COMPARISON OF INDUCTION - ABORTION INTERVAL OF PGE_2 AND PGF_2 IN FIRST TRIMESTER ABORTIONS

PREETI DUBEY ● SEEMA GUPTA ● V.K. SINGH ● I.J.K. SONI ● R.S. MISRA

SUMMARY

In a comparative study of Induction-abortion interval following induction of abortion with PGE_2 & PGF_2 (alpha) in 60 patients (30 patients were given PGE_2 and 30 patients were given PGF_2 (alpha) it was found that the I-A interval in PGE_2 group was 17.18 hrs while it was 14.75 hours in PGF_2 group, which statistically is non-significant (P>0.05). The success rate following induction by PGE_2 was 53.33% while in PGF_2 (alpha) group was 66.66% which also is statistically non-significant. The completion rate was 56.25% in PGE_2 group & 60% in PGF_2 (alpha) group.

INTRODUCTION

The urge to find a reliable and easy technique to abort first trimester pregnancies are overwhelming. So there is a wide scope of research for finding an ideal abortifacient which is safe, easy to administer, effective, painless to the patients and with few side-effects. In this respect, abortifacient properties of prostaglandins are now well established. The aims of the present study are to evaluate the efficacy and safety of induction of first trimester abortions by PGE_2 or PGF_2 (alpha).

Dept. of Gyn. & Obs., G.S.V.M. Medical College, Kanpur.
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MATERIAL AND METHODS

A total of 60 patients were studied in both groups, half of whom were given PGE_2 endocervically and half of them were given PGF_2 (alpha) intramuscularly. The present study was conducted in the Department of Gynaecology and Obstetrics, UISEMH, Kanpur from September 1993 to September 1994. The patient in both the groups were well matched in terms of age, parity, period

of gestation and educational status. A detailed history was taken and complete examination was done. Patients who had contra-indications to prostaglandin therapy were excluded from the above study. In the first group, the patients were induced for termination by instillation of PGE_2 endocervically under aseptic conditions. The drug is supplied by the name of "CERVIPRIME" which is a translucent gel, containing 0.5 mg. of dinoprostone (PGE_2) per 3.0 gm. Subsequent doses were given at 6 hourly intervals, depending on uterine contractions. The instillations were continued till the products were expelled or until 3 mg of the drug was adminstered.

In the second group, the patients were given PGF_2 (alpha) intramuscularly. The drug is supplied by the name of "PROSTODIN" and each ml. contains 250 micrograms of carboprost tromethamine. A test dose of 125 ug was given by 1.M. route and the patient was watched for 1 hour for side-effects. Subsequent doses were given at 1-2 hour intervals depending on uterine contractions or till 5 mg of the drug was injected.

In both the group Tab Lomotil, Tab Perinorm and Tab Calpol were given as and when required.

Any case in the above two groups was considered as FAILURE, if the patient did not abort within 30 hours.

The procedure was labelled as incomplete if there was persistent bleeding with an open cervical OS.

OBSERVATIONS & DISCUSSION

In our study, the mean I-A interval (Table I) in cases in which PGE_2 was used

Table I
SHOWING INDUCTION - ABORTION INTERVAL IN CASES BELONGING TO FIRST TRIMESTER

I-A Interval (In Hours)	Cases with PGE2	%	Cases with PGF2	%
0-5	0	0	0	0
5-10	1	6.25	2	10.00
10-15	6	37.50	10	50.00
15-20	5	31.25	6	30.00
20-25	2	12.50	1	5.00
25-30	1	6.25	1	5.00
> 30	1	6.25	0	
	16/30	100	20/30	100
MEAN	17.18 hours		14.75 hours	
S.D.	+ 6.14		+ 4.60	
Students 't' test	1.35			
P	> 0.05	(Non-significant)		

Table II
SHOWING RELATION OF GESTATIONAL AGE WITH INDUCTION-ABORTION INTERVAL IN PATIENTS BELONGING TO FIRST TRIMESTER ABORTION

I-A Interval	Cases with PGE2				Cases with PGF2			
	Group IA (Less than 45 days)	%	Group IB (More than 45 days)	%	Group IC (Less than 45 days)	%	Group ID (More than 45 days)	%
0-5	0	0	0					
5-10	1	6.25	0		2	12.50	2	
10-15	5	31.25	1	28.57	8	50.00	2	50.00
15-20	4	25.00	1	28.57	5	31.25	1	25.00
20-25	2	12.50	0		1	6.25	0	
25-30	0		1	28.57	0		0	25.00
> 30	0		1	28.57			0	
	12/16	100	4/14	100	16/21	100	4/9	100
Mean	15.41		20		9.06		12.50	
S.D.	+ 4.31		+6.45		+ 3.84		+6.12	

COMPARISON :

	Group IA & Group IB	Group IA & IC	Group IB & ID	Group IC & ID
't' test	1.64	4.12	1.68	1.43
'P' test	>0.05	<0.001 (Highly significant)	>0.05	>0.05

Table III
SHOWING SUCCESS RATE

	Cases with PGE_2	%	Cases with PGF_2 (alpha)	%
Success	16	53.33	20	66.66
Failure	14	46.67	10	33.34

X^2 = 1.11
P > 0.05 (Non- significant)

Table IV
SHOWING COMPLETE RATE

	Cases with PGE_2	%	Cases with PGF_2 (alpha)	%
Complete	9	56.25	12	60
Incomplete	7	43.75	8	40

X^2 = 0.52
P > 0.05 (Non- significant)

was 17.18 hours, while in PGF_2 (alpha) it was 14.75 hours and the difference was not significant (t=1.36, P>0.05). Our results are in accordance to that of Marrs, et al Roy, Mishell (1981), who reported I-A with PGF2 (alpha) vaginal suppositories to be from 12-24 hours. Our results are in contrast to R Nakano, Mata Sasaki et al & Yamato (1981) who reported mean I-A interval to be 9.04 hours, following use of PGE1 analogue pessaries for termination of very early pregnancies.

In the first trimester, cases in which PGE_2 was used (Table II) mean I-A interval in Group IA (cases less than 45 days) was 15.41 hours and it was 20 hours in group IB (cases more than 45 days) and the difference in I-A interval between the groups was not significant. This is in accordance to that Nakano et al (1981) who have also shown faster IA interval in early pregnancies (less than 49 days) by use of PGE_1 anologue pessaries.

In PGF_2 group, I-A interval in group IC (More than 45 days, was 9.06 hours while it was 12.50 hours in group ID and the values between the two groups was not significant (P>0.05). This is in accordance to that of Marrs, et al (1981) who have reported I-A interval of 8-13 hours in pregnancies less than 49 days by PGF_2 (alpha).

The success rate (Table III) in the group in which PGE_2 was used was 53.33% while in PGF_2 (alpha) it was 66.66%. The difference in results is not significant (P> 0.005). Our results are in contrast to that of Nakano, et al 1980 who have reported 70% success rate following use of PGE_1 analogue vaginal pessaries.

However, our results are in accordance to that of Marrs et al (1981) who have shown 60% successful termation of early pregnancies with PGF_2 vaginal suppositories. The completion rate (Table IV) in which PGE_2 was used was 56.25%, which is in accordance to that of Nakano et al (1980) who reported completion rate of 56.50% by use of PGE_1 vaginal pessaries. In PGF_2 (alpha) completion rate was 60%, which is in contrast to that of Roux, and Southerne (1980) who reported 73% completion rate following termination with PGF_2 (alpha) vaginal pessaries.

CONCLUSION

Thus we see that prostagladins possess significant abortifacient properties. They

can be used as a safe alternative to surgical methods of induction and abortion. The compound PGF_2 (alpha) seems to more effective in this respect.

REFERENCES

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