

ATTITUDE OF NIGERIAN WOMEN TO ABNORMAL MENSTRUAL BLEEDING FROM INJECTABLE PROGESTOGEN-ONLY CONTRACEPTIVE

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Key words: Depot-medroxy progesterone acetate, norethisterone enanthate, menstrual abnormalities

Abstract

Background: Depot Medroxyprogesterone acetate (DMPA) and Norethisterone Enanthate (Net-En) are frequently used progestogen-only injectable contraceptives in many developing countries including Nigeria. Their use is often complicated by abnormal and unpredictable menstrual bleeding patterns. This has often been a source of worry to clients and their spouses leading to method switch or discontinuation.

Method: A structured questionnaire was administered on 354 clients who were on intramuscular DMPA 150mg 3-monthly or intramuscular norethisterone enanthate 200mg 2-monthly and a matched control group of 323 clients at the Reproductive Health Center of the Ahmadu Bello University Teaching Hospital Zaria, Nigeria. Data was analyzed using Minitab statistical software.

Results: Abnormal menstrual bleeding, commonly amenorrhea and irregular bleeding, were significantly associated with use of either DMPA or Net-En. Clients tolerated amenorrhea better than irregular bleeding and their preference for either DMPA or Net-En was not altered by amenorrhea. Irregular bleeding was a significant reason for method switch or discontinuation.

Conclusion: Treatments that can inflict amenorrhea could be acceptable options in the management of abnormal bleeding patterns induced by progestogen-only injectable contraceptive which are in present use.

Mots clés: Depot-medroxy progesterone acetate, norethisterone enanthate, troubles des règles

Résumé

Contexte: Depot Medroxyprogesterone acetate (DMPA) et norethisterone enanthate (Net-En) sont fréquemment utilisés comme contraceptifs par progestatifs seuls dans beaucoup de pays en développement comme le Nigeria. Leur utilisation se complique souvent de perturbations des règles qui sont imprévisibles. Ceci est souvent source d'inquiétude des clientes et de leurs époux, ce qui entraîne un changement de méthode contraceptive ou une discontinuité du traitement.

Méthode : Un questionnaire structuré a été administré à 354 clientes qui étaient sous injection intra musculaire de 150 mg de DMPA tous les 3 mois ou de 200 mg de norethisterone enanthate tous les 2 mois. Le même questionnaire a été administré à un groupe témoin de 323 clientes au Centre de la Santé Reproductive, Ahmadou Bello de l'Hôpital Universitaire Zaria, Nigeria. L'analyse des données a été réalisée en utilisant le logiciel statistique Minitab.

Résultats: Les perturbations des règles, principalement l'aménorrhée et les saignements irréguliers sont significativement associées à l'utilisation de contraceptifs à type de DMPA ou Net-En. Les clientes toléraient mieux l'aménorrhée que les saignements irréguliers. Leur préférence au DMPA ou au Net-En n'était pas altérée par l'aménorrhée. L'irrégularité des règles était

une raison significative pour changer de méthode ou discontinuer le traitement.

Conclusion: Les traitements pouvant entraîner une aménorrhée constitueraient des options acceptables dans la prise en charge des tendances au saignement anormal induites par la contraception par des Progestatifs seuls en injections intra musculaires actuellement utilisées.

Introduction

The discovery that progesterone had the power to inhibit ovulation by Makepeace, in 1937 was an important landmark in the contraceptive role of progestogens.¹ Since then numerous synthetic analogues of progesterone called progestogens have been developed and used in clinical practice including contraception.²

Presently up to 20 million women worldwide use progestogen-only methods of contraception. These are administered orally, through intramuscular injections, as implants, intrauterine devices, or in form of vaginal rings. The most widely used progestogen-only contraceptive is the injectable depo-medroxy progesterone acetate (DMPA), which is used by about 12 million clients in developing countries. Norethisterone enanthate (NE-En), the other progestogen-only injectable contraceptive, is used by less than one million users.³ Throughout the world many women value progestogen-only injectable contraceptives because it is safe (even with long term use), highly effective, long acting, reversible and discreet. It is also free of the side effects of estrogens making it appropriate over age 35 years or when there is contraindication to estrogen use.⁴⁻⁷ Its relative affordability and low level skill requirement for administration makes it attractive to patients and providers alike. Indeed it is a practicable method at primary and secondary levels of health care. However many women experience a variety of side effects, the most common of which include disruption of regular menstrual bleeding including amenorrhea, irregular bleeding, frequent and prolonged bleeding that have been cited as the main reasons for method discontinuation.^{7, 8} A World Health Organization (WHO) coordinated multicenter clinical trial documented the diversity of bleeding patterns among users of progestogen-only injectable contraceptive. Abnormal vaginal bleeding is socially inconvenient to clients and many women have expressed concerns over their inability to perform religious rites and meet their coital obligations to their partners as a consequence.⁹

A wide range of treatment modalities have been tried in order to overcome disturbances of bleeding pattern in women who use progestogen-only methods of contraception, including Norplant implants. Surveys in the 1980s and 1990s show that treatment regimens have included estrogens, combined oral contraceptives, non-steroidal anti-inflammatory agents, vitamin, iron and anxiolytics. The use of these has been limited by ineffectiveness, low acceptability and side effects. For example combined oral

contraceptive may help to regularize the bleeding pattern in users but women may doubt the advantage of using two contraceptive methods at the same time and the use of a method containing estrogen negates the pre-existing advantage of an estrogen-free progestogen-only method.¹⁰ This lack of an effective treatment for abnormal bleeding patterns threatens utilization of this choice method in developing countries where contraceptive prevalence is less than 10% in most parts. This study seeks to evaluate abnormal menstrual bleeding patterns among users of injectable progestogen-only contraceptives, clients' attitudes and choices.

Patients and Methods

This was a case controlled study to determine the prevalence of abnormal menstrual bleeding patterns, method switch and discontinuation among clients utilizing progestogen-only injectable contraceptives at the Reproductive Health Center of the Ahmadu Bello University Teaching Hospital Zaria.

The study group consisted of 354 clients who were on intramuscular Depot-medroxyprogesterone acetate 150mg every 3 months or intramuscular norethisterone enanthate 200mg every 2 months and the control group made up of 323 apparently healthy women in the reproductive age group who were yet to commence contraception, had no clinically evident lesion causing abnormal vaginal bleeding. These were recruited into the study after being counseled about the study and informed consent obtained. Both groups were matched in age and parity. A structured questionnaire containing questions on clients' biosocial characteristics, type and duration of use of progestogen-only injectable contraceptive being utilized, the patterns of menstrual bleeding observed and clients' attitude and reaction to them was served on each patient in both groups.

The following definitions were used to specify the patterns of bleeding that were observed during the study period of 120 days:

1. Normal (Regular) Pattern: Three episodes of bleeding lasting between 2-8 days and 21-35 days apart.
2. Amenorrhea: No bleeding for at least three consecutive cycles.
3. Frequent bleeding: Bleeding or spotting episodes less than three weeks apart.
4. Prolonged bleeding: Bleeding or spotting episode lasting more than eight days.
5. Irregular bleeding: No definite pattern of bleeding or spotting.

Results

The socio-demographic profile of the respondents is shown in Table 1. Majority of the clients were Hausa Muslim housewives aged between 21-40 years, had at least secondary education and at least 3 children.

Table 2 shows the menstrual bleeding pattern of control and study subjects; most (93.2%) of control clients (non-users) had a normal menstrual bleeding pattern. However, among clients using DMPA or norethisterone enanthate, normal menstruation was observed in 22.8% and 16.4% of clients respectively. Among clients on DMPA, 34.3% had amenorrhea and 31.1% had irregular menstrual bleeding; 41.4% and 24.0% of clients on Net-En had amenorrhea and irregular menstruation respectively. There was a significantly higher risk of abnormal menstrual bleeding when either DMPA or Net-En was used.

Abnormal menstrual bleeding patterns, commonly

amenorrhea and irregular bleeding were observed more frequently with longer duration of use of either DMPA or Net-En (Table 3)

As shown in table 4, most of the clients preferred to have normal menstruation while utilizing these contraceptives. The next preferred pattern was amenorrhea which was acceptable to 65.4% of the clients who experienced this pattern of bleeding as compared to irregular bleeding which was acceptable to only 20.2% of clients.

Normal menstruation was associated with decision to continue use while among the women who had amenorrhea, 96.2% opted to continue with the method (Table 5). Only 3.9% chose to stop the method, giving a discontinuation rate of 1.4% due to amenorrhea. However, 58.7% of the clients that had irregular bleeding opted to switch method, 13.5% opted to stop contraceptive use altogether. The discontinuation rate due to irregular bleeding was 21.2%.

Table 1: Socio-demographic status of respondents

Demographics	Respondent group						Total
	None		DMPA		Net-EN		
Ethnicity	No.	%	No.	%	No.	%	
Hausa	212	67.5	69	22.0	33	10.5	314
Yoruba	14	14.6	69	71.0	10	10.4	93
Ibo	6	31.6	13	68.4	0	0.0	19
Others	91	35.6	103	40.4	61	23.9	255
All	323	47.2	254	37.1	104	15.2	681
Religion							
Islam	221	60.7	100	27.5	40	11.0	361
Christianity	42	16.2	154	59.2	64	24.6	260
Other	60	100	0	0.0	0	0.0	60
All	323	47.2	254	15.2	104	15.2	681
Educational Level							
None	65	50.0	65	50.0	0	0.0	130
Koranic	0	0.0	3	42.9	4	57.1	7
Primary	76	51.0	68	45.6	5	3.4	149
Secondary	127	58.8	37	17.1	49	22.7	213
Tertiary	55	30.2	81	44.5	46	25.3	182
All	323	47.4	254	37.1	104	15.2	681
Occupation							
Housewife	136	49.5	98	35.6	41	14.9	275
Student	23	46.0	11	22.0	16	32.0	50
Civil servant	132	62.3	57	26.9	23	10.9	212
Professional	27	36.0	29	38.7	19	25.3	75
Business	5	7.5	59	88.1	0	0.0	64
All	323	47.6	254	37.4	99	14.6	676

Net-En = Norethisterone enanthate

Table 2: Menstrual bleeding pattern of control and study subjects

Injectable	Menstrual bleeding pattern										Total
	Normal		Amenorrhea		Frequent		Prolonged		Irregular		
	No.	%	No.	%	No.	%	No.	%	No.	%	
None	301	93.2	0	0.0	0	0.0	18	5.6	4	1.2	323
DMPA	58	22.8	87	34.3	25	9.8	5	2.0	79	31.1	154
Net-EN	17	16.4	43	41.4	7	6.7	12	11.5	25	24.0	104
Total	379	55.4	130	19.0	32	4.7	35	5.1	108	15.8	681

Net-En = Norethisterone enanthate

Table 3: Duration of use of injectable progestogen-only contraceptive and pattern of menstrual bleeding

Duration of use (Months)	Menstrual bleeding pattern										Total
	Normal		Amenorrhea		Frequent		Prolonged		Irregular		
	No.	%	No.	%	No.	%	No.	%	No.	%	
0	301	93.2	0	0.0	0	0.0	18	5.6	4	1.2	323
1-3	22	41.5	5	9.4	0	0.0	12	22.6	14	26.4	53
4-6	19	34.6	11	0.0	5	9.1	0	0.0	20	36.4	55
7-9	6	22.2	14	51.9	3	11.1	0	0.0	4	14.8	27
10-12	0	0.0	15	79.0	0	0.0	0	0.0	4	21.9	19
12+	31	15.0	85	41.1	24	11.6	5	2.4	62	30.0	207
Total	379	55.4	130	19.0	32	4.7	35	5.1	108	15.8	681

Table 4: Attitude of clients to bleeding patterns

Menstrual bleeding pattern	Attitude								Total
	Intolerable		Dislike		Indifferent		Accept		
	No.	%	No.	%	No.	%	No.	%	
Normal	0	0.0	0	0.0	10	12.8	65	87.2	75
Amenorrhea	4	3.1	3	2.3	38	29.2	85	65.4	130
Frequent	7	21.9	5	15.6	14	43.8	6	18.8	32
Prolonged	7	41.2	10	58.8	0	0.0	0	0.0	17
Irregular	24	23.1	51	49.0	8	7.7	21	20.2	104
Total	42	11.6	69	19.1	70	19.4	180	49.9	358

Table 5: Reactions of clients to their abnormal bleeding patterns

Menstrual bleeding pattern	Reaction						Total
	Continue with injectable		Change method		Stop use of contraceptives		
	No.	%	No.	%	No.	%	
Normal	78	100	0	0.0	0	0.0	78
Amenorrhea	125	96.2	0	0.0	5	3.9	130
Frequent	20	80.0	0	0.0	5	20.0	25
Prolonged	0	0.0	10	58.8	7	41.2	17
Irregular	29	27.9	61	58.9	14	13.5	104
Total	252	71.2	71	20.1	31	8.8	354

Discussion

Most women all over the world are aware of their pattern of menstruation and how it affects their lives. Perceptions of menstruation vary in different cultures and religions. These perceptions will influence the attitudes and reactions of women (and their partners) to changes in bleeding patterns resulting from the use of hormonal contraceptives. The acceptability and continued use of hormonal contraceptives may therefore depend on how much change in menstrual bleeding a woman experiences and what her perception of menstruation is.¹¹

The respondents in this study were from diverse backgrounds and were a reflection of the composite structure of the population served. Majority of them revealed that use of either DMPA or Net-En was associated with fewer episodes of normal

menstruation and higher propensity for amenorrhea, irregular and frequent vaginal bleeding. This finding is consistent with those of a WHO coordinated multicenter clinical trial which documented the diversity of bleeding patterns among users of progestogen-only injectable contraceptives. Only about 10% of DMPA users had normal cycles in the first year of use. DMPA users can expect to have irregular bleeding in the first six months and then infrequent bleeding or amenorrhoea in the next six months and beyond. In comparison norethisterone enanthate has less effect on bleeding pattern than DMPA. In a comparative trial, bleeding episodes in the first six months were significantly shorter among norethisterone enanthate users than users of DMPA. However, after six months of use, the bleeding patterns were similar. Amenorrhea lasting more than 90 days was significantly less common among

norethisterone users.⁹

Bleeding pattern may differ among ethnic groups. For example Southeast Asian women using DMPA report more days of bleeding and spotting than women in the Caribbean, Europe, South Asia or North Africa. North African women report amenorrhea more frequently than European women. In this study, amenorrhea and irregular bleeding were more frequently reported. While the full reasons for these differences are unknown, some of the variations may be attributed to regional differences in nutritional status of users, sensitivity to menstrual changes and its reporting and accuracy of menstrual diaries.⁹

Few studies have researched attitudes to menstruation and patterns of bleeding among women who were using injectable progestogen-only contraceptives. In this study, majority of the women preferred normal pattern of menstruation and accepted it. Majority of the amenorrhoeic clients (65.4%) also found it acceptable while 29.2% were indifferent. Most clients who experienced irregular bleeding found it intolerable (32.1%) or disliked it (49.0%) and decided to change method (58.7%) or stop all methods (13.5%). Of the entire amenorrhoeic clients 96.2% opted to continue with the method despite the amenorrhea showing that amenorrhea was not a strong reason for method switch or discontinuation. The client discontinuation rate as a result of amenorrhea was 1.41% and that due to irregular bleeding was 21.2%. The findings in relation to amenorrhea contrast with those reported from some other centers. For example, recent research in Thailand found that amenorrhea was seen in a very negative light; it was considered not only to be unhealthy but also to have a negative effect on a woman's appearance.¹² This perception was held regardless of age or education. In the USA, 328 young women at three different clinical sites were interviewed to find out their attitudes to injectable or implanted contraceptives.

When asked about possible menstrual changes, 74% of the young women said that they would stop using a contraceptive method if it caused irregular bleeding and 66% said they would stop using it if it stopped them bleeding altogether.¹⁵ With respect to irregular vaginal bleeding however, the findings are similar to those by other authors, which implicate it as a significant cause of method switch or discontinuation among clients on progestogen-only contraceptives.^{9,10,13-15} Clients preferences for amenorrhea and dislike for irregular bleeding as exhibited in this study is not surprising because majority of the clients were of the Islamic faith among whom certain religious obligations are precluded by vaginal bleeding. Consequently, persistent, irregular or unpredictable vaginal bleeding disrupts religious activities whereas amenorrhea does not. Amenorrhea begins to cause anxiety only when there is contemplation of another pregnancy.

It has certainly become imperative to find effective, safe and acceptable means of combating the abnormal bleeding patterns associated with the use of progestogen-only contraceptive to guarantee its place now and in the future as a choice contraceptive. The

high acceptability of amenorrhea in this setting is an important point in counseling and should raise an issue of composition and dosing of progestogen-only contraceptive that can incur more of this. Treatment of irregular bleeding aimed at incurring amenorrhea may also be a feasible solution. A similar study in a more socioculturally diverse population will add more weight to this assertion.

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149 Attitude of Nigerian women to abnormal menstrual bleeding from injectable progestogen-only contraceptive. Adaji S. E. et al.

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