CLINICAL TRIAL OF A POST - COITAL CONTRACEPTIVE PILL

Pages with reference to book, From 105 To 108

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Abstract

The study of a post-coital contraceptive pill containing 0.75 mg levonorgestrel was undertaken at National Research Institute of Fertility Control (NRIFC) to assess its efficacy, side effects and acceptability. Ninety five women were studied for 340 months of use. Average age and parity of acceptors was 29.4 and 3.8 respectively. Menstrual cycle irregularity was the most prominent side-effect responsible for 42.1% of discontinuations. No serious medical complications were noted. Contraceptive failure (pregnancy) rate calculated according to modified Pearls formula was 2.5 per 100 women years. The post-coital pill found acceptance in a group of women who needed contraception infrequently. Results are discussed comparing the experience with other contraceptives (JPMA 38:105, 1988).

INTRODUCTION

Post-coital pill is a desirable and useful method of interval contraception as it liberates the women from the need of taking continuous hormonal treatment. It also diminishes the chances of forgetting and irregular pill taking with its consequent risks. Considerable work done on post-coital pill in the past decade shows successful results with high doses of oestrogens and combination pills[1] but a high incidence of severe side-effects proved oestrogens undesirable.[2-5] Later-on, progestagens were tried in different doses including Levo-norgestrel 0.75 mg[6-12]. In view of encouraging results obtained by other workers, NRIFC decided to conduct a preliminary clinical trial of "POSTINOR" containing 0.75 mg Levonorgestrel. Mode of action is considered to be alteration in endometrium, making it unsuitable for implantation[7,12,13].

SUBJECTS AND METHODS

Postinor is a post-coital pill containing 0.75 mg Levo-norgestrel manufactured by GEDEON RICHTER Ltd. of Hungary. The pill has to be taken within one hour of coitus and its use is restricted to a maximum of 4 pills per month for safety reasons. This study aimed to assess the acceptance, tolerability, side-effects and contraceptive effectiveness of this drug in Pakistani women. The trial included 126 women pre-selected for coital frequency. The subjects were healthy, fertile, married women of child bearing age attending the 4 clinics of NRIFC. They were interviewed at admission and follow-up visits according to a questionnaire prepared to serve the objectives of the trial. They were asked to return every month for follow-up and evaluation, instructed to record the occurrence of vaginal bleeding and coitus with pill use on a given menstrual diary. The restriction of a maximum of 4 pills per month was emphasised. Usual exclusion criteria for hormonal contracepfives, e.g., hepatic disease, undiagnosed vaginal bleeding, diabetes, hypertension, malignancy of breast and genital tract and history of thromboembolic phenomenon were employed while selecting women for this trial. The recruits were given a general medical check-up at admission and follow-up visits. Side-effects were noted only if the women volunteered information spontaneously.

RESULTS

It took more than the estimated 6 months to recruit 126 women for our study because our volunteers are married and a restriction on frequency of coitus was found unacceptable. A high number, i.e., 31(24.6%) returned the pills without using even once because of husbands refusal (Non-users). The study was thus restricted to 95 women (75.4%) who agreed to try this new contraceptive (users). Total months under study were 340 during which a number of 943 coitus were recorded. Average coital frequency was approximately 3 per woman per month, whereas average use was 6 months per woman. Mean age and parity of acceptors was 29.4 and 3.8, respectively. No significant difference was noted in the mean age and parity non-users and users, discontinuing and continuing cases. Attempt was made to assess the acceptance of postinor pill by calculating the proportion of Postinor users out of all Family Planning Acceptors attending the selected clinics as well as comparing it with other interval contraceptive acceptors in the same clinics. It was observed that the percentage of women agreeing to use Postinor was 3.1% whereas for oral pill it was 28.9%, injectable 11.1% and condoms 23.2%.

Contraceptive Effectiveness

Two accidental pregnancies were reported in this trial of 95 women using postinor for 340 months, involving 943 coitus. The contraceptive failure rate as calculated by modified Pearls formula was 2.5 per hundred women. Drug efficiency rate was found to be 99.8%.

Discontinuations

Twenty Percent women were found continuing at the end of trial while the rest had discontinued at different stages of use. Minimum and maximum duration of use was 1 month and 16 months respectively. A variety of reasons for discontinuation were recorded (Table 1).

Table 1. Reasons for Discontinuation.

Reasons	No. of cases	% age (N=75)	Use in Months Mean per woman	Range
Bleeding	32	42.1	2.8 ±1.79	1–8
Limit of 4 coitus	14	18.4	2.5 ±1.29	1–5
Giddiness	7	9.2	3.1 ±2.27	1–6
Amenorrhoea	4	5.3	2.7	1–6
Weight gain	2	2.6	6.5 (5.8)	5–8
Headache	2	2.6	3.0 (1.5)	1–5
Pigmentation on face	1	1.3	4.0	1
Pregnancy	2	2.6	3.0 (1.5)	1–5
Husband left Karachi	4	5.3	1.5 (1.3)	1–3
Lost to follow-up	3	4.0	4.7 (3.8)	3–8
Omission to take pills	2	2.6	2.0 (1.3)	1–3
Had Tubeligation	1	1.3	4.0	4
Others	2	2.6	4.0	2–6

* Mean ± S.D.

Bleeding was the most common reason for discontinuation (42.1%). Three patterns of bleeding were reported. Spotting continuing for about a week or so, heavy withdrawal bleeding occurring after few days of taking pills, or unusual prolongation of menstrual period. The period of use after which the method was stopped due to bleeding irregularity ranged from 1 to 8 months with an average of 2.8 months per woman. Next major cause of discontinuation (18.4%) was the limit of 4 coitus per month. Other reasons reported for dropping out constituted 24% which included symptoms like giddiness, amenorrhoea, weight gain, headache and pigmentation. Non-medical reasons constituted 13 3%, viz., husband left Karachi, omission to take pills, lost to follow-up, opted for tubeligation and others. Women complaining of amenorrhoea had delay in menses of 2 or more weeks. Pregnancy was excluded in all these cases by pregnancy test and clinical examination.

Medical Side-effects The records of 95 women were also analysed for any medical side-effects observed or complaints offered by them. Twenty nine (30.5%) bad no medical complaints while 66 (69.5%) had one or multiple of the complaints as given in Table II.

Table II. Complaints.

Complaints	Number of Complaints	No. of Discontinuations out of complaints
Irregular Cycle	20	
Spotting	25 57	32
Heavy bleeding	12	
Amenorrhoea or delayed menses	11	4
Scanty menses	2	None
Weight gain	5	2
Giddiness	10	7
Nausea or dyspepsia	8	None
Backache	1	None
Palpitation	1	None
Headache	2	2
Pigmentation of face	1	1
Tension in breast	3	None

The whole group of users was also analysed for previous use of contraception. See Table III.

Table III. Previous Use of Contraceptive.

Sr. No.	Contraceptive	No. of Women Discontinued Group	No. of Women Continued Group	Total Number	%
1.	I.U.D.	15	1	16	16.8%
2.	Oral Pills	5	1	6	6.6%
3.	Injectable	3	3	6	6.6%
4.	Conventional	11	8	19	20.0%
5.	None	42	6	48	50.4%
Total:		76	19	95	100%

There were 49.5% previous contraceptive users among the 95 subjects. Sixty eight percent in the continuing group and 44.8% among the drop-outs. Fifty percent women had not used any contraceptive prior to the use of Postinor.

DISCUSSION

Postinor, a post-coital pill had limited acceptance as a contraceptive method because of the safety upper limit of 4 pills and hence a maximum of 4 coitus pcr month. It was noted to have a failure rate of 2.5 HWY (Modified Pearls Index) in our study and a drug efficiency rate of 99.8% proving it to be a potent contraceptive agent if used strictly according to instructions. Our results in this respect are comparable to those obtained by others[1-4]. Postinor had a high discontinuation rate (75.6% at 6 months) mostly due to cycle disrup. lion and secondly due to limit of 4 on coitus. Discontinuations ranging 50-76% have been reported for other oral pills also, tried at NRIFC[17]. Discontinuation of Postinor due to medical reasons was also found comparable to that experienced with some other oral pills. Omission to take pills was 2.6% for Postinor whereas it has been 24—29% with other oral pills resulting in high rates of menstrual disturbance and pregnancy[17]. Injection Norigest had 52% drop-out rate at 6 months and about 32% medical reasons of discontinuation[15]. Postinor can be recommended as a safe contraceptive, for women who cannot use Oral Pills because of its Oestrogen content, or women who have infrequent contact with their husbands, or women who have tried other contraceptives and found them unsuitable.

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