



Intrauterine Contraceptive Device Use in Port Harcourt, Southern Nigeria: A Retrospective Analysis

Ojule John Dimkpa^{1*}, Oranu Emmanuel Okwudili¹
and Nnah Echichechi Wamadi¹

¹Department of Obstetrics and Gynaecology, University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria.

Authors' contributions

This work was carried out in collaboration between all authors. Author OJD designed the study, performed the statistical analysis and wrote the first draft of the manuscript. Authors OEO and NEW managed the analyses of the study and the literature search. All authors read and approved the final manuscript.

Original Research Article

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ABSTRACT

Aims: To re-evaluate intrauterine contraceptive use in Port Harcourt, Southern Nigeria and determine the uptake rate, effectiveness, side effects and discontinuation rate of IUCD.

Study Design: Descriptive retrospective analysis.

Place and Duration of Study: Family planning clinic, University of Port Harcourt Teaching Hospital, Port Harcourt, Nigeria, between 1st January 2007 to 31st December, 2011.

Methodology: The case files of all the clients who accepted intrauterine contraceptive device at the UPTH within the study period were retrieved from the record section of the family planning clinic and studied. Data on the client's socio-demographic characteristics, complications and reasons for contraception and discontinuation were extracted, entered into SPSS for windows 11.0 version and analysed.

Results: Of the 1, 434 new acceptors of contraception during this period, 366 accepted intra uterine contraceptive device giving an uptake rate of 25.5%. The mean age of the clients was 33.32±4.2 years and all were parous. The common complications were

*Corresponding author: Email: ojeydee@yahoo.com;

menorrhagia and vaginal discharge in 29 (26.6%) each, abdominal pain in 28 (25.7%) and secondary amenorrhea in 10(9.2%) clients. One unintended pregnancy occurred giving a pearl pregnancy rate of 0.27 per 100 woman years. Up to 108 clients discontinued IUCD use, giving a discontinuation rate of 29.5%.

Conclusion: IUCD is a highly effective and safe contraceptive method with a prevalence rate of 25.5% and discontinuation rate of 29.5% in Port Harcourt, southern Nigeria.

Keywords: Intrauterine device; contraceptive; Port Harcourt; Southern Nigeria.

1. INTRODUCTION

Although intrauterine contraceptive device existed in primordial forms centuries back [1,2], Dr. Grafenberg actually started its refinement and reported high success rate in preventing pregnancy in the 1920's [3]. To further improve the efficacy and reduce the side effects, the modern intra uterine device has either copper or levonegestrel attached to their frames and now comes in various shapes and sizes [4] resulting in prolonged usage period and now accepted as one of the best available contraceptive methods [5]. It is cost effective and independent of coitus making it an attractive option for Nigerian women and women in sub-saharan africa [5,6] and has consistently remained the most widely used long acting reversible contraceptive, with estimated 128 million users worldwide [7]. The IUCD prevalence rate in Nigeria varies from 34.5% to 66% of contraceptive acceptors in different family planning centres [6,8,9].

Interestingly, while the acceptability has remained high, the discontinuation rates of 2.8 to 42.9% reported in some Nigerian studies [10,11,12] is also a cause of serious concern. The major reasons for discontinuation include desire for pregnancy, menorrhagia, method change and vaginal discharge amongst others [12].

At the University of Port Harcourt Teaching Hospital, the intrauterine contraceptive device is still a common contraceptive offered to clients seeking contraception since the inception of the of the family planning clinic in 1986 and copperT 380 A is the main device used and had earlier been evaluated in a previous study [12]. Despite this, a negative perception of IUCD among healthcare providers and potential users has continued to affect its use. Periodic reports are therefore essential to provide updates on IUCD use in Port Harcourt, Southern Nigeria.

2. MATERIALS AND METHODS

The family planning clinic of the University of Port Harcourt Teaching Hospital (UPTH) Port Harcourt, Rivers state, South-South Nigeria, was established since 1986 and has been providing contraceptive services including barrier methods, spermicides, hormonal contraceptives and intrauterine contraceptive device. It draws its' clients from within and without the hospital and the catchment states of the Niger Delta region of Nigeria.

Prospective clients are duely counselled by family planning physcians and nurses and guided to make suitable choice. A detailed history and thorough physical examination and appropriate investigations are done and informed consent for IUCD obtained. The IUCD is then inserted by the physician or trained family planning nurse. Exclusion criteria are pregnancy, huge uterine fibroids and acute pelvic inflammatory disease.

In absence of complications, post insertion visit is at 6 weeks and subsequently 3 monthly. Clients are counselled to report to the clinic if complications arise and all complaints are documented and managed appropriately. Those who defaults 2 or more consecutive scheduled visits are considered lost to follow up.

Contraceptive failure is expressed as Pearl pregnancy rate, defined as number of pregnancies per 100 women using the contraceptive for a year (100 woman-years). Ethical clearance for the study was given by the hospital's Ethics committee.

The case files of all clients who accepted the IUCD between 1st January 2007 and 31st December 2011 were retrieved from the clinic records section and data extracted include their socio-demographic characteristics, reasons for contraception, side effects and reasons for discontinuation. The collected data were fed into a personal computer using SPSS for windows 11.0 version and results expressed in form of frequency, percentages and mean \pm SD.

3. RESULTS

Of the 1, 434 new acceptors of contraception during the study period, 366 accepted intrauterine contraceptive device representing 25.52%.

The age range of the clients was 20 – 51 years with a mean \pm SD of 33.32 \pm 4.2 years. Most (73.2%) clients were para 2-4, while 75 (19.6%) were grandmultiparous. No nulliparous woman accepted IUCD. The rest of the socio-demographic characteristics are as shown in Table 1.

Table 1. Selected socio-demographic characteristics

Variables	Frequency (n= 366)	Percentage (%)
Age (years)		
20-24	21	5.7
25-29	73	20.0
30-34	141	38.5
35-39	99	27.1
\geq 40	32	8.7
Parity		
0	0	0.0
1	26	7.1
2-4	268	73.2
\geq 5	72	19.7
Religion		
Christianity	350	95.6
Moslem	10	2.7
Others	6	1.7

Majority (55.5%) of the clients had previously used one form of contraception or the other, while 163 (44.5%) had not practiced contraception before. Of the 203 clients who had previously used a contraceptive method, 70 (34.5%) used intrauterine contraceptive device while the rest used hormonal contraceptives or barrier method as shown in Table 2.

Table 2. Previous contraceptive use

Type	Frequency	Percentage (%)
Condom	45	22.2
Pills	36	17.7
Injectables	47	23.1
Implants	5	2.5
IUCD	70	34.5
Total	203	100

IUCD- Intrauterine Contraceptive Device

Up to 193 (52.7%) of the clients used the IUCD for child spacing, 141 (38.5%) used it for 'permanent' contraception, 6 (1.7%) were undecided while the reason for contraception was not specified in 26 (7.1%) clients.

One hundred and nine women (29.8%) had side effects from IUCD use while 257 (70.2%) had no side effects. The main complications were menorrhagia in 29 (26.6%), vaginal discharge, 29 (26.6%), abdominal pain, 28 (25.7%) and secondary amenorrhea, 10 (9.2%).

Three (2.8%) had missing IUCD, while 2 (1.8%) had spontaneous expulsion of their IUCD as shown in Table 3. All the missing IUCDs were recovered from the uterine cavity. One accidental pregnancy occurred giving a pearl pregnancy rate of 0.27 per 100 woman years. One hundred and eight clients discontinued IUCD during the study period, giving a discontinuation rate of 29.5%. The common reasons for discontinuation include desire for pregnancy (36.1%), menorrhagia (18.5%) and unspecified reasons in 21.3%. the various reasons for discontinuation were as illustrated in Table 4.

Table 3. Complications of IUCD use

Side effect	Frequency	Percentage (%)
Amenorrhea	10	9.2
Menorrhagia	29	26.6
Missing IUCD	3	2.8
Expulsion	2	1.8
Abdominal pain	28	25.7
Vaginal discharge	29	26.6
PID	7	6.4
Unintended pregnancy	1	0.9
Total	109	100

PID- Pelvic Inflammatory Disease

Table 4. Reasons for discontinuation

Reason	Frequency	Percentage (%)
Menorrhagia	20	18.5
Amenorrhea	6	5.6
Desire for pregnancy	39	36.1
Expulsion	2	1.8
Missing IUCD	3	2.8
PID	4	3.7
Vaginal discharge	5	4.6
Severe abdominal pain	6	5.6
Unspecified	23	21.3
Total	108	100

4. DISCUSSION

The IUCD acceptance rate of 25.5% among new acceptors of contraception is higher than the 16.2% uptake rate [12] previously reported in Port Harcourt, but lower than prevalence rates reported earlier in other Nigerian studies [10,13,14]. This differential rates may be due to the time difference between the studies, change in attitude and perception of acceptors as a result of on going counselling and use of both new and continuous users in determining the rates by some authors.

The 30- 34 years age group still constituted the highest number (38.6%) of IUCD users in our centre, similar to our previous report and findings elsewhere [12,14]. This may be as a result of the observation that women much younger than this have higher bleeding and expulsion rates [14,15] and as such relatively contraindicated in this category of women, especially the nulliparae as recommended by the WHO [16]. Interestingly, there were no teenagers in this study, at variance with the previous study in Port Harcourt [12]. This may be a reflection the aggressive campaign against teenage marriages and therefore teenage pregnancy by government agencies and Non- governmental organisations (NGOs) in Port Harcourt and entire Nigeria.

All the acceptors were multiparous women in keeping with the earlier findings in Enugu, South-Eastern Nigeria, (13) but at variance with our previous report [12]. This may be as a result of the negative perception concerning future pregnancies in IUCD users. Fortunately, this fear has been dispelled by studies which proved that women who use IUCD have fertility rates in the first 6-12 months after discontinuation similar to non users [17].

Majority of the IUCD acceptors are of the Christian religion, similar to our earlier findings and has been attributed to the predominantly Christian background of the Southern Nigerian population [18]. This is at variance with studies in Northern Nigeria, where IUCD users are predominantly Muslims reflecting the Islamic background of the Northern Nigerian population [19].

Most (55.5%) of the acceptors had previously used one form of contraception or the other, and of this 34.5% had previously used IUCD. This may be as a result of greater awareness and benefit of family planning from on going counselling and advocacy and the harsh economic realities of keeping large family in Nigeria. That up to 38.5% of the acceptors used IUCD for 'permanent' contraception instead of sterilisation is not surprising in our environment where there is strong aversion for bilateral tubal ligation for permanent contraception in preference to other methods including injectable contraceptives [20]. Considering the complications of these other methods compared to sterilisation and the possibility a very long time use, concerted efforts should therefore be made to encourage and promote bilateral tubal ligation among the general public and our women in the reproductive age group desiring permanent contraception.

The discontinuation rate of IUCD in this study was 29.5%, much lower than the discontinuation rate 49.5% reported earlier in our centre [12]. This coupled with the relatively higher uptake rate of IUCD in this study is a reflection of the acceptability of this method of contraception in Port Harcourt, Southern Nigeria. The common reasons for discontinuation were desire for pregnancy, menorrhagia, amenorrhea and vaginal discharge similar to results of other studies [12,21]. Up to 4.6% discontinued IUCD due to persistent vaginal discharge. Earlier studies have confirmed this to be initiated at the time of insertion [22]. To prevent this, aseptic techniques at insertion and prophylactic use of antibiotics are practiced,

more so in our setting where there is high prevalence of sexually transmitted infections [23]. One unintended pregnancy occurred giving a Pearl pregnancy rate of 0.27% similar to reports of studies elsewhere [24]. Our IUCD expulsion rate of 1.8% is still comparably low [13], probably because we insert the IUCD outside the puerperium. To further reduce the expulsion rate, the newer gynaefix IUCD which has very low expulsion potential should be introduced in our centre.

The retrospective nature, the single centre, and the relative small sample size are some of the limitations of this study. A prospective study in collaboration with other family planning centres in Port Harcourt and other southern Nigerian cities will provide a more robust data and improve the sample size.

5. CONCLUSION

IUCD is a highly effective and safe contraceptive method with a rising uptake and delining discontinuation rates in Port Harcourt, southern Nigeria. Concerted efforts should be made to encourage the provision of newer generation IUCDs with fewer side effects and better safety profile to further promote IUCD uptake in our environment and improve on the discontinuation rate.

CONSENT

Not applicable.

ETHICAL APPROVAL

Ethical clearance for the study was given by the Hospital's Ethics Committee.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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