause	120 - 156	138

MEAN NUMBER OF YEARS OF IUCD USE: MONTHS (4.08 YEARS)

TABLE 3:TRENDS IN IUCD USE

YEAR	TOTAL ACCEPTORS OF FAMILY PLANNING	TOTAL IUCD USE	%
2005	457	150	32.82
2006	460	164	35.65
2007	473	217	45.87
2008	544	203	37.31
2009	577	166	28.77
Total	2511	900	

IUCD. SPSS version 17 for Windows was used to analyze the data. Chi-squared tests were used where appropriate and differences were considered significant if $P < 0.05$.

RESULTS

During the 5 year review of IUCD use in FMC Owerri, 900 clients out of 2511 acceptors of Family Planning had this method giving an IUCD prevalence of 35.84%. The age range was between 25 and 45 years while the mean age (S.D.) of method use was 36.5± 4.3. Most of the clients (24.1%) were between 35 and 39 years old (Table 1). The parity range was 2 to greater than 8 and the mean parity S.D. was 4.9±1.8 with 58.56% being para 5 and above (Table 1). Majority of the clients had secondary or higher education (55.12%) but with primary education inclusive it was 90.49%. Thus 90.49% had formal education while 9.51% had no formal education (Table 1). About 92.67% of the women were married and in a stable relationship. Only 7.33% were widowed (Table 1). A total of 48.78% had IUCD inserted after caesarean section compared with interval insertion (13.44%) and postpartum 37.78% (Figure 1).

Reasons for IUCD use was completion of desired family size in 39.33% of the clients, with a large majority (51.78%) doing so for child spacing. 8.22% had it for health reasons while only 0.67% assessed it for emergency contraception (Figure 2). Three hundred and sixty eight (368) clients discontinued in the years studied (40.8%). Reasons for removal include desire for more children (74.73%), menopause (20.65%), menorrhagia (2.99%) and dysmenorrhea (1.63%).Figure 3. Mean length of time insitu was 30, 138, 13 and 15

months respectively for above mentioned variables (Table 2). Mean number of years use for the variables analyzed was 4.08 years. There was no significant difference in the yearly rate of IUCD use in FMC Owerri with a P value of 0.16. (Table 3). There was a peak in use between 2007 and 2008 with a reduction to base level in 2009.

DISCUSSION

With proven fertility and in most cases a demonstrated need for better contraception, many women with unintended pregnancies have an acute need for contraception that is effective and easy to use. Intrauterine contraceptive devices (IUCDs) are among the most effective forms of reversible contraception available worldwide with about 127 million current users[1]. There are 3 types – inert, copper bearing and hormone releasing types. It is highly effective with newer models having a failure rate of less than 0.5%[2,6,7].

In the 5 year study period, the incidence of IUCD use in FMC Owerri was approximately 35.84% which is similar to the incidence reported from Western and mid-Western parts of the country, and also in developed countries- 34% in Asia (China), 37% in the middle East (Isreal) but 26% in Europe (Finland)[1]. The yearly uptake of IUCD varied insignificantly from year to year with 2007 having the highest uptake, but generally the observed trend is that of a high and stable uptake rate of IUCD in Owerri. The mean age for women that had IUCD insertion in FMC Owerri was 36.5±4.3 and the most prevalent age group was 35-39 years which accounted for 24.1% of the clients. Majority of the clients (65.3%) were grandmultiparous. The mean parity was 4.9±1.8SD. Similar findings were made in Enugu, Ife and Jos.[9,14,15] This is however not the situation in developed countries where couples are choosing to have smaller families at young age[12]. This finding is dependent on cultural background as the client may still want more pregnancies especially if she is desirous of a particular sex. From the study, 90.49% of the clients had at least primary education. This is also in keeping with the findings of Ozumba and Ibekwe where about 88.6% had formal education[9]. The woman's educational level goes a long way in determining the frequency with which she accesses health care. Notwithstanding, women in low social classes with less education are more at risk of having large families which they are unable to support and are in urgent need of contraception. This is where the local government and community health comes in as a public health issue. Commitment to family planning coverage in the rural areas is essential in the reduction of maternal mortality and control of population growth.

About 93% of the clients were married and in a stable relationship implying spousal support. Ninety eight percent of the couples in a review done by Ozumba et al[9] were in stable relationships. There was no documented use of IUCD in nulliparous women in our center, probably due to the fear of tubal factor infertility and ectopic pregnancies which can reduce their chances of having their desired number of children when they decide to start a family. Even nulliparous women who were married in stable relationships did not access this service, studies have however been done to refute this[13]. Majority of the women (82.9%) in this study accepted IUCD because they had completed their family size while about 17% had IUCD insertion for health reasons such as cardiac diseases, chronic renal diseases etc. Only 6 cases (0.67%) of IUCD insertion was recorded for emergency contraception in 5 years, which is a very low value compared to the other reasons for insertion and may be explained by the fact that most of these women will have need for immediate service and IUCDs are provider dependent and cannot be accessed over the counter, on holidays or at weekends. Also, the need to rule out infections of the reproductive tract before its insertion with swab cultures may cause unacceptable delay, although some cases of IUCD insertion after 7 days of exposure have been found to be effective but

since it mostly acts as an abortificient, this may be unacceptable to women of some religious sects.

Timing of insertion was also a factor analysed. There was no case of immediate post abortion insertion of IUD in the population studied. However, 340 (37.78%) of the women had IUCD inserted immediately after vaginal delivery. There are worries about IUCD being inserted immediately post partum, one of which is the provider's fear of the IUCD's inability to anchor in a uterus with an open cervix, its risk of expulsion by an involuting uterus or perforation of a uterine fundus softened by the effects of pregnancy hormones. Studies have however shown that immediate post partum insertion of IUCD would decrease rates of unintended pregnancy.[16,17] Studies in the West have supported IUCD insertion within 10 minutes of delivery of placenta after vaginal delivery and caesarean section with expulsion rates ranging from 0% to 50%, with 0% recorded in the post caesarean group after 3 months.[18-20] The immediate post partum rates were however found to be unacceptably high by Emens et al who still advocated for delayed insertion.[21]

The study audit revealed that the device was well tolerated with high satisfaction[18,20]. At one year review, 87.6% of clients were still using the method[20]. Immediate insertion in Nigeria would help to cover women who would have been lost to follow up if advised on delayed insertion as some of the clients that present with miscarriages may have come from very remote areas and may not bother to return if so discharged. For women who have travelled from rural areas, this may be their only point of contact with the medical system. In such settings, the proportion not returning for delayed insertion may approach 100%.[4,16,17]

In this study, 40.8% of the clients were still using the method after 5years with a mean length of 4.08years of IUCD insitu. This was comparable to a study done in Jos which showed a mean length of 4.3years.[22] The clearest indication for removal was desire for more children with a rate of 74.73%. This was also found to be the most frequent indication in studies in Jos(30.7%)[22], Ibadan(57%)[23], Jordan(39.6%)[24] and Indonesia.[25] In inference, shorter acting IUCDs which may cost less may need to be revisited for clients who want to use the method for child spacing.[26] Also, the discontinuation rate for IUCD is high inspite of the high initial acceptance of the method in Owerri. In a country experiencing a rapid population growth where the prevalence of contraceptive use is low, it is imperative that policy makers and gynaecologists double their efforts at ensuring an appreciable continuation rate of contraceptive use among Nigerian women.

CONCLUSION

In conclusion, the uptake of IUCD is high in Owerri as it is in most other Nigeria towns, probably due to its efficacy, long term coverage and minimal client responsibility for effectiveness. There is still need for reinforced counselling of clients especially for emergency contraception and more personnel should be trained in IUCD insertion and removal with daily coverage of services.

Conflicts of interest

The authors hereby declare that there was no conflict of interest in this study.

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