

Profile Of Norethisterone Oenanthate (Noristerat) Acceptors At The Rivers State University Teaching Hospital, Southern Nigeria: Ten Years Review

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Abstract:

Background: *Noristerat is one of the long acting progestogen-only contraceptive injections used by more than 16 million women worldwide. It is given deep intramuscularly at interval of 2 months. It is effective, safe, convenient, not related to coitus, easy to use, and non reversible.*

Objective: *To determine the prevalence and socio-demographic characteristics of Noristerat acceptors at Rivers State University Teaching Hospital (RSUTH).*

Methods: *This was a retrospective study of clients' records in family planning clinic at the RSUTH over a period of ten years. Their records were retrieved, reviewed; data extracted, coded and analyzed using the statistical package for social sciences (SPSS) IBM version 25.0 (Armonk, NY)*

Result: *The uptake of Noristerat contraceptive among 1893 contraceptive acceptors at the RSUTH during the study period is 161 (8.5%). The modal age group was 30-34 years accounting for 59 (36.6%). Mean age \pm SD was 30.9 ± 4.6 years. Age range was 19-43 years. One hundred and fifty nine (96.9%) clients had formal education. Majority of the clients had secondary level of education, 85.7%. One hundred and twelve (69.6%) were multipara. Most of the clients were married 153 (95.0%) and of Christian religion 153 (95.0%). Clinical personnel were the commonest source of information accounting for 129 (80.1%).*

Conclusion: *The uptake of Noristerat during the study period was low. Most women who used noristerat were young, educated, multiparous and married. Education and increased patient awareness are advised to increase the uptake of this effective and safe method of contraception.*

Keywords: *Noristerat, RSUTH, Acceptors, socio-demographic characteristics, Rivers State.*

I. INTRODUCTION

Contraceptives have been used over the years to prevent unwanted pregnancies. Among the various contraceptive methods available, hormonal agents are the most popular and most effective non surgical method of contraception worldwide. Nigeria has a fertility rate of 5.7% and contraceptive prevalence among women of 16%.

Norethisterone Enanthate (Noristerat, NET-EN) is an injectable progesterone only contraceptive with anti

gonadotrophic properties. It is long acting, reversible and is given intramuscularly at a dose of 200mg two monthly in the first 5 days of a normal menstrual cycle but can also be given at any time in the menstrual cycle after ruling out pregnancy. It is an oil suspension that is effective and convenient with a pregnancy rate close to zero when used correctly. In Africa, noristerat and other injectable progesterone only contraceptives have the advantage of not requiring storage and they enable the women to keep it as a secret because their husbands may object to their use.

The mechanisms of action include inhibition of follicular development thereby preventing ovulation and inhibition of sperm penetration by causing changes in the cervical mucus. It also causes thinning and atrophy of the endometrium thereby preventing implantation of a fertilized ovum. Noristerat does not cause an increased risk of deep vein thrombosis, pulmonary embolism, stroke or myocardial infarction. It reduces the risk of ovarian cancer, pelvic inflammatory disease, uterine fibroids, ectopic gestation, endometrial cancer and endometriosis. There is reduction in seizures and sickle cell crisis in women with epilepsy and sickle cell disease respectively. NET-EN is associated with loss of bone mineral density and increased risk of bone fracture which reverses after stopping its use. This is why United States Food and Drug Administration (USFDA) has discouraged its use for more than two consecutive years. Noristerat is commonly used in Nigeria, hence the need for this study which is the first of its kind in the family planning clinic of our centre. The study was done to determine the uptake rate of noristerat, socio-demographic characteristics of its acceptors, yearly trend and the sources of information of this type of contraceptive.

II. MATERIALS AND METHODS

This is a retrospective study carried out at the family planning clinic of the Rivers State University Teaching Hospital (RSUTH), a newly established teaching hospital in Port Harcourt, the capital of Rivers State in South-South geopolitical zone of Nigeria. The clinic gets its clients from within Port-Harcourt and the neighbouring towns and villages. Its own records section is different from the hospital records and this makes it easy to retrieve the clients' case notes. The clinic is headed by a consultant Gynaecologist, with the support of trained family planning nurses and resident doctors.

At presentation, the clients were warmly welcomed by trained family planning nurses and physicians who also counseled them. The clients were allowed to make informed choice based on their needs and available contraceptives suitable for them. Thereafter medical history and clinical examination were done. Urine analysis and pregnancy test were also done for the clients and informed consent obtained. During the study period, the only available progesterone-only injectables were intramuscular injections of DMPA and Noristerat. The nurses injected 200mg of noristerat into the deltoid or gluteal muscle within 7 days of normal menstrual period after excluding pregnancy. It was also given six weeks post partum in lactating mothers. Follow up visits were at the first four weeks and thereafter two monthly. The clients were encouraged to come to the clinic if there were complications and these were recorded in the clients' cards. At each follow up visit, the clients were weighed, blood pressure checked and complications managed appropriately. Clients who did not follow up for two or more consecutive scheduled visits were regarded as lost to follow up.

The record cards of all the clients that accepted Noristerat between 1st January, 2008 and 31st December, 2017 were retrieved and studied. The information extracted from the cards included the socio-demographic characteristics of the clients, indications for their use and source of information

concerning contraception. The data was analyzed with the statistical package for social sciences (SPSS) IBM version 25.0 (Armonk, NY) using frequency counts and percentages.

Results:

There were 1893 contraceptive acceptors during the study period, out of which 161 women accepted Noristerat resulting in an acceptance rate of 8.5%. One hundred and nineteen (73.9%) women used it for birth spacing, 33 (20.5%) women had completed their family size and used it to prevent further pregnancy. There was no reason for the use of Noristerat indicated in the cards of 9 (5.6%) clients.

The ages of the clients ranged from 19 to 43 years. Majority of the clients 59 (36.6%) were between 30-34 years. The mean age was 30.9 ± 4.6 years. Majority of the clients were multiparous women, 112 (69.6%) and Christians 153 (95%). The parity range was 1 to 11 and modal parity was para 3. One nullipara (0.6%) accepted and used NET-EN during the study period. Grandmultiparous women were 22 (13.7%). One hundred and fifty nine (98.8%) women had formal education out of which 138 (85.7%) had secondary level of education while 16(10%) and 5(3.1%) had tertiary and primary levels of education respectively.

Majority of the clients were married 153 (95%) while 8 (5%) were single. The occupation of the clients were not documented in the patients' cards therefore could not be analyzed. The socio-demographic characteristics of the NET-ET acceptors are shown in table 1.

Variable	No.	Percentage (%)
AGE		
<20	1	0.6
20-24	14	8.7
25-29	51	31.7
30-34	59	36.6
35-39	32	19.9
40-44	4	2.5
EDUCATIONAL STATUS		
No formal education	2	1.2
Primary	5	3.1
Secondary	138	85.7
Tertiary	16	10.0
RELIGION		
Christianity	153	95.0
Islam	6	3.8
Others	2	1.2
PARITY		
Nullipara	1	0.6
Primipara	26	16.1
Multipara	112	69.6
Grand multipara	22	13.7
MARITAL STATUS		
Single	8	5.0
married	153	95.0

Table 1: Socio-demographic characteristics of the clients

Sources of information on contraception are shown in table 2. One hundred and twenty nine (80.1%) women obtained their information concerning contraception from clinical personnel and 16 (9.9%) from friends and relatives. Seven (4.4%) clients got theirs from community health workers, one (0.6%) from print media and three (1.9%) from

radio/television respectively. The source of information on contraception for two (1.2%) women was through outreach.

Sources of Information	No. of clients	Percentage (%)
Clinical personnel	129	80.1
Friends/relatives	16	9.9
Community Health Worker	7	4.4
Print Media	1	0.6
Radio/Television	3	1.9
Outreach	2	1.2
Others	3	1.9

Table 2: Sources of information on contraception

Table 3 shows the yearly trend of acceptors of Noristerat. In 2008, 30 (12.7%) women accepted and used NET-ET. Nineteen (8.6%) women in 2009 and another 19 (11.2%) women in 2013 used noristerat. Thirty two (12.1%), 29 (16.9%) and 22 (11.1%) clients used it in 2010, 2011, and 2012 respectively. After 2013, there was a huge decline in the use of noristerat from 2014 to 2017 with 3 (2.2%), 2 (1.1%), 3 (1.7%), and 2 (1.4%) women using it respectively.

Year	No	Total no. of contraceptive users	Percentage (%)
2008	30	237	12.7
2009	19	220	8.6
2010	32	264	12.1
2011	29	172	16.9
2012	22	199	11.1
2013	19	170	11.2
2014	3	138	2.2
2015	2	175	1.1
2016	3	178	1.7
2017	2	140	1.4

Table 3: Yearly trend of acceptors of Noristerat

III. DISCUSSION

The uptake rate of noristerat throughout the study period was 8.5% which was higher than in a similar study done in Port Harcourt. This rate in our centre is the fifth after intrauterine contraceptive device, implanon, jadelle and Depo Provera in that order. This finding is in keeping with other studies. The women must have considered the ease of not taking pills daily, having to take injection once every two months, husbands not feeling any foreign body in them while having sexual intercourse and decided on accepting noristerat injectable contraceptive. Nevertheless, religious beliefs and cultural practices such as desire to have a male child are some of the factors responsible for poor uptake of contraceptives in developing countries such as Nigeria. Also with the advent of more modern contraceptives, the uptake of noristerat in our centre has drastically reduced over the years. This is due to the long term coverage of these contraceptives like IUCD and subdermal implants which can last for five years and more. This decline in the use of noristerat is similar to findings in other centre.

The socio demographic characteristics of the clients who used noristerat is in keeping with what obtains in other centres. Almost all the clients had formal education. Several

studies have confirmed the fact that contraception is more readily accepted and used by educated counterparts. After the delivery of the first child, 80% of educated couples used contraception whereas even after the third child, more than 50% of women with no formal education did not use any form of contraception. Christians are predominant in this study. This is not surprising because of the Christian background of the population in south south, Nigeria. Majority of the clients 110 (68.3%) were within the age of 30 to 39 years which is in keeping with the findings from other centres. Only one adolescent who was a nullipara used noristerat. This might be due to the stigma attached to premarital and adolescent sex in our environment. Also adolescents prefer to patronize the chemist shop in our environment to government owned family planning clinics in order not to be seen and identified as promiscuous by the service providers. Adolescents are not advised to use progesterone-only contraceptives due to its effect on bone mineral density causing osteoporosis. They are also unlikely to be married as in this client and thus would benefit from abstinence or barrier methods to prevent sexually transmitted infections (STIs) as well as the contraception effects.

More than two thirds of the acceptors used NET-ET for child spacing and 20.5% of the clients who used it had completed their family size. In Nigeria, there is aversion for bilateral tubal ligation because of cultural and religious beliefs. Hence a good number of our women would prefer other methods of contraception to surgical sterilization. Most of the clients that accepted noristerat were multipara which is in keeping with previous studies. This is because it is usually the multiparous women who seek for contraception to limit the family size and space the childbirths. Clinic personelle was the main source of information followed by family, relatives and community health workers. This is not surprising because we have a lot of health centres in the state and the health workers do a lot in information dissemination on contraception. This also shows the importance of dissemination of information on family planning by friends and relatives. This finding is in keeping with other studies. Only one client got the information on contraceptives from print and media. Therefore publicity of contraceptives through both the electronic and print media in southern Nigeria is of essence to improve the uptake and reduce maternal morbidity and mortality.

IV. CONCLUSION

Noristerat was mostly used by married, educated and multiparous women in their thirties. The contraceptives publicity from print and media was very poor. Therefore a lot of work has to be done on the dissemination of accurate information on contraceptives using the print and media to improve the uptake rate of contraceptives including noristerat.

ETHICAL APPROVAL

Ethical approval was given by the Hospital's Ethics committee.

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