# CENTCHROMAN, A SAFE CONTRACEPTIVE COVERAGE FOLLOWING MEDICAL TERMINATION OF PREGNANCY

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## SUMMARY

**This study aims to find an ideal method of contraceptive coverage following MTP with minimal side effects and maximum patient acceptance and compliance. Ninety six patients (96) were selected following MTP from S.R.N. and K.N.M. Hospital, Allahabad since January 93 and still continuing. Clinical history, examination was undertaken in each case. Routine investigation were performed in each case. Liver function test serum bilirubin, S.G.P.T.serum alkaline phosphatase and total serum protein and renal function test (serum urea, creatinine, uric acid, total urine ouput) was carried out initially, and after 3 monthly. Ultrasonography was done in 56 patients to study the size and volume changes of ovary during therapy.**

**Majority (85.42%) belonged to age group of 20-30 years. Maximum patients were para-1 and para-3 (68.7%). About 41.60% were upper middle class. To date 83% cases had normal cycles and 12.5% had prolonged cycles (35-44 days) in one to two cycles. 4.16% cases had longer cycles than 45 days. Success rate was 96.87%, failure rate is 3.12%. Liver function and renal function test showed no alteration after one year of use of Centchroman. Size and volume of ovary remained the same after use of Centchroman as shown by USG. The contraceptive effect is reversible within 6 months of stopping therapy.**


## *INTRODUCTION*

In the national commitment i.e. 'Health for all by 2000 A.D.', our aim is to bring

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*Accepted for Publication on21.8.95*

down the birth rate to 21 and a family size of a 2.3. Therefore effective spacing methods should receive greater emphasis, and in future target couples should be motivated to follow the regimen of postponing the first child birth after marriage and to space the second birth by 5-8 years.

The best time for motivation is after a delivery or an M.T.P. Therefore immediately after M.T.P. a contraceptive coverage method is mandatory.

This study aims to find an ideal method of contraceptive coverage, following M.T.P. with minimal side effects and maximum patient acceptance and compliance. This is a short term report, though the study is still continuing.

Centchroman is a drug developed by Central Drug Research Institute (CDRI, Lucknow) and after being approved by the drug controller of India, has been introduced in the Market as Saheli and Centron.

It is 3, 4 - Trans-2, 2 DIMETHYL-3 PHENYL-4-P

( B PYRROLIDINEOTHOXY PHENYL) - 7 - METHOXYCHROMAN.

Centchroman is a non steroidal, non hormonal oral contraceptive. In contraceptive doses it has an anti estrogenic action mediated via oestrogenic receptor, devoid of progestational, androgenic, antiandrogenic and anti-gonadotrophic activities (Kamboj et al in 1971).

It does not interfere with pituitary ovarian hypothalamic axis, therefore inhibition of ovulation is not observed following its administration.

It appears to manifest its contraceptive action by slightly accelerating embryotransport and suppressing Endometrium proliferation for implantation, thereby interfering with nidation.

It does not interfere with adrenal and thyroid function.

Its antifertility effect is reversible and no adverse effect on fetal genital organs has been observed.

## *MATERIAL & METHODS*

96 patients were selected following M.T.P. from S.R.N. Hospital, K.N.M. Hospital.

Centchroman was given to all these patients as contraceptive coverage following M.T.P. All the patients were educated and belonged to urban group so that regular follow up could be done effectively.

The study started in Jan.'93 and it still continuos since it is a 2 year study. The present date has been compiled after 12 months follow up of the trial cases.

Clinical history with special reference to menstrual cycle was taken. Recent history of jaundice, severe anaemia was ruled out. Diabetes mellitus and hypertension were excluded. These patients did not use other methods of contraception.

Clinical examination, bimanual palpation and perspeculum examination was done to rule out any pathology.

Routine investigations, Hb gm.%, TLC, DLC and complete urine examination was done in each case.

To observe any abnormal or any deleterious effect of Centchroman on body system, renal and liver furnction tests were carried out initially and then 3 monthly.

Liver function tests included serum Bilirubin, S.G.P.T., Serum Alkaline phosphatase, Total serum Protein (serum A/G. ratio)

Renal function tests comprised of serum

urea, creatinine, uric acid, total urinary output in 24 hours, Total protein excretion in 24 hrs.

Ultrasonography was done in 56 willing patients to study the size and volume changes of ovary during therapy.

## *RESULTS & DISCUSSION*

Majority 82 (85.42%) belonged to the age group of 20-30 years. (Table-1).

Maximum patients were between Para-1 and Para-3 (68.75%), while 22.90% were Para-4 and above (Table-2).

According to socio-economic status, maximum cases (41.66%) were upper middle class and 37.55% were upper class (Table-3)

To date 83% of cases had normal cycles and 12.5% had cycles prolonged for more than 35-44 days in one to two cycles

**Table 1**
**Showing Distribution of cases according to Age.**

| Age (Years) | No. | % |
|---|---|---|
| 20-25 | 42 | 43.76 |
| 26-30 | 40 | 41.66 |
| 31-35 | 10 | 10.41 |
| 36-above | 4 | 4.16 |
| Total: | 96 | 99.99% |

Majority (85.42%) belong to Age Group of 20-30 years.

**Table 2**
**Showing parity in Centchroman Users**

| Parity | No. | % |
|---|---|---|
| $P_0$ | 8 | 8.33 |
| $P_1$-$P_3$ | 66 | 68.75 |
| $P_4$ and above | 22 | 22.90 |
| Total: | 96 | 99.98 |

Maximum patients were between Para-1 and Para-3. 22.90% were Para-4 and above.

**Table 3**
**Showing Socio-economic Status**

| Class | No. | % |
|---|---|---|
| Upper | 36 | 37.50 |
| Upper Middle | 40 | 41.66 |
| Upper Lower | 12 | 12.50 |
| Lower Middle | 8 | 8.33 |
| Lower | Nil | - |
| Total: | 96 | 99.99 |

This Table shows that Maximum cases were from upper middle class (41.66%) and 37.55 belonged to upper class.

**Table 4**
**Cycle Variation**

| Cycle Duration (Days_) | No.of Patients | % |
|---|---|---|
| 17-26 | 25 | 26.04 |
| 27-35 | 55 | 57.29 |
| 35-44 | 12 | 12.50 |
| 45 | 4 | 4.16 |
| Total: | 96 | 99.99 |

**Table 5**
**Showing Failure Rate**

| No.of Cases | Success Rate | | Failure Rate | |
|---|---|---|---|---|
| | No. | % | No. | % |
| 96 | 93 | 96.875 | 3 | 3.125 |

(Table-4). In 4.16% cases cycles were more than 45 days.

In a long term study by Kamboj et al (1992) it was observed that distribution of prolonged cycle was random and not confined to any particular cycle or individual. No other side effects were seen in the present series.

The success rate was 96.87%. Reliable contraception cannot be practiced without scheduled use of Centchroman. Failure rate is 3.12 whereas Puri et al 1988 with Centchroman showed a pearl index of 4.4.

Nityanand et al (1990) reported pearl index of 2.17.

USG study shows no change in ovarian or uterine size wheras Nityanand et al 1990 found palpable tubo ovarian masses in 3 cases.

The Contraception effect is reversible with 6 months of stopping therapy. Liver function & renal function test showed no alteration after one year use of Centchroman. Similar findings were reported by Nityanand et al 1990.

## *CONCLUSION*

It was therefore concluded that Centchroman is safe nonsteroidal contraceptive with minimal side effect and excellent patient compliance due to its weekly dosage schedule.

Its contraceptive effect is reversible with 6 months of stopping therapy and is therefore recommended for women in reproductive age group wanting an easy spacing method of contraception following M.T.P.

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