

## **Discontinuation Pattern Of Norplant Among Implant Acceptors At The Family Planning Clinic, University College Hospital, Ibadan, Nigeria**

**Okunlola M.A Owonikoko K.M; Adekunle .A O and Morhason-Bello I.O**

*Department of Obstetrics and Gynaecology, University College Hospital, Ibadan, Nigeria.*

### **SUMMARY**

*This is a retrospective study of 136 Norplant acceptors. We assessed the reasons for the discontinuation during the prescribed 5-year period of use. The continuation rates for the first, second and third years were 94.1%, 83.8%, and 79.4% respectively. The commonest reason for discontinuation was menstrual irregularities (40.43%) of clients followed by the desire for pregnancy in 29.79%. Contraceptive failure as a reason for discontinuation of Norplant use was not recorded in any of the clients in this series. In conclusion, it is our belief that to sustain high continuation rates of Norplant use the clients require proper and effective counselling and support on the side effects of irregular bleeding patterns, which when occurs will be better coped with.*

**Key words:** *Family planing, Norplant, Discontinuation pattern*

### **INTRODUCTION**

All the evidence that has accumulated over the 30-40 years that contraceptive implants have been in existence indicates that they constitute one of the safest and most effective forms of contraceptives that exist. The main advantage of implants over other methods of contraception is their extremely high degree and long duration of efficacy following insertion. In addition, the doses of progestogen they deliver are lower than those given in oral and injectable contraceptives and blood levels are very

stable over long periods[1].

Norplant (Levonorgestrel Implant) is a long-term reversible method that provides continuous contraception for as long as 5 years. In 1996, more than 1 million women in United States and over 3.6 million women worldwide had been implanted with Norplant[2]. Among the drawbacks of implants is the need for a surgical procedure for their insertion and removal. Although the procedure is a minor one, it should only be performed by trained personnel and it can therefore be relatively costly. The most notable drawback of implants, however, and the one that most women invoke as a reason for discontinuing the method, is the high prevalence (in 11-12% of users) of menstrual problems. These problems are typical of all contraceptives that use only progestogens, as distinct from oral contraceptives that use a combination of a progestogen and an oestrogen. Since Norplant is intended to be used as long-term contraception, information concerning its discontinuation is very important. Subgroup analysis of Norplant users showed that younger age and low parity predicted early removal. Desire for pregnancy, menstrual problems and personal wishes were major reasons for its discontinuation[3]. Adverse effects of Norplant especially changes in menstrual bleeding pattern are the most common reason for early removal of Norplant among women in the United States[4]. Other reasons for removal include headache, weight gain, acne, hair loss and depression or mood changes.

Norplant as a family planning method was introduced into clinical practice in Nigeria in the 1980s. In a study in Enugu, Nigeria, between 1992-1995 only 8% family planning clinic clients opted for Norplant, their reasons for its choice was based

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**All Correspondence to Dr.K.M. Owonikoko**

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Department of Obstetrics & Gynaecology,  
University College Hospital, Ibadan,  
Nigeria.

on attainment of their desired family size, economic considerations and decline in health condition with use of other method. The same study showed that menorrhagia is the major reason for its discontinuation, followed by irregular menses, amenorrhoea, and dermatitis at site of insertion and elevated blood pressure[5].

The aim of this study was to determine the rate and reasons for discontinuation of Norplant among implant acceptors at the University College Hospital, Ibadan. This information will be useful in drawing up interventional programmes designed at improving its sustained use and better continuation patterns in subsequent users of Norplant in developing countries in general and in Nigeria in particular.

**MATERIALS AND METHOD**

This was a retrospective study of 5years duration reviewing Norplant users who had insertion from January 2<sup>nd</sup> to 31<sup>st</sup> December 1998 at the family planning unit of the University College Hospital, Ibadan, Nigeria. This group of women were followed up for a period of 5years (i.e.) until December 2003. Those women who discontinued the method during the study period were noted. Relevant information was retrieved from their case records. The period of contraception in this study was the interval between the date of insertion and removal of the Norplant. Various reasons adduced for discontinuation was recorded.

The data was entered into an SPSS Version 10 package and analysed by the SPSS data processor. The initial analysis was by generation of frequency tables and further analysis was by cross tabulation of the observed factors against the reasons for discontinuation. Observed differences were subjected to chi-square analysis at 5% level of significance.

**RESULTS**

The total number of clients who had Norplant implanted from January 2<sup>nd</sup> to 31<sup>st</sup> of December 1988 was 136. Their age range was 19 to 50 years with a mean age of 32.74 ±6.75 years. The mean period of use was 3.18years ±1.96 years. Ninety-eighty (72.3%) clients were Christians while Thirty-five(25.5%) were Muslims. Eighty-four (61.7%) of the clients had tertiary education, 26 (19.1%) had

up to secondary education, while 14 (10.6%) had primary education. 12 of the clients (8.5%) had no formal education.

Figure 1 shows the discontinuation rate over the period of the study. Forty-seven (34.6%) of the clients continued to use their implant until the expiry period of 5 years. Figure 2 shows the different reasons adduced for the discontinuation of the device. Table I shows possible determinants of discontinuation, chi-square and p value generated from cross tabulation of these factors and the reasons for discontinuation.

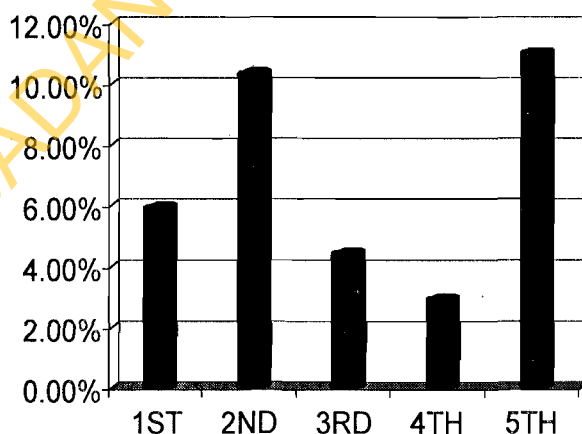


Fig. 1: Discountiunation rate

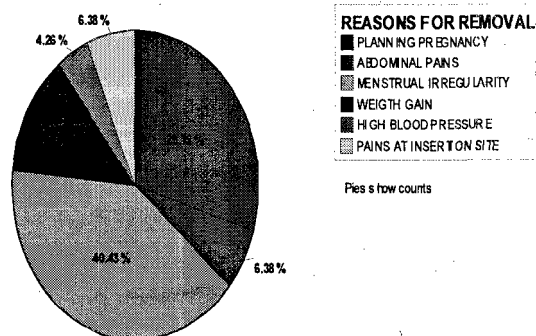


Fig. 2: Reasons for discontinuation

The reasons given for discontinuation included menstrual irregularity (40.43%), desire for another pregnancy (29.79%) and weight gain (12.77%). Abdominal pain and pains at the site of insertion were the reasons for discontinuation in 6.38% of women and elevation of the blood pressure was the reason in 4.26% of the clients.

**DISCUSSION**

This study shows that Norplant implant contraception acceptance is still relatively low in Nigeria among women of reproductive age group. However; there was relatively high continuation rate among the users. The continuation rate of 94.1% in the first year of use is similar to what obtained in the Enugu, study

**TABLE 1:** Factors associated with common reason for removal of Norplant

Religion	Reasons for removal						Total
	Planning Pregnancy	Abdominal Pain	Menstrual Irregularity	Weight Gain	High blood Pressure	Pain at Insertion site	
Moslems	3 (21.4%)	0	6 (31.6%)	1 (16.7%)	0	2 (66.7%)	12(25.5%)
Christianity	11 (78.6%)	3 (100%)	12 (63.2%)	5 (83.3%)	2 (100%)	1 (33.3%)	34(72.3%)
Others	0	0	1 (5.3%)	0	0	0	1(2.2%)

*P Value=0.42 (not statistically significant)*

**TABLE 1b:** Educational level and reasons for removal crosstabulation

Educational level	Reasons for removal						Total
	Planning Pregnancy	Abdominal Pain	Menstrual Irregularity	Weight Gain	High blood Pressure	Pain at Insertion site	
None	1 (7.1%)	0	1 (5.3%)	0	0	2 (66.7%)	4(8.5%)
Primary	1 (7.1%)	0	2 (10.5%)	2(33.3%)	0	0	5(10.6%)
Secondary	3 (21.4%)	1 (33.3%)	2 (10.5%)	2(33.3%)	0	1 (33.3%)	9 19.1%)
Tertiary	9 (64.3%)	2 (66.7%)	14 (73.7%)	2(33.3%)	2 (100%)	0	29(61.7%)

*P Value = 0.64 (not statistically significant)*

**TABLE 1c:** Number of living children and reasons for removal crosstabulation.

Number of living Children	Reasons for removal						Total
	Planning Pregnancy	Abdominal Pain	Menstrual Irregularity	Weight Gain	High blood Pressure	Pain at Insertion site	
1-4	13 (92.9%)	2 (66.6%)	14 (73.7%)	4(66.7%)	2 (100%)	0	35(74.5%)
5-7	1 (7.1%)	1 (33.3%)	5 (26.3%)	2(33.3%)	0	3 (100%)	12(25.5%)

*P Value = 0.042 (Statistically significant)*

Nigeria[4] and in some developed Countries like Chile, China and Singapore[6,7]. Enugu, Nigeria [5] and in some developed Countries like Chile, China and Singapore[5, 6, 7]

Menstrual irregularity was the most common reason for the discontinuation and this is in line with findings in earlier related studies[5, 8, 9, 10]. Prolonged and heavy menses is a common complaint in the early months of Norplant use, thus clients require proper prior counselling and warning in order to achieve a high level of satisfaction and better continuation rates.

A desire for further pregnancy was the second most common reason for removal of Norplant in this study. This however differs from what obtained in the previous studies[5, 7, 11]. This may be explained by the fact that many of the clients in this study were highly educated women who commenced their childbearing careers late but wanted a long acting contraceptive method. Also low parity was shown to encourage early discontinuation in this study as it had been found previous studies[8].

The third commonest reason for discontinuation was weight gain. This is similar to the finding in previous studies[7, 12]. Other reasons of discontinuation were attributed to high blood pressure, pain at insertion site and occasional abdominal pain. Some of these symptoms occurred transiently and subsided spontaneously [13]. There was no case of contraceptive failure as a reason for discontinuation.

In conclusion, this study showed that unwanted side effects particularly of menstrual irregularities and a desire for further childbearing were the main reasons for Norplant discontinuation. To achieve better tolerance of the method and to ensure lower discontinuation rates of Norplant in this environment, proper patient selection is crucial. Also, extensive and effective counselling on the intolerable but transient side effects is necessary as studies have shown that although bleeding may be prolonged or frequent in women using Norplant, the average total blood loss is about the same or less than what obtains in women menstruating normally.

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