MEDICAL TERMINATION OF PREGNANCY IN SECOND TRIMESTER BY CATHETER AND PGF_2 ALPHA—A COMPARATIVE ACCOUNT

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SUMMARY

Two methods, the extra-amniotic gamma sterilized rubber catheter and PGF_2 alpha were tried for induction of second trimester abortions in 100 cases each and the observations were recorded with special emphasis on rate of success, nature of abortion and induction-abortion interval.

Introduction

Various methods have been used. In the present study, we have selected two methods for termination of second trimester pregancy viz.:

1. Extra-amniotic Gamma sterilized rubber catheter.
2. PGF_2 alpha by intramuscular route.

We have carefully studied the various aspects of these two methods and have compared heir results.

Material and Method

The present study was conducted in the department of Obstetrics and Gynaecology, Medical College, Kanpur. A total of 200 cases, both multiparous and nulliparous were selected from the women attending family planning clinic and O.P.D. for MTP. Patients selected varied in their period of gestation from 12 to 20 weeks. They were given full information about the procedure and advised admissions. A complete systemic and pelvic examinations were done to rule out any pathology. The patients were divided in two groups.

Group I: Included 100 cases for catheter induction. Patient was put in lithotomy position and cervix visualised. A gamma sterilised rubber (ranging in No. from 8 to 14 depending on period of gestation) was introduced through cervical os. between uterine wall and the amniotic sac, until only 2 cm of catheter was left out of external os. After this patient was kept in bed for 24 hours and also to report if the catheter came out at the time of micturition or defecation. If there was resistance or bleeding during introduction of catheter, then it was withdrawn and reintroduced in different direction to avoid injury to the placenta. Mild uterine contractions started usually in 6 to 8 hours, which became strong within 24 hours. If strong contraction did not develop after 24 hours, syntocinon drip was started with 10 units in 5% dextrose. After abortion abortus was examined for completeness and the amount of bleeding was carefully

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noted. Cervix was visualised for any tears. Patient was discharged next day and instructed to report after 2 weeks and then 4 weeks for a follow-up.

Group II: Included 100 cases for MTP by PGF_2 alpha, which is now available by the name of Carboprost in 10 ml vial (1 ml. containing 250 ugm of PGF_2 alpha). After proper examination, a sensitivity test was done by giving 2 cc of carboprost intermuscularly. Patient was given capsul Imodium (Loperamide) half an hour before starting the injections of PGF_2 alpha and repeated if required, in order to avoid loose motions which was a very common occurrence in these patient.

If the patient did not show any hypersensitivity reaction like hypotension, flushes and blurring of vision following dosage schedule was adopted. First injection of 200 ugm of PGF_2 alpha was given and then two hourly injections of 300 ugm were given for 7-8 doses. These injections were stopped as soon as the patient expelled the foetus. The uterine contractions normally started 5 minutes after the first injection. This method was not used in patients who had asthma, allergic bronchitis, organic heart disease, epilepsy. liver and kidney disorders.

Observation

Majority of the patients were unmarried and nulliparous (63.63%). This was because the unmarried girls sought termination in late first or second trimester due to social stigma. Mean age of the patients was 28 years in both groups. Mean gestational age was 19.4 weeks and 15.33 weeks in groups I and II respectively.

Table I shows the relation between period of gestation and mean induction-abortion interval (IA interval).

TABLE I

Gestation in wks.	Induction-abortion interval in hrs. Group I	Group II
12-14	31.0	15.73
16-18	30.61	17.3
Above 18	30.47	—
Mean	30.56	16.5

Statistical analysis

Group I F = .011 Not significant.
Group II Difference in Mean 1.47
S.E. of difference 2.92
t = .53 P .05 Nonsifinificant.

Mean I-A interval was much less in Group II, being 16.5 hours as compared to 30.56 hours in Group I. However, the mean I-A interval did not show any significant change with variation in the gestation period in both groups.

Table II shows the relation between period of gestation and rate of success in the two groups.

TABLE II

Period of Gestation in wks.	Rate of success Group I	Group II
12-14	100%	93.33%
16-18	100%	86.66%
Above 18	100%	—
Mean	100%	90.0%

Statistical analysis for Group II.
$Xc^2 = 0$
Xc = 0 P .05 Nonsifinificant.

Table III shows th nature of abortion (Incidence of complete abortion) in different periods of gestation by two methods.

TABLE III

Period of Gestation in wks.	Incident of Group I	Complete abortion in Group II
12-14	95.2%	85.0%
16-18	80.0%	76.1%
Above 18	100%	—

In group I (catheter Group), the incidence of complete abortion rose as the period of gestation increased, being 100% above 18 weeks, but in group II (PGF_2 alpha Group) the incidence of complete abortion was higher in lower gestational age (85% in 12-14 weeks and 76.1% in 16-18 weeks.

Table IV shows the side effects and complications as recorded in the two groups.

All cases of imcomplete abortion in the catheter group (4%) required oxytocin alone, while 6.66% of prostaglandin group required oxytocin and evacuation and 10% only evacuation.

Table V shows the followup results of patients after 2 and 4 weeks of MTP.

Discussion

An analysis of the present series shows that in group I, the success rate was 100%, irrespective of the period of gestation. 96% of the cases had complete abortion and in only 4% cases the abortion was incomplete. The incidence of complete abortion was higher with higher gestational age, it being 80%, 95.2% and 100% at 12-14. 16-18 and above 18 weeks respectively. Gupta *et al* (1977) reported incomplete abortion in 50% cases of catheter group. In the present study, the mean induction abortion interval was 30.56 hours and it has no relation with the period of gestation. Gupta *et al* (1977) reported that 40% cases of catheter aborted in 48

TABLE IV

Side effects and complications	Group I %	Group II %
1. Vomiting	nil	86.6
Mean episode	nil	2.3
2. Diarrhoea	nil	93
Mean episode	nil	2.8
3. Fever	2	nil
4. Excessive bleeding per vaginum	2	nil
5. Incomplete abortion	4	16.66

TABLE V

Follow-up of patients Cases followed	Group I %	Group II %
Complaints	36.69	33.32
Vaginal discharge	6.65	3.32
Pain in abdomen	3.32	1.66
Fever		
Nil	1.66	—
	24.90	28.32
Pelvic examination		
Normal		33.32
Abnormal	Nil	Nil

hours, while 20% took 72 hours. His overall success rate was 60%.

In the prostaglandin group, the success rate was 90%, 10% cases failed to abort in the present series. 81.4% cases had complete abortion but in 18.6% cases the abortion was incomplete. Mean IA interval was 16.51 hours.

The success rate reported by various workers varied between 80-100% (Karim and Sharma, 1972; Bygdeman *et al* 1976; Laursen and Wilson, 1975). The success rate was higher in lower gestational age, this being 93.3% in 12-14 weeks, 78.6% in 16-18 weeks gestation. Hingorani *et al* (1978) and Duenhoelter *et al* (1975) have also reported similar findings. Krishna *et al* (1978) has reported an IA interval of 18.88 hours by Prostaglandin.

The incidence of side effects was very high in group II (96.7%) as compared to group I (2%) in the present series. The main side effects in group II were vomiting and diarrhoea, 86.6% and 93.3% respectively. Hingorani (1978) has found similar side effects and has reported mean episode of vomiting and diarrhoea as 0.8 and 1.4% respectively. Diarrhoea started within 15-20 minutes of the first injection and we had to give immodium to every patient for controlling the diarrhoea.

In group I there were minimum side effects and complications. 2% cases developed fever and vaginal bleeding and only 4% had incomplete abortion for which oxytocin drip had to be given.

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