



Implanon Implant Contraception at the University of Port Harcourt Teaching Hospital: A Periodic Review

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Authors' contributions

This work was carried out in collaboration between both authors. Author EOO designed the study, performed the statistical analysis, and wrote the first draft of the manuscript. Author JDO managed the analyses of the study and the literature searches. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Implanon subdermal implant has been in use for contraception in our centre for over a decade; hence we decided to evaluate its usage so as to improve services.

Objectives: To determine the acceptance, efficacy and side effects among users of Implanon in the University of Port Harcourt Teaching Hospital (UPTH), Port Harcourt, Nigeria

Methods: It is a 10 year longitudinal retrospective study of clients who accepted and used Implanon for contraception in the University of Port Harcourt Teaching Hospital, Southern Nigeria. The case files in the family planning clinic were retrieved and information on their biodata, source of information, complications and reason for removal were extracted. Data obtained was filled into a spread sheet, analyzed using statistical package for social sciences (SPSS) version 21.0 and presented in tables of frequencies and percentages.

Results: Of the 3,829 who accepted modern contraception in the period under review, 361 women chose Implanon giving an up take rate of 9.4%. Their mean age was 32.1±7.1; most of them were multipara 340(94.2%) with a mean parity of 4.±5.3 while 346(95.7%) had secondary education and above. Irregular vaginal bleeding was the major complaint 73(86.9%) while the main reason for

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removal of the implant was desire for conception 87(48.6%). Pearl index was 0.003.

Conclusion: Implanon is a very effective and safe method of contraception with increasing acceptance in Port Harcourt, southern Nigeria.

Keywords: Implanon; contraception; Port Harcourt.

1. INTRODUCTION

Contraceptive use helps couples and individuals realize their basic right to decide freely and responsibly, when and how many children to have. The growing use of contraceptive methods have resulted in not only improvements in health-related outcomes such as reduced maternal mortality and infant mortality [1,2,3] but also improvements in education and economic indices, especially for girls and women [4,5]. In 2015, West Africa was the sub-continent with the lowest contraceptive prevalence and was among the sub-regions with the highest unmet need for family planning among married or in-union women aged 15 to 49 years.

Generally, implants offer promising opportunity for addressing the high and growing unmet needs for modern contraception especially in sub-Saharan Africa where 1 in 3 women have unmet need for family planning [6]; the highest proportion for any region in the world⁷. Work on subdermal implant started in 1966 in New York [7,8] and was introduced into Nigeria by 1985 [8]. The availability of this contraceptive method in sub-Saharan Africa increased the number of family planning options from which the clients makes a suitable choice.

Implanon was introduced into the UPTH in the year 2006. It is a long acting reversible contraceptive (LARC) progestogen. Unlike the Jadelle (a progestogen only contraceptive implant that is two capsule acting for 5 years), Implanon is a single silastic capsule of 40 mm long and 2 mm thick licensed for 3 year use [9]. It contained 68 mg of etonorgestrel and belonged to second generation implant contraceptive. It acts by thickening the cervical mucous, causes hypertrophic changes at endometrial lining and induces anovulation [10-11]. Studies in Nigeria shows that it is highly effective, safe and widely acceptable [12-15]. More to this is the fact that it has no user dependence, and has minimum requirement for medical follow-up once inserted.

In spite of the apparent beautiful advantages, the limitations of possible weight changes, menstrual irregularities, headache and raised blood

pressure though occasional, are of concern. Since the 18th century, there has been an explosion in the world's population with Africa bearing the brunt of over population and its consequences [5]. This has stalled development in the region, plugging Africa into poverty and heightening the desire for population control in the region. Fertility control as an option has suffered a setback in sub Saharan Africa, mainly owing to cultural and religious challenges but also due to the fact that little has been done to improve the uptake of the available family planning services. All these work in cohesion to undermine the several reported benefits of family planning in the region [8,13]. It is with these challenges in mind that this study was conceived to update our experiences with Implanon implant contraceptive method among clients in a referral centre southern Nigeria. This will afford us a review of Implanon in this center in the past 10 years, its use/uptake, hence identifying areas for improvement

2. METHODOLOGY

This is a retrospective descriptive study of client who accepted to use Implanon for contraception at the UPTH family planning clinic between March 1st, 2006 and February 28th, 2016.

At presentation, prospective clients are counseled by family planning nurse practitioners on the various contraceptive methods thereby guiding them to make informed choice of methods suitable for them. Medical history is taken and a clinical examination is performed. A urine analysis is done as well as a pregnant test.

The pregnant respondents, those who are severely hypertensive or diabetic are discouraged from having Implanon inserted. Barrier contraceptives were excluded in this study as there was no recorded evidence of follow up, hence their use for the purpose of contraception was not certain. All folders of client on contraceptive method are usually kept in the family planning record section.

The biodata, source of information, side effects and reasons for implant removal for Clients on

Implanon are extracted using a structured proforma and the data entered into SPSS version 21.0 spread sheet for analysis. Descriptive statistics of the data using mean and standard deviation was done and result presented in frequency and percentage tables.

3. RESULTS

During the study period, a total of 3,829 women accepted and used modern contraceptive methods. Out of this, 361 used Implanon, giving an up take rate of 9.4%. One thousand two hundred and twenty one of this number used intrauterine device (32.0%) and 116(30.3%) used injectable progestogen. Three hundred and fifteen used oral contraceptives (8.2%) and 223(5.8%) had bilateral tubal ligation.

Of the 361 that were on Implanon, 346(95.8%) had at least secondary education, while most of them 340(94.2%) were multipara with a mean age of 32.1±5.9 (Table 1). A greater number of acceptors were recorded in the last quarter of the study, Table 2. Clinical personnel and friends and relations accounted for most of the source of information 332(91.9%), Table 3. Irregular vaginal bleeding was the major complaint 73(86.9%) while weight gain was 6(7.1%), Table 4. The main reason for discontinuation of implant was desire to conceive 174(48.6%) and discontinuation due to complications such as vagina bleeding, perceived weight gain and depression accounted for 51(14.2%), Table 5. Pearl index was 0.003 from a case of accidental pregnancy during this study. Implanon use for limiting pregnancy was 142(39.3%) and spacing 219(60.7%) while only 3(0.8%) of the women were lost to follow up.

From the above mention study, it can be said that person those who are mostly accepting the following medication name Implanon, are of pre menopause age group (34-39 years), with multiparity acceptors. As well as moderate education level consisting groups are shown highest susceptibility.

It can be also depicted from the Table 2 is the year 2013-14, showed highest rate of efficacy of Implanon amongst the numerous age groups frequently.

Table 3 shows that clinical practioners advised mostly the intake of such medicines, which have been taken into account by the patients.

There are various ill effects are observed by frequent usage of Implanon amongst the population, which mostly include Menorrhagia as well as other clinical symptoms like Spotting, Amenorrhoea, Intermenstrual bleed, Weight gain etc but are comparatively lower than earlier one.

Most potent need to remove or withdraw the usage of Implanons is basically for gaining pregnancy and prevents other complications of it.

Table 1. Socio-demographic characteristics of acceptors of implanon

	No.	Percentage (%)
Age (years)		
20-24	19	5.3
25-29	84	23.3
30-34	69	46.8
34-39	72	19.9
40 and above	17	4.7
Total	361	100%
Parity		
Nuliparity	3	0.8
Primiparity	18	5.0
Muultiparity	340	94.2
Total	361	100%
Education		
Primary	15	4.2
Secondary	98	27.1
Tertiary	248	18.7
Total	361	100%

Table 2. Yearly distribution of implanon acceptors

Year	No.	Percentage (%)
March 2006- Feb. 2007	3	0.8
March 2007- Feb. 2008	37	10.3
March 2008- Feb.2009	69	19.1
March 2009- Feb.2010	23	6.4
March 2010- Feb.2011	16	4.4
March 2011- Feb.2012	25	6.9
March 2012- Feb.2013	40	11.1
March 2013- Feb.2014	51	14.1
March 2014- Feb.2015	50	13.9
March 2015- Feb.2016	47	13.0
Total	361	100%

Table 3. Sources of information

Parameter	No.	Percentage (%)
Clinical personnel	243	67.3
Friends and relations	89	24.6
Media	23	6.4
Others	6	1.7
Total	361	100%

Table 4. Complications of implanon

Side effects	Frequency	Percentage (%)
Spotting	25	29.8
Amenorrhoea	21	25.0
Menorrhagia	17	20.2
Intermenstrual bleed	10	11.9
Weight gain	6	7.1
Headache	3	3.6
Depression	2	2.4
Total	84	100%

Table 5. Reasons for removal of implanon

Reasons	Frequency	Percentage (%)
Desire for pregnancy	174	48.6
Expiration	106	29.6
Complications	51	14.2
Menopause	15	4.2
Clients request	12	3.4
Total	358	100%

4. DISCUSSION

Implanon, a long acting reversible progestogen only contraceptive, remain a common and effective option of contraception among our women [16,17]. Its up take rate of 9.4% is forth after intrauterine device, progestogen only injectable contraceptive and jadelle; and is lower than 16.0% uptake rate found in Zaria study [18] apparently because it is new in this centre. However, the increasing acceptance trend noted with this method is not surprising as it matches efficacy with its long acting property. This increasing acceptance trend is also illustrated in the previous work in this centre demonstrating implant as one of the associated factors responsible for the declining trend in the use of progestogen only injectable contraceptives [19,20,21].

Most of its users are young women with good education hence ease appreciation of counseling and hence acceptance. Clinical personnel and friends and relations as in most studies, have continue to play a great role introducing implants to clients (91.1%) while the role of the media in this respect has remained worrisomely and abysmally low (6.4%) [22,23]. The media should realize its role in this all important situation and deliberately make it part of its programme as this will help in improving our low national contraceptive prevalence [24].

Irregular vagina bleeding, as have been in almost all previous studies, top the complications associated with this contraceptive in this study (86.9%) [25,26] Although this could be very disturbing to the clients, most cases resolve on counseling [27] or following medication (consistent result following medications are lacking but all of these devices seem to have best response to non-steroidal anti inflammatory drugs and anti fibrinolytics) [28]. Combined oral contraceptives is also useful [29]

Weight gain (7.1% in this study) with progestogen only contraceptives has remained variable and hence controversial as there is no statistical confirmation of the 10% significant cut-off mark [30,31] We also noted that studies on lipid changes were normal, [32,33] hence collaborating the above assertion.

Most acceptors of Implanon in this study used it mainly for spacing their children (60.7%) rather than limiting fertility (39.3%), hence their preference for the 3 year life span implant to the longer 5 year type. Though the most common complaint was menstrual disturbances, the common reasons for discontinuing Implanon use were desire for conception (48.6%) and expiration (29.6%). Other reasons such as complications, client request, and menopausal states were also noted for removal of the device. Just like in other medications, many of our people feel that a drug should not be ingested for a long period otherwise it would be "too much" in the system, hence the number that voluntarily requested to remove the implant (in spite of adequate counseling) for no obvious complaint.

The pearl index of Implanon in this study was 0.003 reflecting a high efficacy which is in keeping with most studies [26,34]. Commendable is the fact that only 3 (0.8%) client were lost to follow up apparently due to adequate counseling.

5. CONCLUSIONS

Implanon, a long acting, safe and effective means of contraception with increasing acceptance profile as shown in this study is hence cost effective. Training more care providers in this direction as shown by improved uptake of implant contraceptive after training of community health extension workers in Northern Nigeria [35] will be a welcome idea towards satisfying a huge unmet-need gap in our contraceptive menu.

CONSENT

It is not applicable.

ETHICAL APPROVAL

Ethical approval for the study was obtained from the teaching hospital ethical committee.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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