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CONTRACEPTION WITH DEPOT MEDROXY PROGESTERONE ACETATE (DMPA) IN PORT HARCOURT, SOUTH-SOUTH NIGERIA.

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ABSTRACT

Clinical experience with depot medroxy progesterone acetate (DMPA) at the family planning clinic of the University of Port Harcourt Teaching Hospital between 1st of January 2004 and 31st of December 2013 is presented. This was a descriptive retrospective study aimed at establishing the acceptance, safety and effectiveness in our population. Information on socio-demographic characteristics, source of primary information, complications and accidental pregnancies were obtained from clients. Case files entered into Microsoft excel and analyzed using SPSS for Windows 15.0. Of the 3258 new contraceptive acceptors, 1064(32.66%) used DMPA; making it the most sort after contraceptive method in Port Harcourt. The modal age group of the clients was 30-34(36.84%). While most of the clients had secondary level of education (53.67%) majority of them got their information from health personnel (67.29%). Amenorrhoea was the most common complaint (63.29%). No accidental pregnancy occurred. DMPA is safe, effective and most accepted method of contraception in Port Harcourt. Concerted effort should be made in improving information dissemination on DMPA especially to the rural/non-literate population.

INTRODUCTION

The decision to limit or space child bearing is deeply sensitive often times involving religious and philosophical convictions. Preventing unintended pregnancies in women constitute a critical and cost effective approach to preventing maternal morbidity and mortality including infant/childhood morbidity/mortality. Despite the introduction of modern contraceptives, unintended pregnancies continue to be a problem in Nigeria. Nigeria has a fertility rate of 5.7% but a contraceptive prevalence of 14.6% for married women[1]. Most women with unintended pregnancies end up in abortion with its attendant consequences. Abortion accounts for about 13% of pregnancy related deaths globally[2] and about 40% of maternal deaths in Nigeria[3]. To reverse this trend will involve an improvement in contraceptive awareness and usage in Nigeria.

DMPA is a long acting injectable contraceptive that is valued for its effectiveness, convenience, safety and reversibility[4-7]. DMPA is an aqueous suspension of 17-acetoxy-6-methyl progesterone. It is given in a dose of 150mg administered intramuscularly every

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three months[4]. The mechanism of action include suppression of ovulation by suppressing the surge of gonadotrophins, thickening cervical mucus to impede the ascent of sperm and thinning of the endometrium such that implantation of a blastocyst is less likely. The contraceptive activity is for 13 weeks. It actually persists for approximately 4months[4] allowing for providers to schedule follow-up injections.

During one year of perfect use of DMPA injections, a failure rate of 0.3 pregnancies per 100 woman years and 3 per 100 woman years for typical use has been documented[8]. Studies show that DMPA is the most commonly used contraceptive in Southern Nigeria[9-11], and the third most commonly used in Northern part of the country[12.] The use of DMPA is associated with numerous health benefits. The risk of ectopic pregnancy is significantly lower amongst users compared to women who do not use contraception[4.] Not only is DMPA a highly effective method for healthy women, it is one of the few methods available for women who cannot use oestrogens, those 35years and older who smoke, those with thromboembolic disorders, migraine[6].The risk of endometrial cancer is reduced by 80% and a reduction of as much as 70% in frequency of sickle cell crisis. A decrease in the monthly blood loss as amenorrhoea occurs in 40-75% of users including improvement of symptoms in women with endometritis.

The most significant potential risk associated with DMPA use is the reduction in bone mineral density (BMD). When compared with non-users, BMD at the hip and spine decreased by 0.5-3.5% after one year, 5.7-7.5% after two years[7]. However, the best available evidence supports the notion that DMPA use decreases BMD but that the decrease is small, reversible and has not been associated with osteoporotic fractures[7, 12-18.].

Irregular vaginal bleeding and prolonged menstrual flow are not uncommon during the first 6months of use. However, with continued use, many women become amenorrhoeic and up to 70% of them experience no menses after one year[4, 6, 16,19]. Mood changes and depression have been reported to be higher with DMPA use but lower with combined oral contraceptive use [20.] Randomised control trials demonstrated that DMPA was not associated with any significant weight gain[16].Use of DMPA is effective, safe and independent of coitus. It is thus an accepted method of birth control and hence the study to determine the prevalence, side effect profile and failure rate in Port Harcourt.

Port Harcourt, capital of Rivers state in South-South Nigeria, is cosmopolitan, oil rich and has people from all parts of the country. The population of Port Harcourt was estimated at 1.5 million in 2013[21]. University of Port Harcourt Teaching Hospital is the apex tertiary hospital in the state. It has 800 beds and offers general and specialist care to the citizenry of Rivers State and neighbouring states.

SUBJECTS AND METHODS

The record cards of all clients who accepted DMPA injectable contraception at the Family Planning Clinic of the University of Port Harcourt Teaching Hospital from January 2004 till December 2013 were studied. The Family Planning Clinic has its own records that are not in the main hospital records. This makes it easier for the retrieval of the records of these clients. The clients (who came from Port Harcourt and neighbouring towns and villages) were counselled by trained family planning nurse practitioners and physicians and allowed to make informed choice based on their needs and available contraceptive for which they are suitable. Following this, a full medical history and

clinical examination were performed. In the absence of complication, follow up visits were at first four weeks and then every three months subsequently. Clients were encouraged to come to the clinic if complications arose and all complaints/ complications were documented. At each follow up visit, the client's weight and blood pressure were recorded and complications managed as appropriate. Clients who do not report two or more consecutive scheduled visits were usually regarded as lost to follow-up.

The information included the client's socio-demographic characteristics, sources of information, side effects and accidental pregnancies. The data was coded and entered into a Microsoft excel and analyzed using SPSS for Windows 15.0.

RESULTS

A total of 3258 new acceptors were seen at the Family planning clinic of the University of Port Harcourt Teaching Hospital within the period under review.
Table 1 shows the contraceptive method chosen by clients during the period under review. DMPA injectable contraception ranked highest followed closely by intrauterine device.

Age of Clients:
The age range of new acceptors was between 18 and 48 years. The mean age was 30.92±3.84 years. Six clients (0.56%) were teenagers, 58(5.45%) were within 20-24 years. About 290(27.26%) were within the age range of 25-29 years, 392(36.84%) were within the age range of 30-34 years while 318(29.89%) were above 35 years making the 30-34 age bracket the modal group (table2).

Parity:
There was no nullipara in the study. Primipara were 63(5.92%), multipara 626(58.84%) and grandmultiparous women 357(33.55%). The mean parity was 3.02±1.27.

Educational status:
Majority of clients 571(53.67%) had secondary education; 167(15.70%) had primary education while 326(30.63%) had tertiary education. All the patients had formal education.

Source of information:
Health personnel (66.54%) were the leading source of information on contraceptives followed by friends/ families (22.96%). Other sources of primary information on contraception were: electronic media (5.39%), church/school (2.32%) print media (1.78%) and self (1.00%). Some clients had more than one source of primary information. (Figure 1).

Common side effects:
Common side effects include amenorrhoea (71.88%), scanty menstruation (18.12%), heavy menstrual bleeding (4.10%), irregular vaginal bleeding(3.43%) and weight gain (2.47%). (Figure 2).

Accidental pregnancy.
During the period under review there was no accidental pregnancy.

DISCUSSION

Injectable contraceptive appears to be the most accepted method of family planning in our environment. This finding is in keeping with other studies done in Port Harcourt, Aba, Enugu, and Uyo.[10, 11, 12, 20] but contrasts with that done in Ilorin and Ibadan where IUD ranked highest[22].

In developed countries, oral contraceptive pills and barrier method were the prevalent methods[23]. Contraceptive prevalence is related to the range of methods available, patient's choice, health/clinic personnel's bias, prevailing cultural and religious

Table 1:Contraceptive choices of clients at the UPTH FPC between 1st January 2004 - 31st December 2013.

Contraceptive method	No. Of clients (N)	Percentage(%)
DMPA	1064	32.66
IUD	1014	31.12
NORISTERAT	541	16.60
OCP	391	12.00
IMPLANTS	228	7.00
BARRIER	12	0.37
NATURAL	8	0.25
TOTAL	3258	100.00

Table 2: Socio-Demographic Characteristics of Acceptors.

AGE (YEARS)	NUMBER (N)	PERCENTAGE (%)
≤19	6	0.56
20-24	58	5.45
25-29	290	27.26
30-34	392	36.84
≥35	318	29.89
TOTAL	**1064**	**100.00**
EDUCATIONAL STATUS		
PRIMARY	167	15.70
SECONDARY	571	53.67
TERTIARY	326	30.63
TOTAL	**1064**	**100.00**
RELIGION		
CHRISTIANS	996	93.61
MUSLIMS	20	1.88
OTHERS	48	4.51
TOTAL	**1064**	**100.00**
PARITY		
PRIMIPARA	63	5.92
MULTIPARA	626	58.84
GRANDMULTIPARA	375	35.24
TOTAL	**1064**	**100.00**

Mean parity = 3.02±1.27

FIGURE 1: SOURCES OF PRIMARY INFORMATION ON CONTRACEPTION:

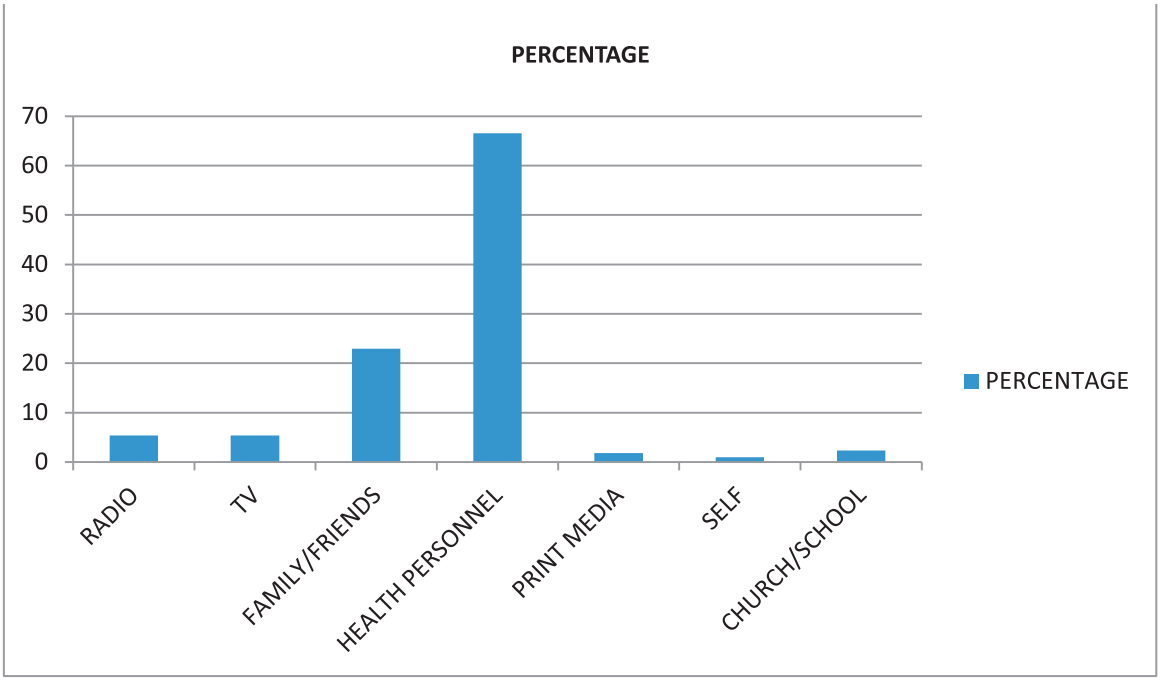
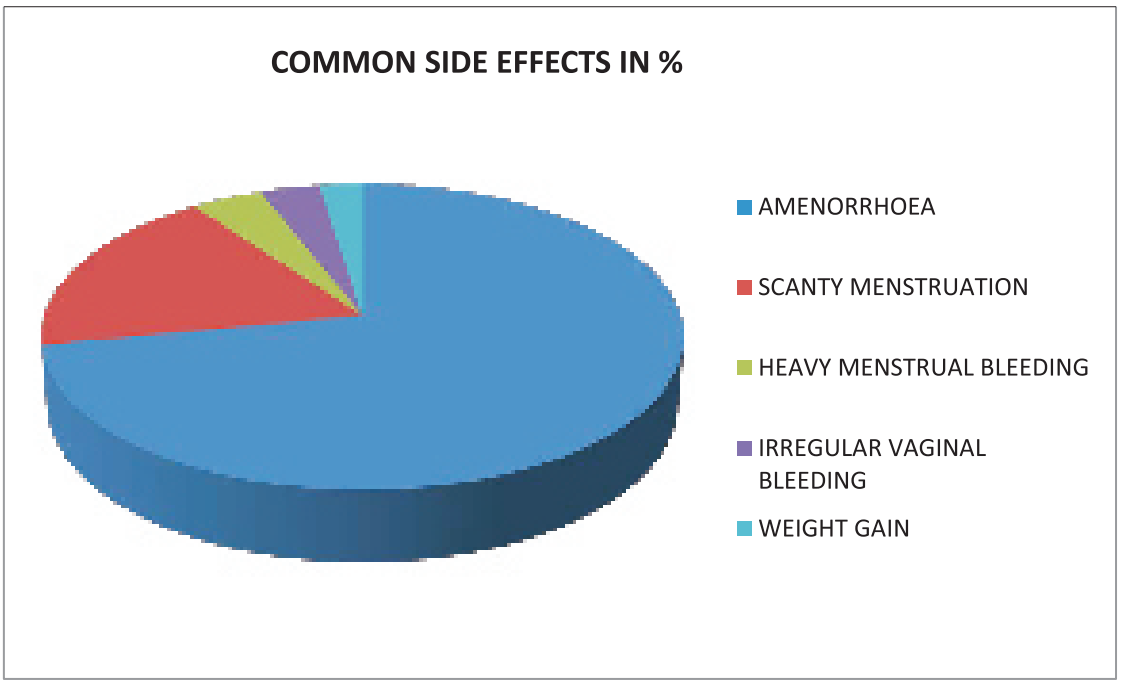


FIGURE 2:



beliefs, perception of method effectiveness, side effects and spouse influence[10, 23]. Our women considered the convenience of not having to take pills every single day, spouse not detecting any foreign body in them, and having to take a single injection every three months and accepted DMPA injectable contraception.

The socio-demographic characteristic of the new acceptors of DMPA is consistent with what has been shown in other populations. The results show that the modal age group was 30-34 years with the mean age of 32.2 years, which represents peak obstetric carrier age. This result agrees with other findings in other centres in the country [10, 20-22]. Most of the clients (84%) had secondary and tertiary education. This means that the study population here were literates. This finding differs from a study in Uyo where majority (50.6%) of the acceptors had primary education[20]. Many couples use contraceptives to space their children or to limit their family size, others avoid child bearing due to effects of pre-existing illnesses on pregnancy such as severe cardiac disease. Majority of the acceptors in this study 586(55.74%) were limiters and comprised of clients with at least four children. This reiterates our women's desire to having not too large a family and not too small a family size.

The parity profile of the clients here showed that some of the clients were grandmultiparous (Para 5 and above). No nulliparous was found in the study, which confirms the clients were either limiters or spacers. In the study at Ilorin, the clients that dominated their cohort were primiparous and multiparous. The predominance of Christians in this study is not surprising owing to the Christian background of the population in the South –South Nigeria.

The clients had more than one source of information on contraception. However, health personnel were the main source of information (67.87%) on contraception followed by family and friends. This might be explained by the numerous health centres in the state and the involvement of community health extension workers in the propagation of information on family planning. It also brings to the fore, the contribution by family members and friends in disseminating information on family planning. This finding while agreeing with other studies in Uyo[20] and Enugu[24] is in contrast with findings by Ezeugwu where family/friends were the leading source of information[12].

The main complication associated with DMPA injection was menstrual abnormality, ranging from amenorrhoea (71.88%), heavy menstrual bleeding (44.10%), irregular vaginal bleeding (3.43%), intermenstrual spotting (3.43%) and weight gain (2.47%). Eighteen clients (1.69%) discontinued the method; seven and six were due to menstrual abnormality and desire for pregnancy respectively and five were lost to follow up. The clients were properly counselled on these side effects before and during the period of use of DMPA. Globally, abnormalities of menstrual cycle are a predominant side effect of DMPA use and some of them like amenorrhoea or oligomenorrhoea are beneficial. Where irregular bleeding is a problem, a short course of oestrogen or shorter injection intervals can be used[19]. Recently, a monthly combined injectable contraceptive containing DMPA 25mg + Estradiol cypionate 5mg as well as Norethisterone enanthate 50mg + Estradiol valarate 5mg which enables better cycle control has been recommended[25]. No accidental pregnancy occurred during the period under review.

CONCLUSION

DMPA is a safe, effective and most accepted method of contraception in our population. It was mostly used by multiparous women and those in their early thirties. It should be available as a first line to all who wish to make informed choice about a reversible method of contraception. The print and electronic media should be more involved in the propagation of accurate information about contraceptives including DMPA to members of the community, especially the rural/non literate population so they can make informed choice on contraception.

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