

Original Research Article

A ten year review of depot medroxyprogesterone acetate contraceptive use at Rivers State University Teaching Hospital, South Nigeria

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ABSTRACT

Background: Depo Medroxyprogesterone Acetate (DMPA) also known as Depo provera is a long acting progestogen-only contraceptive injection used by women worldwide. It is given deep intramuscularly at interval of 3 months. It is easy to use, effective, safe, convenient and reversible. Objective was to determine the prevalence of DMPA contraceptive method and profile of its acceptors at the RSUTH.

Methods: This was a retrospective study of 271 clients attending family planning clinic at the RSUTH from 1st January, 2008 - 31st December, 2017. Their records were retrieved from the clinic and reviewed. Data was extracted, coded and analyzed using the statistical package for social sciences (SPSS) IBM version 25.0 (Armonk, NY).

Results: The prevalence rate of DMPA contraceptive among contraceptive acceptors at the RSUTH within the study period was 14.3 %. The modal age group was 30-34 years accounting for 103 (38.0%). Age range was 20-51 years. Two hundred and sixty eight (98.9%) had formal education. Majority of the clients had secondary level of education 209 (77.1 %). Of the 271 acceptors of DMPA, 175 (64.6%) were multipara. Most of the clients were married 259 (95.6%) and of Christian religion 265 (97.8%). Clinical personnel were the commonest source of information, accounting for 228 (84.1%).

Conclusions: The prevalence of DMPA use over the study period was low. There is need for more counseling and enlightenment campaign to encourage our women to use this effective and safe method of contraception.

Keywords: Acceptors, Contraception, Depo provera

INTRODUCTION

Progesterone-only injectable contraceptives are one of the commonly used long acting contraceptive methods in the developing countries.^{1,2} The two main types are depot medroxyprogesterone acetate (DMPA) and norethisterone enantate. Depo Provera was developed by the Upjohn Company in 1954 for the treatment of endometriosis and habitual miscarriage. However, in the early 1960s, it was noticed that females who received it subsequently had a delay in the return of fertility leading to its development

as a fertility regulating agent. DMPA is effective with failure rates ranging from 0.1 to 2 per 100 women years.³ It is also affordable, reversible, long acting and demands less compliance. It does not depend on sexual intercourse and can be given by trained non-medical staff making it suitable for use in developing countries.⁴ It also has the advantage of not requiring special storage making them suitable for use in the tropics like Nigeria.⁴

The non-contraceptive benefits of Depo Provera include protection against endometrial cancer, ovarian cancer,

pelvic inflammatory disease, uterine fibroids, ectopic gestation and iron deficiency anaemia. It is ideal for sicklers and epileptics because it prevents sickling of cells thereby reducing sickle cell crisis and frequency of seizures. It reduces menstrual cramps and pains, menstrual blood loss and in some cases causes amenorrhoea.⁵⁻⁹

Depo Provera is available in two formulations; 150mg/ml for intramuscular injection and 104mg/0.65ml for subcutaneous injection (depot-subQ provera). They are administered every three months with contraceptive protection continuing for an additional two weeks. Depo Provera acts by primarily inhibiting gonadotrophin secretion thereby inhibiting follicular maturation and ovulation. It thickens the cervical mucus thus preventing ascent of spermatozoa into the uterine cavity. It also causes changes in the endometrium leading to endometrial atrophy thereby making implantation of fertilized ovum difficult.^{10,11} DMPA is useful in lactating mothers since it does not affect the quality, quantity and composition of breast milk.^{3,7,12} Since the family planning unit in our centre was established, there has not been any study evaluating the use of DMPA. The study was done to determine the uptake rate of DMPA, socio-demographic characteristics of its acceptors and the sources of information of this type of contraceptive.

METHODS

This retrospective study was 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 and outside the hospital. It has its own records section 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 injectable was intramuscular injections of DMPA. The nurses injected 150mg of DMPA 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 observations and repeat injections were done every 90 days.

The record cards of all the clients that accepted DMPA 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 271 women accepted DMPA resulting in an acceptance rate of 14.3%. One hundred and eighty three (67.5%) women used DMPA for birth spacing, 83 (30.6%) women had completed their family size and used it to prevent further pregnancy. There was no reason for the use of DMPA indicated in the cards of 5 (1.9%) clients.

The ages of the clients ranged from 20 to 51 years. Majority of the clients 103 (38%) were between 30-34 years. The mean age was 33.1+ 5.3 years. Majority of the clients were multiparous women, 175 (64.6%) and Christians 265 (97.8%). The parity range was 1 to 9 and modal parity was para 4. No nullipara accepted and used DMPA during the study period. Seventy three (26.9%) clients were grandmultipara. Two hundred and sixty eight (98.9%) women had formal education out of which 209 (77.1%) had secondary level of education while 39(14.4%) and 20(7.4%) had tertiary and primary levels of education respectively.

Table 1: Socio-demographic characteristics of the clients.

Variable	No.	Percentage (%)
Age	20-24	9 3.3
	25-29	55 20.3
	30-34	103 38.0
	35-39	70 25.8
	40-44	26 9.6
	45-49	7 2.6
	≥ 50	1 0.4
Educational status	No formal education	3 1.1
	Primary	20 7.4
	Secondary	209 77.1
	Tertiary	39 14.4
Religion	Christianity	265 97.8
	Islam	3 1.1
	Others	3 1.1
Parity	Nullipara	0 0
	Primipara	23 8.5
	Multipara	175 64.6
	Grand multipara	73 26.9
Marital status	Single	12 4.4
	Married	259 95.6

Majority of the clients were married 259 (95.6%) while 12 (4.4%) 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 DMPA acceptors are shown in table 1.

Sources of information on contraception are shown in table 2. Two hundred and twenty eight (84%) women obtained their information concerning contraception from clinical personnel and 19 (7%) from friends and relatives. Five (1.9%) clients each got theirs from community health workers, print media and radio/television respectively. The source of information on contraception for two (0.7%) women was through outreach.

Table 2: Sources of information on contraception.

Sources of Information	No. of clients	Percentage (%)
Clinical personnel	228	84.0
Friends/relatives	19	7.0
Community health worker	5	1.9
Print Media	5	1.9
Radio/Television	5	1.9
Outreach	2	0,7
Others	7	2.6

Table 3: Yearly trend of acceptors of DMPA.

Year	No	Total no. of contraceptive users	Percentage (%)
2008	48	237	20.3
2009	51	220	23.2
2010	43	264	16.3
2011	23	172	13.4
2012	76	199	38.2
2013	12	170	7.1
2014	5	138	3.6
2015	6	175	3.4
2016	5	178	2.8
2017	2	140	1.4

Table 3 shows the yearly trend of acceptors of DMPA. In 2008, 48 (20.3%) women accepted and used DMPA. Fifty one (23.2%), 43 (16.3%), 23 (13.4%) clients used it in 2009, 2010, and 2011 respectively. 2012 recorded the highest uptake, 76 (38.2%). After 2012, there was a huge decline in the use of DMPA from 2013 to 2017 with 12 (7.1%), 5 (3.6%), 6 (3.4%), 5 (2.8%) and 2 (1.4%) women using it respectively.

DISCUSSION

DMPA is the third most frequently accepted and used contraceptive method among women attending the family planning unit of Rivers State University Teaching Hospital (RSUTH) following intrauterine contraceptive

device (IUCD) and implanon.¹³ The uptake rate of DMPA during the study period was 14.3%. This is similar to 15% contraceptive prevalence rate among Nigerian women in the reproductive age group.¹⁴ The national survey had suggested that injectable contraceptives were the most popular and commonly accepted contraceptive method among Nigerian women.¹⁴ With the advent of more modern contraceptives, the uptake of DMPA 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 DMPA is similar to findings in other centre.⁴

The mean age of the acceptors of 33.1 years in our study is similar to those from previous study in southern Nigeria.² Majority of the clients 173 (63.8%) were within the age of 30 to 39 years which is in keeping with the findings from other centres.^{15,16} In this study, no adolescent used DMPA. This is similar to a study done in Uyo.² 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 other 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.^{3,7} They are also unlikely to be married and would benefit from abstinence or barrier methods to prevent sexually transmitted infections (STIs) as well as the contraception effects. This might also be the reason why no nullipara used this method of contraception in this study.

About two thirds of the acceptors used DMPA for child spacing and 30% 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 prefer other methods of contraception to surgical sterilization.¹⁷⁻¹⁹ Also the delayed return to fertility associated with DPMA makes it acceptable to these women who have completed their family size. Most of the clients that accepted DMPA were multipara which is in keeping with previous studies.^{16,20} This is because it is usually the multiparous women who seek for contraception to limit the family size and space the childbirths.^{4,21} This is not in keeping with a study done in southern Nigeria where most of the acceptors were grandmultipara who preferred to use DMPA for terminal contraception.²

Majority of the clients in this study had formal education. Several studies have confirmed the fact that contraception is more readily accepted and used by educated counterparts.^{2,4} The commonest source of information about contraception was from the clinic personnel. This is similar to findings in previous studies.^{15,16,22} Only 1.9% of the clients heard about contraception from mass media indicating the poor role of media in disseminating

information on contraception. Therefore there should be an increase in dissemination of information on the usefulness of contraception through the media in order to reduce maternal morbidity and mortality.

CONCLUSION

DMPA was accepted and used by married, educated and multiparous women in their thirties. The uptake rate of DMPA is low and the trend of its use is tremendously reducing over the years. There is urgent need for mass dissemination of information on this type of contraception to improve its uptake.

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