**SUMMARY**

Centchroman (3, 4 trans - 2, 2 dimethyl-3 phenyl - 4 - p (β pyrrolindoethoxy) - phenyl - 7 - methoxychroman) is a non steroidal compound with oestrogenic, antioestrogenic and anti progestational activity. It is a odourless, crystalline substance of melting point 163°C and molecular weight 493.5.

As early as 1926 it was observed that oestrogen prevents pregnancy in rats and mice when given post coitum. (Parker, A.S. and Ballbarry, C.W.). But difficulties in mass administration and side effects associated with oral oestrogen progestagen pills led to the synthesis of alternative compounds and this resulted in the discovery of centchroman.

Oral administration of centchroman in various doses on day 1 - 5 post coitum caused cent percent prevention of pregnancy in rats and mice (Namboj et al., 1977).
It had also shown its antifertility efficacy in human being at doses of 120 mg and 60 mg weekly.

Oestrogenic activity was observed when oral (0.1 mg/kg to 2.0 mg/kg) or subcutaneous (1 to 5 μg/animal) administration caused a significant increase in uterine weight in immature rats (Kamboj et al., 1977).

Antioestrogenic effect was seen when centchroman was given to preweaning rats. It caused increase in ovarian weight, luteinisation of follicular cells, ovulation and corpus luteum formation. Lack of proportionate increase in uterine weight in presence of ovarian stimulation in centchroman treated animals could probably be explained on the basis of antioestrogenic effect (Datta, J.K. and Roy, S., 1980).

Antiprogestational properties was observed in claufery assay in rabbit in counteraction of decidualization and in alternation of biochemical constituent of uterus in mated or delayed implantation (Nair et al., 1977).
Cenchrroman inhibited pregnancy by arrest of ova development, inhibition of decidua formation and by interfering the action of oestrogen and progesterone (Kamboj et al., 1977).

In human female volunteers cenchrroman showed its contraceptive efficacy due to its action over cervical mucous and endometrium affecting sperm transport and implantation (Vaidya et al., 1977).

Cenchrroman had not shown any abnormal toxicity in rats and monkey on chronic administration (Sakarjee et al., 1977).

In clinical pharmacological studies in healthy male and female volunteers no untoward effects was reported (Chandra et al., 1977).

In the present study cenchrroman at 30 mg weekly dose was given to the thirty cases. Drug was started from first day of period and was taken on same day in subsequent weeks. One additional tablet was taken if next cycle did not start on pill day. Hormonal evaluation was done
by the study of cervical mucus for pH, spinabarkesit test and fern test and vaginal cytology for karyopyknotic index and maturation index. This cervical mucus examination and vaginal cytology study was done on 8th, 14th and 22nd day of one pretreatment cycle, three treatment cycles and one post treatment cycle just after treatment with centchroman. Endometrial biopsy was not done because no cycle got prolonged more than 45 days.

From this study we observed and concluded that:

- Patients who opted centchroman are in age group from 20 – 32 years with parity ranging from primipara to fifth parity or more than 5.

- Centchroman caused delay in cycle length in 20% cases in all the three treatment cycles but in different cycles in different cases. So thus could not be explained as an effect of centchroman.

- Fall in karyopyknotic index was seen in vaginal cytology study, taken on 8th, 14th and 22nd days of treatment cycles when compared to pre and post treatment cycles.
- Cervical mucus did not reveal any noticeable changes.

- Side effects noticed are dizziness and itching over vulva on day of drug intake. No change in blood pressure and pulse was recorded.

Se methystoxan had shown its antioestrogenic property in treatment cycles and no pregnancy was reported in any of the case. Its antifertility efficacy might be due to its antioestrogenic activity but no definite conclusion could be drawn because the duration of study was short.