

Research Article**Request for Temporary Contraception at University of Calabar Teaching Hospital (UCTH), Calabar, Nigeria: Why the Preference for Cooper T IUD?**

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Abstract: The intrauterine devices (IUD) are widely used contraceptive methods all over the world. They are cheap, durable and very effective. This is a retrospective study directed at evaluating the request for temporary contraception over a 5-year period (01 January, 2004 to 31 December, 2008) in the University of Calabar Teaching Hospital with a closer look on the Cu T380A IUDS – its frequency of usage, reasons for removal and failure rate. The emphasis on IUD was because it was the most requested form of temporary contraception. Within this period, it was provided free by a non-governmental organization promoting safe motherhood in the state. The data on users of the various forms of temporary contraception provided by the family planning clinic of this centre from January 1, 2004 to December 31, 2008 were collated. The records of users of intrauterine devices during same period were then analyzed. The inclusion criteria were all patients who enrolled for family planning in the clinic. Intrauterine device (IUD) was the commonest form of contraception used within this period with a rate of 45.06%. There was a yearly increase in request for IUD over the period. Out of 6,337 users of the method, 2196 (34.65%) belonged to the age group of 25 – 29. There was a corresponding decrease in request for the method with age, accounting for 9 (0.14%) at age 50 and above. Only 5.13% of the users requested for reversal. The major reason for removal was the desire for pregnancy (51.38%). Also only 0.31% method failure was recorded. The method was also found to be easily affordable and effective. There is undoubtedly a yearly increasing demand for intrauterine device usage. Copper T IUD is cheap, easily available and easy to use. It should be encouraged in our clinics.

Keywords: Temporary contraceptives, Copper T IUD, Calabar-Nigeria

INTRODUCTION

One of the most sensitive and intimate decisions made by an individual or by a couple is that of fertility control. This decision is often based on deeply held religious or philosophical convictions. Thus, the clinician must approach the patient's fertility needs with particular sensitivity, empathy, maturity and non judgmental behavior [1]. Many couples use contraception to space their children or to limit the size of their family. Others desire to avoid childbearing because of the effects of pre-existing illness on the pregnancy, such as severe diabetes, or heart disease [2-4]. As a matter of public policy some countries, especially less developed, promote contraception in an effort to reduce the undesired population growth [5, 6].

There are several methods of contraception. Health care providers must provide detailed information about the use of methods, benefits, risks, and side effects to all the persons requesting contraception so that an informed choice can be made relative to a particular method [1, 7].

Different methods of contraception are therefore in use today [2-8], and each has over time been undergoing development towards achieving the above goals. The intrauterine device (IUD) is one of the most widely used contraceptive methods in the world today. It has undergone a lot of development, from the first generation or non-medicated devices dominant in the 1960s to the present day 3rd generation devices. The second generation medicated IUDs of the 1970s and 80s had primarily copper added to them.

The third generations IUDs are improvement on the second generation devices and some are impregnated with progestogen [9-11].

The first generation devices include the Lippes loop and Saf – T coil made of plastic, the M – device and the Y – device made of stainless steel, the Dalkon shield made of Polyvinyl acetate, the copper 7 (Gravigard) and copper -T 200.

The second generations IUDs include the Nova – T (Noncard) and multiload 250. The basic differences

in the copper devices are in the shape and the amount of copper [1-10]. The third generation IUDs commonly in use now include copper T380A, 380S, 380Ag, multiload 375, copper safe 300 (Cu-safe 300), copper Fix 330 or Flexigard 330 and Levonorgestrel releasing IUD (LNG-IUD or Levonal) [6, 8]. The third generations IUDs have been developed to reduce some of the common side effects related to IUD use as well as combine the benefits of IUD and hormonal contraception in other cases. Some of these devices have design modifications to reduce the incidence of pain, spontaneous expulsion and bleeding [8]. Copper T380A is by far the most popular IUD in the world and it is the device used commonly in UCTH amongst other methods. It is introduced aseptically into the endometrial cavity through the cervical canal. A large variety of shapes and sizes have been tried with varying degrees of contraceptive effectiveness [6-12].

At the present, only 3 IUDs are available for use in the United States; the progestasert, the copper T (Cu 380A or paragard) and a Levonorgestrel releasing system (mirena). The progestasert is made of a special polymer that contains a reservoir of 38mg of progesterone, which is released at a rate of 65mcg per day. However, due to this design the useful lifespan of this device is only 1 year. The paragard (Cu T 380A) is wound with copper wire that creates a surface area of copper 300mm^2 on the vertical arms and 40mm^2 on each of the transverse arms, the lifespan of this device is at least 10years [18].

Recently, an intrauterine system containing Levonorgestrel (released at 20ug/d; mirena) has been approved for use. It provides contraception for up to 5 years. Just how IUDs act to prevent conception is not known. The most widely observed phenomenon is mobilization of leukocytes in response to the presence of the foreign body. The leukocytes aggregate around the IUD in the endometrial fluids and mucosa, and to a lesser extent, in the stroma and underlying myometrium.

It is hypothesized that the leukocytes produce an environment hostile to the fertilized ovum [15, 18]. Efficacy with the CuT380A device is high, with a failure rate of less than 1% per year with prolonged use [14-18].

Either bleeding or pain or both are common reasons for removal of an IUD and reversal of the method of contraception. As is the case with expulsion, the incidence of pain or bleeding is more or less proportional to the degree of endometrial compression and myometrial distention brought about by the IUD.

The highest risk of pelvic infection associated with the use of IUD (3 or 4 – fold increase) occurs around the time of insertion, suggesting that

endometrial cavity contamination is the major mechanism [5].

There are absolute contraindications to IUD use, these include current pregnancy, undiagnosed abnormal vaginal bleeding; acute cervical, uterine or salpingeal infection; past salpingitis; and suspected gynaecologic malignancy [10, 12, 18]. The major reason for removal of IUD is desire for pregnancy. Medical reasons for removal are partial expulsion, usually occurring in the first few months of use; persistent lower abdominal cramping, abnormal bleeding per vagina or anaemia, accounting for about 20% of removals during the first 3 months; acute salpingitis or Actinomyces on Pap smear, pregnancy; intra abdominal placement or perforation; and significant post – insertion pain, which may indicate improper placement or partial perforation [9].

MATERIALS AND METHODS

The data on users of the various forms of temporary contraception provided by the family planning clinic of this centre from January 1, 2004 to December 31, 2008 were collated. The records of users of intrauterine contraceptive device during same period were carefully studied. During this period a total of 14,062 users were provided with various forms of temporary contraceptives. Of these, 6,337 were IUDs. Other parameters of the IUD users' reviewed were their age distributions and reasons for reversal. The results obtained were analyzed using simple percentages and ratios.

RESULTS

Fig. 1 shows a summary of the various forms of temporary contraception provided to clients by the family planning clinic during the five year period under review. IUD was highest with 6337 representing 45.06% of all the clients. Condoms accounted for 22.91% while vaginal foam tablets were the least provided (2.41%)

Table 1 shows the various methods offered and the age distribution of users of the various methods of contraception reviewed. The age group of 25-34 years had the highest usage. As expected, contraceptive usage was low between the ages of 15-24 years. This age group also prefers the pills and condom. Contraceptive use started declining after the age of 34 years.

Fig. 2 illustrates the age distribution of the IUD users. Majority of the users fall between the ages of 24-34 years (67.76%). At the age of 50, only 9% of the clients were given IUD for contraception.

The overall request for removal of IUD was 5.13% and the indications for removal were many as shown on Table 2. The need to get pregnant accounted for 65.22% of demand for removal while method failure was just 0.31%.

Table 1: The age distribution of IUD and other methods

Age Group	IUD	Pills	Injectables	Norplant	VFT	Condom	Total
15-19	168	420	6	4	118	60	776
20-24	894	448	52	28	82	12	1628
25-29	2196	220	148	218	60	390	3232
30-34	2098	168	420	352	48	428	3510
35-39	620	88	646	420	28	1040	2842
40-44	280	60	240	142	10	1142	1874
45-49	72	12	38	18	4	30	174
50 and above	9	4	2	2	1	6	26
	6337	1416	1552	1184	351	3222	14062

VFT= Vaginal foam tablets

Table 2: Shows the indications for removal of IUD

Indications	Number	Percentage (%)
To get pregnant	212	65.22
Removal and re-insertion	43	13.23
Bleeding per vagina	7	2.14
Husband's request	8	2.46
Method failure	1	0.31
Persistent vaginal discharge	10	3.08
Lower abdominal pains	7	2.15
Dizziness	1	0.31
Waist pain	2	0.62
Internal heat (climateric)	5	1.54
Missing tag	2	0.62
Prolonged menses	7	2.15
Amenorrhoea	6	1.85
Weight gain	1	0.31
Constant headache	1	0.31
Weight loss	1	0.31
Husband's death	4	1.23
Menopause	3	0.92
Doctor's request	2	0.62
Dysmenorrhoea	1	0.31
Menorrhagia	1	0.31
	325	100

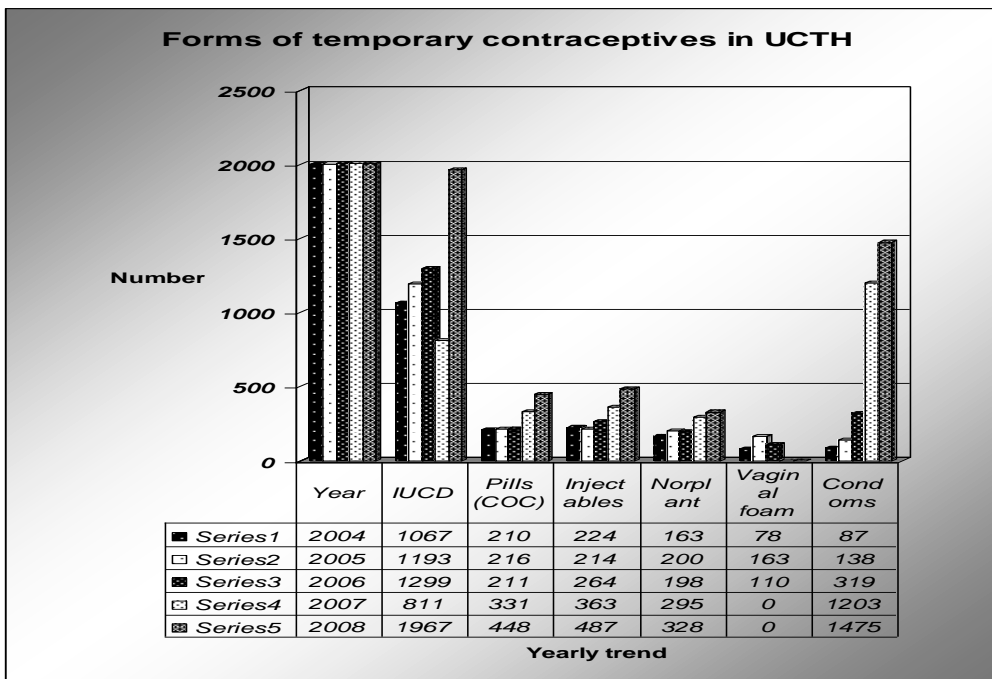


Fig. 1a: Forms of temporary contraceptives in UCTH

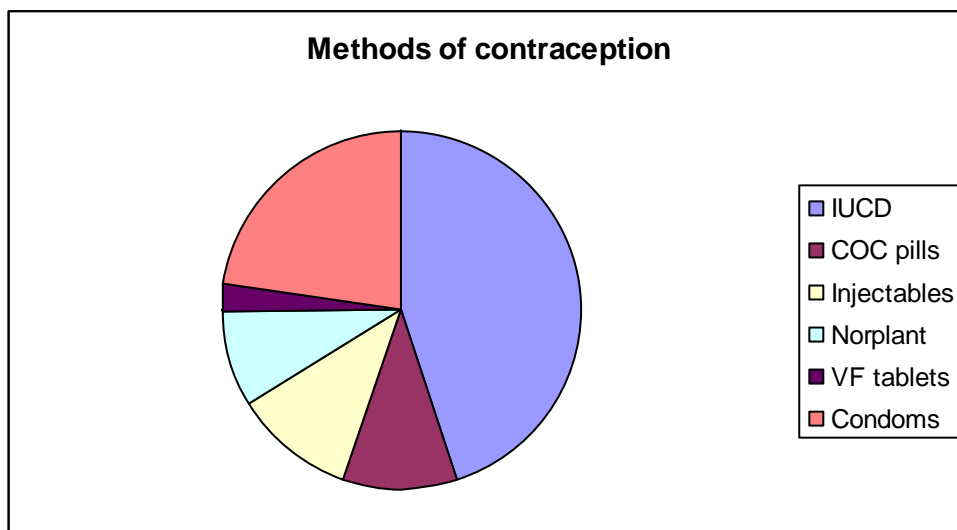


Fig. 1b: Methods of contraception

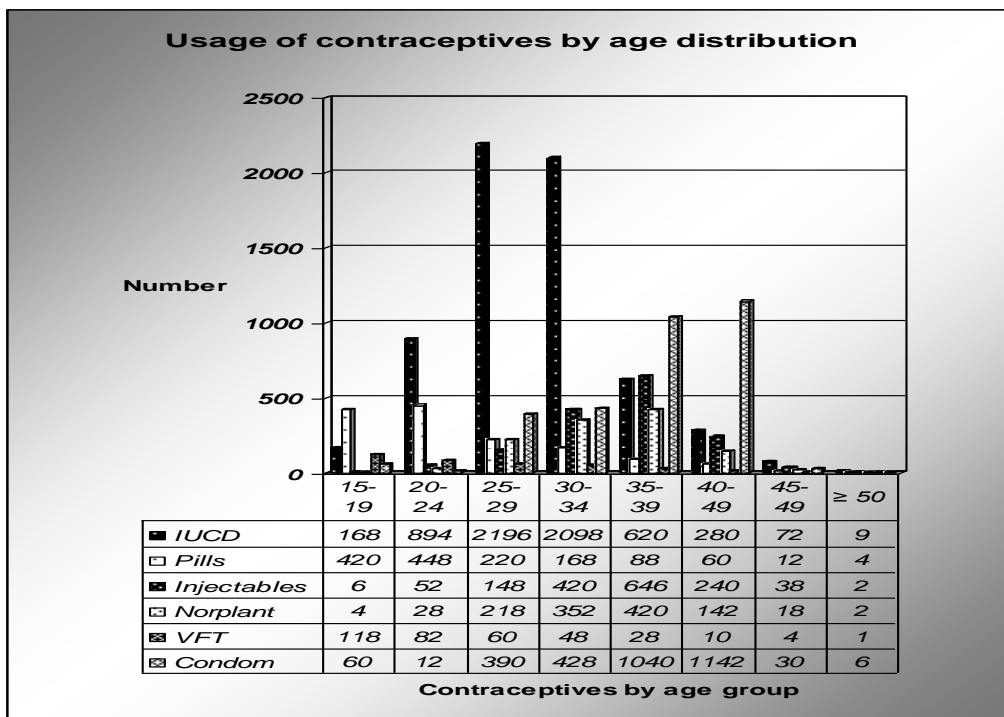


Fig. 2: Age distribution of use of contraceptives

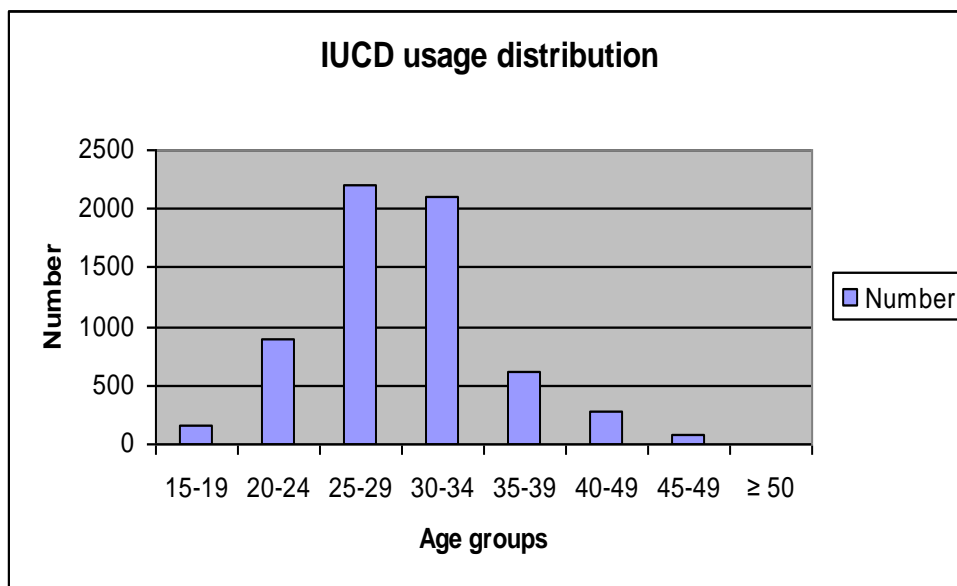


Fig. 2b: IUCD usage distribution and age

DISCUSSION

Contraceptive prevalence in Nigeria, representing the percentage of couples in the reproductive age group using modern contraception is low (6%) compared to over 50% worldwide [6, 7]. Only 14,062 users had access to various forms of temporary contraceptives during the period under review which is similar to findings all over the country and a far cry from the world over. Of this figure, 6337 (45.06%) used intrauterine device (IUD), accounting for the commonest form of contraception provided by the centre. This is similar to studies in other parts of the country [6, 7]. This is because advances in intrauterine

contraceptive device (IUD) technology have led to the development of highly effective, safer and long – lasting devices [8]. It might also be due to the fact that this form of contraception was provided free during this period of study.

There was an increased demand for various forms of contraception, especially during the peak of reproductive ages of 25 – 39 years with the highest demand of 3510 (24.96%) noticed among the group of 30 – 34 years. There is a corresponding decreasing request for contraception thereafter. This is understandable since only sexually active women need

to prevent pregnancy and this age group falls within the very sexually active and most fertile women in the society. It agrees with findings all over the world [1, 4, 5, 7].

The copper T 380A IUD was the most requested form of temporary contraception even in this age group. This age groups 25 – 34 when combined accounted for 67.76% of the total request for the device. This is also the age at which most individuals aspire to attain the peak in their career, hence the request for contraception so as not be hindered by unwanted pregnancies.

Very few side effects were recorded .About ten patients (3.08%) complained of persistent vaginal bleeding which was treated with some antibiotics. Another group 2.14% experienced vaginal bleeding which might not have been related to the procedure. This actually stopped after counseling and reassurance. These devices, though effective, are not without side effects, which often prompt the users to request for removal. Only 325 (5.13%) of those using the copper T requested for removal. The commonest request for removal, however, was the desire to get pregnant. This accounted for 65.22%. This was followed by removal and re-insertion following expiration of the period of usage (13.25%).

Contraceptives do fail occasionally. Failure rates are described by the Pearl Index, which refers to the number of failures per 100 women using the contraceptive method for a year (100 women years) [9]. A failure rate of 1 (0.3%) was noted over a 5 year period in this study. Other cases necessitating removal of the copper T device are vaginal bleeding (2.14%), persistent vaginal discharge (3.08%), prolonged menses (2.15%) and lower abdominal pains (2%)

CONCLUSION

With the rapid increase of population and the deleterious effect on the health of the mother and child, contraception is a necessary tool especially in the developing countries to reduce maternal mortality. The Cu T380A is very effective, safe with fewer side effects, long-acting and easily available and affordable. With respect to the combination of high efficacy, good continuation rates, low product cost and long life, the IUD is the acme of reversible methods of contraception.

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