Profile of Implanon® acceptors and pattern of side effects

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Objective To determine the social and biological characteristics of Implanon® acceptors at Ibadan Nigeria, and also to describe reasons why they opt for this choice and their concerns.

Methods This was a descriptive study that retrospectively reviewed all records of the Implanon® acceptors from January 2006 to December 2009 at University College Hospital, Ibadan, Nigeria.

Results One hundred and twenty-eight women accepted Implanon® as a modern contraception accounting 4.3% of the total number of clients seen (2,972) during the period. The age range of the client that accepted Implanon® was 26–43 years with a mean of 33.6 ± 2.4 years. Of the 128 Implanon® acceptors, 101 (78.9%) had used other contraceptive methods before. The commonest reason for switching to Implanon® by clients was failure of the contraceptive method that was previously used (32.7%). Within the first year follow-up of insertion, none of the Implanon® acceptors had expressed desire for removal due to any of the side effects, and none contraceptive failure was observed during their follow-up evaluation.

Conclusion The findings suggest that Implanon® could safely be used by all women of reproductive age group including those who desire future fertility.

Key words: implanon; contraceptive methods; hormonal contraception; women; acceptors; Nigeria

Long acting reversible contraception has gained wider acceptance for decades due to its overwhelming conveniences to the end-users and higher probability of future fertility upon discontinuation[1-3]. Implanon®, a single implant containing 68 mg of etonogestrel, is a technology of the upper arm contraceptive implants developed by Organon International with about 99% efficiency[1,2,4]. Since its launch, Implanon® has been shown to have better...
contraceptive effect and tolerability compared with other implantable products\cite{4}. Generally, the Pearl index of Implanon® has been reported to be 0% but there has been some occasional reporting of failure\cite{5,6}. Like other progestin only contraception, clients that are at risk of estrogen derivatives complications can use it conveniently\cite{4}. Other non-contraceptive benefits include prevention of sickle cell crisis by stabilizing cell membrane, reducing the clogging rate and improving the red cell transit time\cite{7}.

Emerging evidence has shown that clients prefer Implanon® to other forms of contraceptive technology for various reasons such as lack of sexual pleasure disruption, need to remember the method and its long-term effect\cite{2,8,9}. Studies have shown that Implanon® is acceptable and tolerable with bearable side effects\cite{10-13}. Side effects include amenorrhea, abnormal vaginal bleeding, transient elevation of some lipid profiles, and weight gain amongst others\cite{11,14}.

In Nigeria the supply of Implanon® is still limited and largely donor driven. This has also made research on it challenging and few. Some studies have examined the pattern of biochemical changes following Implanon® insertion in the country and the outcome revealed significant elevation of haematocrit level, swinging level of lipid profiles and mild elevation of blood pressure\cite{15}. Majority of the clients were satisfied with its usage\cite{16}. However, studies that wholly examine the profile of Implanon® acceptors in Nigeria are scarce and this has not provided any evidence to assess the pattern of the clientele, the reason(s) why they opted for this choice and other concerns that may need to be dispelled to improve acceptability. This study aims to determine the social and biological characteristics of Implanon® acceptors since its introduction at the University College Hospital, Ibadan and also document reasons why they opt for this choice and their concerns.

**Materials & Methods**

**Subjects**

This was a descriptive study that retrospectively reviewed all the records of the Implanon® acceptors seen at the Fertility Research and Endocrinology Unit (FR&EU) of the Department of Obstetrics and Gynaecology, University College Hospital, Ibadan between January 2006 and December 2009. Implanon® was introduced into the FR&EU in 2006, immediately after its launch by the Federal Ministry of Health, Federal Republic of Nigeria. Like other contraceptive choices, the guideline at the clinic involves initial counseling of all available options including Implanon®. Thereafter, the prospective acceptor is then allowed to freely decide her choice after all clarifications regarding the method has been satisfactorily cleared. Prior to the insertion, the trained provider usually records socio-demographics including some biological data. In addition, general physical examination is performed including the blood pressure. Specifically, women who weighed above 70 kg were usually discouraged from...
up-taking Implanon® or other hormonal methods. All the Implanon® acceptors were routinely followed up after the insertion at the FR&EU till 2010, and they were also informed to present whenever they had concerns or complaints afterwards for the provider to evaluate. At the clinic, a medical doctor properly evaluated the clients that presented with complaints attributable to their contraception. This evaluation usually includes history of the complaints, clinical examination of all systems and where indicated, a pelvic examination (speculum and digital) was also performed. Sometimes, ancillary investigations are performed to rule out the possibility of an organic cause. Clients were also counseled that they could discontinue the method if the side effects were unbearable.

Data collection

The data were collected using a proforma to obtain information from the medical records and this included; biosocial variables such as age, parity, ethnicity, religion, educational status, desire for future childbearing, pattern of referral of clients and types of complaints recorded during the study period.

Statistical analysis

The data were expressed as mean ± standard deviation (x ± s) or percentage (%). The statistical analysis was performed using STATA 12.0 software by generation of simple frequency tables and Microsoft 2007 Excel was used for the figures.

Results

One hundred and twenty-eight accepted Implanon® as a modern contraceptive method accounting for 4.3% of the total number of clients (2,972) seen during the period. The age range of the client that accepted Implanon® was 26–43 years with a mean of 33.6 ± 2.4 years. Majority (81.3%) got married before 30 years old, and they are currently in a monogamous union (82.8%). Regarding educational status, about two-third (63.3%) had tertiary education while 25.8% had secondary and the rest had primary or no education (10.9%). Most (87.9%) are Yoruba ethnic group and Christians (75.8%) by religion. Majority (64.7%) had more than three children as at the time of accepting Implanon®. About 9 out of 10 of the clients had had a live birth before presenting at the clinic. About 38.3% desired more children, 48.4% did not want more children while 13.3% were not sure (Table 1).

Of the 128 Implanon® acceptors, 101 (78.9%) had used other contraceptive methods before. The commonest reason for switching to Implanon® by clients was failure of the contraceptive method that was previously used (32.7%). Other reasons mentioned included: inconvenience (25.8%), menorrhagia (5.9%), husband’s objection (5.9%), amenorrhoea (4%), weight gain (3%), infections (3%), forgetfulness (2%) and 17.7% of the clients with no reason.

The reported side effects mentioned by the Implanon® acceptors were menorrhagia, intermenstrual bleeding, continuous spotting per vaginam, amenorrhoea, weight gain, and
headache over the first year follow-up of insertion (Table 2). At one year post-Implanon®
insertion, the proportions of those with common side effects, such as headache, amenorrhoea,
intermenstrual bleeding and menorrhagia, had reduced by half.

None of the Implanon® acceptors had expressed desire for removal due to any of the
aforementioned side effects, and there was no report of contraceptive failure during the
entire period of the study (data were not shown).
This is the first time the unit is reviewing the profiles of women that used Implanon® at our family planning clinic since its launch, and it probably represents the first published effort from southwestern Nigeria. Findings from this study showed that women with a wide range of demographic profiles had used Implanon® despite the long-term contraceptive effect. Specifically, young women with desire for future fertility formed significant proportion of acceptors in our study. The finding is in tandem with other studies elsewhere [15,17]. This signifies one of the core benefits of Implanon®, which has a comparable contraceptive efficiency with permanent methods whilst retaining easy fertility reversal [18,19]. The use of Implanon® allows for optimal birth interval to be observed, and this promotes healthy living of women and their children. Another interesting finding is that most acceptors are in monogamous union; this may be a reflection of good counseling that Implanon® does not provide protection for sexually transmissible infections, an adverse health consequence that could result from multiple sexual partners.

Of those that have used contraception before among the acceptors, majority cited failure and inconvenience of the previous methods. Contraceptive failure is one of the commonest fears expressed by both the provider and the clients. The low Pearl index of Implanon® may have motivated the switch of these participants as it is certain that none had used any other form of contraception whose efficiency is at par with it. Most reported cases of failure of Implanon® were blamed on poor timing of insertion within the menstrual cycle, lack of adherence to advise on sexual activity in the immediate period of insertion and dislocation or fracture of the Implanon® rod [6,20,21]. “Contraceptive inconvenience” as expressed by clients is predicated with several interpretations depending on the methods used. The inconvenience could mean, “need to remember to use”; “unbearable side effects”, “loss of sexual pleasure” and “spousal complaints/discomfort”. In a similar study conducted among Australia women, convenience was the commonest reason for opting for Implanon® uptake, and it accounted for 68% of the reason adduced to their choice [22]. This may also explain other reasons mentioned such as husband objection to previous methods and

<table>
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<th>Table 2 Pattern of reported side effects at follow-up (n=128)</th>
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"Discussion"

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forgetfulness.

Some of the reasons mentioned by the clients for not accepting Implanon® are its known side effects. They include menorrhagia, amenorrhoea and weight gain[10,23]. This could probably be due to lack of clear understanding of the counseling offered or insufficient assurance from the provider that its side effect is milder. For instance, it has been argued that menstrual side effects of Implanon® are not as high as other progestin only contraceptives[19]. However, this observation is not full proof. It is therefore important that women should be adequately counseled before a method switch to prevent any disappointment arising from side effects similar to those previously experienced. This is imperative especially for a significant proportion of clients in developing countries who despite counseling against a method would still not have genuine reasons for preferring that particular method. In this study, about 20% of the clients do not have any reason for preferring Implanon® after counseling. It is also important for providers to refrain from temptation of promoting a particular product above others, which may confuse clients’ choice.

During the follow-up period, headache is the commonest side effect mentioned as about 1 in 3 associated their headache to the Implanon® within the first three months of insertion; however, the proportion reduced with time. More importantly, none was so severe to warrant discontinuation in this study unlike in other studies[24]. Most clients admitted that they used mild analgesic (paracetamol) to relief the headache.

Other reported side effects mentioned were menstrual disturbances such as menorrhagia, continuous spotting per vaginam, intermenstrual bleeding and amenorrhoea. The manifestation is due to the hormonal disruption of the normal milieu of the hypothalamic-pituitary-ovarian axis network. This effect is maximal at the outset after insertion and gradually wanes with time. The proportional decrease in each of these complaints observed in this study is similar to other studies elsewhere[16]. None of the clients manifested any complication of excessive bleeding clinically or through their haematological parameters. The amenorrhoea following Implanon® insertion has been associated with increased haematocrit level amongst clients; this is of clinical benefit in settings where maternal anaemia remains a public health concern. Regarding the weight gain by some clients, there was a gradual increase in the proportion with time and this was quite different from what Aisien et al.[15] reported in Benin. These workers did not find any particular pattern of weight effect from Implanon® at one year. It is possible that weight gain could easily be influenced by other competing factors such as exercise, eating pattern and genetics.

Though this study did not investigate the biochemical factors such as hormonal and chemical changes as well as haematological profiles associated with this method of contraception, findings revealed that Implanon® could safely be used by all women of reproductive age group especially those who desire future fertility. In addition, the perceived side effects could be bearable when there is an opportunity for a follow-up[10].
References


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