

A Study on the Use of Primolut-N Tablet as a Contraceptive in the Kumasi Metropolis of Ghana

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Abstract

Objective: This study investigated into the use of Primolut-N tablet which contains norethisterone (5 mg), popularly called 'N-tablet' by users, as a pre-coital contraceptive by women in the Kumasi metropolis of Ghana.

Methods: Clients who called at any of the Twenty (20) selected Pharmacies in residential areas within the Kumasi metropolis demanding the drug, with or without valid prescriptions were interviewed using a structured proforma.

Results: Of the two hundred and twenty (220) users interviewed 94% demanded the drug for contraception and 6% for menstrual disorders. Sixty one percent of those demanding it for contraception were between the ages 20-25 years. Respondents preferred the use of norethisterone tablets as a contraceptive to other methods because it worked for them and they also found it easy and convenient taking a tablet just before coitus than taking daily oral contraceptive pills.

Conclusion: Norethisterone is being used as a pre-coital contraceptive, although the efficacy, safety and reliability of the drug for that purpose is unknown. Until these are known, women must be discouraged from using the drug as such.

Key Words: Norethisterone, Primolut N, Pre-Coital Oral Contraceptive

Introduction

Primolut N tablet containing norethisterone 5mg, is a first generation progestogen¹⁻³ indicated for use in conditions such as dysfunctional uterine bleeding (DUB), primary dysmenorrhoea, endometriosis, premenstrual syndrome and progesterone challenge test as in secondary amenorrhoea³⁻⁴.

Norethisterone has also been formulated in some preparations as a contraceptive³⁻⁶.

These preparations which include (1) Micronor (Ortho), (2) Brevinor (Synthex), (3) Loestrin 30 (Parke-Davis), (4) Noristerat (Schering Health Care) and (5) Norigynon (Schering) are available for use in pharmacies and most family planning clinics in Ghana. Some other emergency contraceptive preparations which do not contain norethisterone such as Postinor-2 (Gedeon Richter) and Norlevo (Cipla)^{5,6} have

Also been introduced unto the market in Ghana. Despite the availability of these large range of products, there have been speculations in Ghana that, Primolut N tablet containing norethisterone 5mg and popularly called N-tablet by users, is being used as a pre-coital contraceptive by a cross-section of women in Ghana. This has come to the notice of community health nurses, midwives, medical officers, pharmacists and other family planning providers in the country. Primolut N tablet taken minutes/few hours before sexual intercourse has however, not been a conventional contraceptive.

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A study was therefore undertaken to investigate into the use of Primolut N Tablet as a pre-coital contraceptive by women in the Kumasi Metropolis of Ghana.

The rationale for the study was to obtain background information on the use of norethisterone 5mg (Primolut N tablet) as a pre-coital contraceptive by a cross-section of women in Kumasi.

The specific objectives include:

1. To determine the percentage demand of Primolut N tablet use as a contraceptive against its recognized uses such as in dysfunctional uterine bleeding, progesterone challenge test and endometriosis
2. To identify the age groups and marital status of women who use the N - Tablet as a contraceptive.
3. To identify the prescribers who recommend this drug as a family planning method.
4. To identify how long users have been on the drug as a contraceptive.
5. To identify reasons for preference of Primolut N as a contraceptive and some side effects that might have been encountered during its usage.

Methodology

The study was a prospective cross-sectional study. Twenty (20) Pharmacies in residential areas within the Kumasi metropolis were selected. Selected pharmacists and pharmacy technicians in the 20 Pharmacies were trained to conduct the interview and assisted the respondents to fill the questionnaires. A prescriber in the questionnaire is defined as under the Ghana National Drugs Programme as anyone with a recommendation for a use of a drug and a dispenser as anyone who gives out a drug to a client⁷.

Clinical or hospital prescription implied clients came with a written prescription

form.

Clients who called at the pharmacy demanding Primolut N tablets with or without a valid

prescription and consented were interviewed. Each client was interviewed once within the period of study. Interviews were conducted one on one with an interview guide. Privacy and confidentiality were assured before the interview, the motive of the survey was explained to the respondents and informed consent obtained.

The data collection instruments were pre-tested in two community pharmacies. Five clients in each of the pharmacies were interviewed over a period of two weeks before the actual survey started. In all 300 respondents were targeted randomly. Each pharmacy received a file with 15 questionnaires (one for each respondent). The second author distributed the files and monitored the progress of the survey, by periodic visits to the pharmacies and phone calls. At the end of the 12 weeks, the completed questionnaires were collected and analysed.

Results

Two hundred and twenty (220) users of the Primolut N-tablets responded to the questionnaire. Ninety four percent (94%) of the respondents demanded norethisterone tablets for contraceptive use as against 6% for use in menstrual disorders, such as dysfunctional uterine bleeding, progesterone challenge test in amenorrhoea and primary dysmenorrhoea. The dosage requested for as contraceptive was a total dose of 515mg before and/ or immediately after intercourse as a single or in divided doses. The dosage requested for treatment for menstrual disorders ranged between a daily dose of 1015mg in divided doses and for five or more days.

The age group with the highest usage of

Primolut N-tablets as contraception were women between ages of 20 and 25years. This median age group represents 61% of the total respondents. Sixty-three percent (63%) of the respondents were single as against 37% married women. Forty three percent (43%) of the respondents had no children whilst 57% had between one and four children. Sixty-one percent (61%) of the respondents had been introduced to the drug for less than two years. Thirty-five percent (35%) had been introduced to the drug between two and four years and 4% had used the drug for over four years.

The study showed that 89% of the respondents had no hospital or clinical prescription as against 11% with hospital or clinical prescription. Only 3% had received hospital or clinical prescription meant for contraception. The non-health workers prescribers (mainly by verbal prescription) included the following, hairdressers, traders, policewomen, teachers, apprentices of various trades, students, boyfriends and partners.

Eighty eight percent (88%) of the respondents who demanded the drug for contraceptive use said they did not know any other uses of the drug apart from being used as a contraceptive. Whilst 12% said they know other uses apart from using it as a contraceptive and mentioned the following uses as; *prescribed for menstrual disorders, to stop bleeding, timing or postponing menstruation, correcting irregular menses, and also used in certain cases of menstruation difficulties.* All the respondents who demanded the drug for menstrual disorders said they did not know any other uses of the drug apart from its use for menstrual disorders.

On accessibility of norethisterone tablet, 78% of the respondents found no difficulty in accessing the drug whilst 22% found it

difficult in accessing the drug for the following reasons. *Seven percent (7%) felt shy to request for the drug and 14% said dispensers asked many questions before the drug was supplied.*

Seventy-five (75%) of users of norethisterone tablets as a contraceptive said they did not experience any side effects, while 25% said they experience side effects such as.

* *Frequent menses such as bleeding every two weeks*

* *Cessation of menses*

When asked about the last two methods of contraception used before switching over to the use of norethisterone tablets as birth control pills, the respondents mentioned all the orthodox methods and some unorthodox methods such as saccharin and ergometrine and menstrogen tablets. About 5% of respondents said they used abortion as a means of addressing unwanted pregnancies until they resorted to the use of norethisterone tablets because *the abortions were unsafe.*

The reasons given by respondents for choosing norethisterone tablet as a contraceptive are summarised below:

Sixty-six percent (66%) found the drug efficacious and that it worked for them. Twenty-four percent (24%) found it simple, comfortable and easy to take and *no special rituals required before taking it. They also preferred it because they used it only when required but not daily as with the daily oral tablets.* Ten percent (10%) found it cheap and two percent (2%) think it corrects their menstrual cycle and *helps in passing painless menses.*

Discussion

The high percentage (94%) of the respondents demanding norethisterone

tablets for contraceptive use as against 6% for use in menstrual disorders confirms the suspicion of health workers that Primolut N tablet is being used as a contraceptive rather than the recommended indications. Many women are ignorant about the use of Primolut N tablets. They believe the drug as presented, norethisterone 5mg tablet, is a conventional contraceptive.

The median age group of 20 to 25years representing 61% of the total respondents is a very sexually active group and therefore can be targeted for reproductive health education. Even though Primolut N tablets is classified as a prescription only medicine in Ghana, the study showed that only 3% of the respondents had a hospital or clinical prescription. This figure therefore represents a high level of abuse of the drug in the metropolis. Dosage ranges for contraception and menstrual disorders were within the maximum dosage use of the drug, which is up to 25mg daily British National formulary, 2004⁶.

In-vitro studies⁶ has showed that norethisterone 350microg is effective in preventing sperm migrating in the cervical mucus about 12hours later, so perhaps,

there may be some scientific basis to the claim by the women that it is effective. However until a scientific in-vivo studies have been conducted women have to be discouraged from using it as such.

Primolut N tablets is being used mainly as a pre-coital contraceptive and also as post-coital contraceptive in the Kumasi Metropolis because users claim it works for them and it is easy and convenient to take a table just before or immediately after coitus. However until results of clinical investigations indicate its efficacy or otherwise as a pre-coital contraceptive, the sale of Primolut N tablet to the general public for that purpose must be discouraged. It is also very important that public education is intensified on the use of oral contraceptives and the availability of post-coital (emergency) contraceptives such as Postinor 2 to help control the usage of Primolut N tablet as a contraceptive. The need to develop and manufacture a convenient, safe, reliable and affordable pre-coital oral contraceptive for women is necessary since compliance is difficult with the use of daily oral contraceptives. This is a challenge to drug designers and manufacturers.

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Low Serum Selenium Concentration in Patients with Cervical Cancer

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Introduction

Selenium (Se), vitamin E and sulfur amino acids have long been considered to serve as antioxidants that complement one another. So is an essential component of intracellular and extracellular glutathione peroxidases [1]. Vitamin E is a membrane-associated molecule that scavenges free radicals, preventing damage to membrane lipids [1]. In addition to enzymatic antioxidative action, Se is included in other anticancerogenic mechanisms, among which activation-inactivation of cell growth factor is the most important [2]. In many publications low plasma Se concentrations correlated directly with an increased incidence of different carcinomas [3,4]. The present study was designed to investigate serum selenium concentrations of patients with cervical cancer and of non-cancer subjects in Haryana (India).

Materials and Methods

The study included twenty five women with carcinoma cervix registered consequently in Radiotherapy Clinic at Pt.B.D.Sharma PGIMS, Rohtak (Haryana, India). Twenty five patients aged 37 to 63 years (mean 50.3 years) were treated for primary cervical cancer (Ca cervix). They were in different clinical stages of cervical cancer: four were in stage I_b, two in stage II_b, two in stage III_A and seventeen in stage III_B (FIGO Staging). All patients were in good nutritional condition. Venous samples were taken from these patients before starting treatment. Twenty age-matched healthy volunteers served as controls. Serum was separated by centrifugation and stored at 20 ° C until

assayed for selenium. The determination of Se in serum was performed by acid digestion of the samples followed by the reduction of Se to hydrogen selenide which was determined by atomic absorption spectrophotometer. The data obtained was analyzed statistically using student's t-test.

Results

Carcinoma cervix patients had significantly lower serum concentrations of selenium than controls (p <0.001, Table 1). The ages of the patients and the clinical stages of cervical cancer and the histological grading did not correlate with the serum concentration of selenium.

Discussion

In the present study, carcinoma cervix patients had significantly lower serum Se levels as compared to healthy controls (Table 1, p <0.001). This is in accordance with observations that patients with gastrointestinal or Hodgkin's disease, chronic lymphocytic leukaemia, breast cancer [5,6] had significantly lower blood concentration of Se than their respective controls. Also, epidemiological data suggest that cancer mortality is inversely correlated with Se consumption and that people living in geographic areas with a low Se content have a higher rate of malignancies, especially breast and gastrointestinal cancer [7].

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Table 1. Serum Selenium Concentration (mean \pm SD, ppb/ml)

	Serum Selenium
Control	120.57 \pm 13.45
Ca cervix	97.4 \pm 16.0

Numerous factors influence the appearance and spread of malignant processes in the organisms, among which the immune system, as well as detoxicating cellular enzymes which contain Se as their essential cofactor (Glutathione peroxidase, phospholipid hydroperoxide glutathione peroxidase, etc.) have important roles in the prevention and correlation of these transformations [2].

From big prospective epidemiological studies, it is well known that persons with low serum Se concentrations, as well as population from geographic areas with Se deficiency represent risk group for cancer genesis [8,9]. The exact mechanism by which a deficiency of Se is involved with carcinogenetic process is not known. As a cofactor of glutathione peroxidase, selenium prevents peroxidation of polyunsaturated fatty acids and consequently reduces the risk of cellular membrane damage, but other mechanisms are also possible [10].

On the other hand, Se deficiency might be a consequence of the malignant disease. In Broghamer's study, the serum concentrations of Se in carcinoma patients varied widely and the lowest concentrations of Se tended to appear in patients with distant metastases, multiple recurrences and short survival rates [11].

Robinson *et al* have postulated that a low concentration of Se in the serum reflects the nutritional state of patients [12]. The present results, however, did not support these theories because there were no difference in serum Se concentrations between various clinical stage, and all of our patients were in good nutritional condition. Our findings suggest that low serum concentration of Se in uterine cervical carcinoma patients might be a contributing factor in the development of cervical cancer. Selenium supplementation may have a role in chemoprevention of carcinogenesis.

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