COMPARATIVE STUDY ON NET-EN 200 MG (TWO MONTHLY INJECTION) VERSUS NET-OEN 50 MG + E 2 VAL 5 MG (ONE MONTHLY INJECTION) FOR A PERIOD OF 3 YEARS

By

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SUMMARY

Injectable Contraceptives can become very popular in India, where majority like to take an injection for any type of ailment. This study was conducted in Govt. RSRM Lying-In Hospital, Madras-13 to compare and contrast their efficacy and the side effects. NET-EN 200 mg was compared with NET-EN 50 mg + E2 Val 5 mg. Injections were given to two groups of selected subjects for one year and they were followed up for another two years. NET-EN 200 mg was given once in 60 days and NET-EN 50 mg + E2 Val 5 mg once in 30 days. The commonest side effect encountered in both groups was irregular unpredictable menstrual bleeding. We did not have any subject with heavy bleeding. All showed an increase of 1.5 to 2 kg body weight and increased haemoglobin content. We had one NET 200 mg user showing abnormal weight gain. She gained 5 kg body weight in 6 months. We had one method failure with NET 200 mg. One NET 200 mg user developed thrombophelbitis of right leg and two NET 200 mg users developed jaundice. We found that in 95% of cases belonging to both groups the menstrual cycles got regularised within one year of stopping the drug. Only 4% subjects continue to have scanty infrequent periods after 2 years after discontinuation of drugs. Majority conceived within first 6 months, of the side effects of NET-EN 200 mg were more than that of NET-EN 50 mg + E2 Val 5 mg. Inspite of menstrual irregularity being the commonest side effect, subject's acceptance was good. 75% of subjects took injections for one year. Many wanted to be enrolled for one more year also. This shows that this method has become very popular. We did not encounter side ecects like cramps, breast nodules, dizziness and nervousness as reported by others. The occurrence of amenorrhoea was not high as reported in the literature.

Introduction

Norethisteron Enanthate 200 mg is a two monthly injectable contraceptive given once in 60 days. Norethisteron Enanthate 50 mg + Estradiol Valerate 5 mg is a monthly injection given once in 30 days. Both were given as deep intramuscular injections on the buttocks.

From: Govt. RSRM Lying-in Hospital, Royapuram, Madras-600 013. South India.

These are long acting progesterones which are slowly released into the system. Indications and contra-indications for subject selection is same as for any other hormonal contraceptive agent. Pregnancy was ruled out in women with lactational amenorrhoea. Lactating women whose last child birth was less than 6 months and who do not have any living child were not included in this study.

Material and Methods

In each group 60 cases were registered. The women were moderately built, in the age group of 18-35 years and para 1-3. Before administration of the injection a thorough clinical, bi-manual and breast examinations were done. Blood pressure, weight, urine analysis, ectocervical smear, endocervical smear and vaginal smear for moniliasis and trichomonal infections were taken. Blood pressure and body weight were recorded and breast examination and bimanual pelvic examination were done at every visit. Laboratory investigations were done once in 6 months. Pregnancy was ruled out in all cases of amenorrhoea. Cervical smears were stained by Papanicolaou stain. In all suspicious cases colposcopy directed biopsy were done and necessary treatment was given, depending upon the biopsy report. Subjects were instructed to maintain a menstrual diary and report for injections on the 30th day or 60th day irrespective of whether they got the periods or not. If subjects did not turn up for injections, reminders were sent and home visits were made. Injections were given for one year, and follow-up was done for 2 years to study the return of fertility and reversal of side effects.

Results

Out of 60 users of NET-EN 200 mg, 41 cases (78.4%) took injections for one year. Out of 60 users of NET-EN 50 mg + E2 Val 5 mg, 47 cases (68.36%) took injections for one year.

The commonest cause for discontinuation was iregular unpredictable menstrual cycle in both groups (Table I).

TABLE I
Reasons for Discontinuation 120 *Cases*

	Net—EN 200 mg (60 cases)		Net—EN 50 mg + E2 Val 5 mg (60 cases)	
	No.	%	No.	%
1. Protocol Violation	1	1.7	3	5
2. Irregular periods	8	18.3	6	10
3. Amenorrhoea	3	5	1	1.7
4. Pregnancy	1	1.7	NIL	
5. Thrombophelbitis	1	1.7	NIL	
6. Jaundice	2	3.3	NIL	
7. Tubectomy	1	1.7		
8. Abnormal weight gain	1	1.7	NIL	
9. Wanted another child	1	1.7	2	3.3
10. Committed suicide	NIL		1	1.7
Total	19		13	

From the Table II we find that unpredictable irregular spotting was the commonest menstrual pattern. It is also clear that amenorrhoea is more common in NET 200 mg users.

Laboratory investigation

Vaginal smear for trichomonal Infection and moniliasis, was done in 120 cases. Results are shown in Table III.

Cervical smears both ectocervix and endocervix was taken in 120 cases and stained with papanicolaou technique. The results are shown in Table IV.

Colposcopy was done in 100 cases. The Results are shown in Tabe V.

Out of four cases who showed dysplasia 3 regressed. One, 35 years old subject showed grade III dysplasia, cervix biopsy

TABLE II
Menstrual Pattern

Type of periods	Net—EN 200 mg (60 cases)		Net—EN 50 mg + E2 Val 5 mg (60 cases)	
	Cases	%	Cases	%
1. Regular periods with scanty flow	14	23.3	16	27
2. Amenorrhoea	15	25	4	6.5
3. Unpredictable scanty irregular spotting	31	51.7	40	66.5
4. Excessive bleeding	NIL		NIL	

TABLE III
Vaginal Smear in 120 Cases

Findings	Net-EN 200 mg (60 cases)		Net-EN 50 mg + E2 Val 5 mg (60 cases)		Treatment
	No.	%	No.	%	
1. Negative	52	86.6	48	80	Nil
2. Trichomonal vaginitis	5	8.3	10	16.6	Metronidazole tablets
3. Moniliasis	3	5	2	3.3	Mycostatin vaginal tablets

TABLE IV
Cervical Smear in 120 Cases

	Net-EN 200 mg (60 cases)		Net-EN 50 mg + E2 Val 5 mg (60 cases)		Treatment
	No.	%	No.	%	
1. Negative	46	76.5	54	90	Nil
2. Trichomonal vaginitis	2	3.3	1	1.7	Metronidazol tablets
3. Inflammation	10	16.7	3	5	Antibiotics and vaginal tablets
4. Dysplasia	2	3.3	2	3.3	Colposcopy—biopsy cervix

TABLE V
Colposcopy in 100 Cases

Findings	No. of cases	%	Treatment
1. Normal	72	72	Nil
2. Erosion-cervix	13	13	Cauterisation with cryocautry
3. Trichomonal infection	5	5	Metronidazol tablets for Husband and Wife
4. Non specific inflammation	6	6	Vaginal tablets
5. Dysplasia	4	4	Follow-up every three months with Pap-smear and Colposcopy

showed chronic cervicitis with severe dysplastic changes. Hence total abdominal hysterectomy was done.

TABLE VI
Follow up at the End of 2 Years of Discontinuation of Net-en Injections (100 Cases)

Sl. No.	Findings	No. of cases
1	Continue to have scanty infrequent periods	5
2	Interval T A T	15
3	Interval Laparoscopic sterilisation	5
4	Interval CUT insertion 200 mg	15
5	Using Conventional Methods	15
6	Pregnancy	45

TABLE VII
Return of fertility was better with NET 50 mg.
Pregnancy Outcome (45 Cases)

Sl. No.	Outcome	No. of cases
1	Full term normal delivery	29
2	MTP with concurrent Laparoscopic Sterilization	10
3	MTP with concurrent CUT 200 mg insertion	6

Discussion

Many authors like Chowdhuri and Mukerjee (1987), Mishra and Dubey (1988) and Rohatagi and Mishra (1985) have reported that with Injectable contraceptives, the irregular, unpredictable bleeding p.v. is the commonest side effect and also the common cause for discontinuation. In our study also we had similar observations which is shown in Table I and II. Meads and Peroz (1984) found in their study with NET 200 mg in Rural Mexico, that, 66.5% of subjects had amenorrhoea and 35.9% discontinued due to this. In our series one NET 200 mg user had 14 months amenorrhoea. We did not have any users with heavy bleeding. Whereas Chowdhuri and Mukherjee (1987) found 0.5% of their NET 200 mg users had heavy bleeding.

At the end of 6 months of discontinuation 85% of NET 50 mg + E2 Val 5 mg users and 65% of NET 200 mg users reverted back to normal periods in our study. At the end of 2 years only 4% of NET 200 mg users and 1% of NET 50 mg users continued to have scanty infrequent periods. In (Mishra and Dubey, 1988) series on NET 50 mg, only 55.56% users reverted back to normal periods.

All subjects in our study (100%) showed an average increase of 2-3 kg body weight. Only one NET 200 mg user had abnormal weight gain of 5 kg in 3 months

along with 90 days amenorrhoea. She reduced weight of 3 kg and resumed periods within 2 months of discontinuation. Rohatagi, Mishra found in their series, 77.5% NET 200 mg users did not have any change in body weight. Dubey and Mishra found, 85% of their NET 50 mg users showed weight increase and only 5% showed weight reduction after discontinuation. Abnormal weight gain is reported in Population Reports Series K on Injectable contraceptives.

There was one method failure with NET 200 mg in our study. Dubey with NET 50 mg and Rohatagi's study with NET 200 mg they did not have any method failure. Mukherjee and Choudhuri with NET 200 mg had a pregnancy rate of 0.87 per 100 women per year with NET 200 mg and 0.36 per 100 women with DMPA. Pregnancy was 0.2 per 100 women per year in Meads series with NET 200 mg. Pregnancy with NET 200 mg is reported as 2 per 100 women at twelve months in Population Reports (1983 and 1987). None have reported method failure with NET 50 mg + E2 Val 5 mg. We did not encounter any side effects like cramps, chest pain, nervousness, breast tenderness and dizziness as reported by Rohatagis, Mishra and Dubey. Side effects were more with NET 200 mg as shown in Table I.

During the return of fertility study and follow-up of 100 cases at the end of 2 years of discontinuation we found 40 subjects conceived within one year and 5 cases within 1-2 years. Results of follow-up and pregnancy outcome are seen in Table III and IV.

We conclude that, in contrary to many adverse reports about injectable contraceptives, like other authors (Mishra, Dubey, Choudhuri and Meads). We in our 3 years experience with NET EN injections, found that they are safe, effective temporary contraceptives agents with minimal revesible side effects and good return of fertility. It is observed that NET 50 mg is better than NET 200 mg as the side effects are minimal, with better return of fertility. In our series, the rate of amenorrhoea with NET 200 mg is less compared to other series.

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