

Use of PGF₂ with Emcredyl for extramniotic instillation for better outcome of IInd trimester termination

Shailesh Kore • Sangeeta Goenka • Nirmala Bilgi • V. R. Ambiyé

Department of Obstetrics & Gynaecology, L.T.M.M.C. & L.T.M.G. Hospital, Sion, Mumbai - 400 022.

Summary: A prospective study comprising use of 1 cc (0.25 mg) Carboprost (PGF₂) with 150 cc emcredyl for extraamniotic instillation for IInd trimester termination was done at L.T.M.G. Hospital, Sion, Mumbai - 400 022. 100 such patients were compared with control group (100 patients), where only 150 cc emcredyl with 20 units of pitocin was instilled. In study group, the induction abortion interval was significantly shorter. There were 13 failures in control group as compared to only 2 in study group.

Introduction

Medical Termination of Pregnancy (MTP) has been accepted as one of the methods of reducing the increasing population in developing countries like India and can reduce the incidence of illegal abortions and complications.

Various methods of IInd trimester termination of pregnancy have been evaluated. But the most commonly used safe method is extraamniotic instillation of ethacridine lactate. But disadvantages of this method are longer induction - abortion (I-A) interval and high failure rate. We have made an attempt to increase the efficacy of the procedure by combining prostaglandins with ethacridine lactate for extraamniotic instillation.

Materials and Methods

In this study, 200 cases of IInd trimester MTP were studied over the period of 3 years at L.T.M.G. Hospital, Sion, Mumbai - 400 022. They were divided into two groups - A & B. Group-A consisted of 100 cases where 150 cc of ethacridine lactate with 20 units of oxytocin was used for transcervical extraamniotic instillation through No. 14 Foley's catheter. While in Group-B which also consisted of 100 cases, (0.25mg) 1 cc of prostaglandin derivative PGF₂ (Carboprost) was added to 150 cc of Ethacridine for extraamniotic instillation.

The catheter was removed after 6 hours in both the groups.

Patients were monitored for vital signs till abortion. Oxytocin augmentation was done in cases where abortion did not take place in 48 hours. After abortion check curettage was done under sedation, in patients with incomplete abortion. Patients were given prophylactic antibiotics. The technique was considered as a failure when the patient did not abort within 72 hours of instillation.

Observations and Results

Majority of the patients were between age group of 25-30 years. The youngest being 16 years, unmarried girl, while the eldest was 37 years. Though majority of these cases were gravida 3 or more, there were 18 primigravidas (Table 1).

Table 1
Gravidity Distribution

	Group-A	Group-B	Total
Primigravida	8	10	18
Gravida 2	18	22	40
Gravida 3 or more	74	68	142

Number of cases in both the groups were comparable. There were 7 unmarried girls, 2 widows and 1 divorcee in

group - A as compared to 5 unmarried girls and 3 divorcees in group B. Indications for termination in these patients are listed in Table II. Most common being failure of contraception. Table III shows number of cases according to period of gestation at the time of termination in both the groups.

Table II
Indication for Termination of Pregnancy

	Group A	Group B	Total
Failed Contraceptive	74	78	152
Social	16	14	30
Medical	6	6	12
Eugenic	4	2	6

Table III
Period of Gestation (POG)

Period of Gestation	Group A	Group B	Total
14-16 weeks	26	34	60
17-18 weeks	50	42	92
19-20 weeks	24	24	48

Table IV
Mean Induction - Abortion Interval

Period of Gestation (Weeks)	Primigravida		Multigravida	
	Group-A (Hours)	Group-B (Hours)	Group-A (Hours)	Group-B (Hours)
14-16	47.0	34.0	38.5	23.0
17-18	36.0	30.0	31.0	16.5
19-20	34.0	22.0	23.0	17.0
Overall	35.5	28.0	28.5	17.5

The mean induction - abortion interval in primis was 38.5 hours in Group-A as compared to 26 hours in Group-B ($p < 0.01$). Also in multigravidas I-A interval in Group-B (17.5 hours) was significantly shorter ($p < 0.01$) than Group-A (28.5 hours). Table IV shows that I-A interval was much shorter in Group-B than that in Group-A at

any period of gestation. There were 13 failures in Group-A, while only 2 in Group-B. Thus success rate was significantly higher ($p < 0.01$) in Group-B (98%) than in Group-A (87%). The percentage of complete abortion was significantly more ($p < 0.01$) in Group-B (84%) than in Group-A (62%). Apart from minor side effects like rigors, abdominal cramps and nausea, side effects/ complication rate was not more in Group-B as compared to Group-A (Table V).

Table V
Complication

	Group A	Group B
1. Minor side effects	2	8
2. Oxytocin Augmentation	34	10
3. Incomplete Abortion	38	16
4. Sepsis	2	2
5. Cervical tear	0	0
6. Rupture	0	0

Discussion

Ethacridine lactate is a well established agent with excellent record of safety over many years of clinical experience but not without drawbacks of high failure rate and longer I-A interval. Various methods have been tried to combat these disadvantages like IV Oxytocin Augmentation (Naabriski, 1971), I.M. Pitocin (Manabe, 1969) and use of unitocin - Spartine sulphate by (Anjaneyulu, 1977). All with limited success. Though Nayak & Dalal (1989), Yadav & Kapoor (1993) reported more than 94%, success rate when pitocin was added to ethacridine, success in our study was only 87% with similar combination.

In order to overcome these disadvantages a combination of ethacridine with prostaglandin was proposed and used in this study, thus combining the safety of ethacridine and efficacy of prostaglandin. PG used was PGF_2 (Carboprost). Carboprost when used extraamniotically has synergistic effect with endogenous prostaglandin released by ethacridine. With this combination, success

rate was 98% in our study, with significant reduction in 1-A interval. Though Kher et al (1992) proposed instillation of carboprost 6 hours after ethacridine, we did not find higher complication rate when drugs were used at the same time.

The extraamniotic route of PG has advantage over I.M. route in reducing the systemic side effects and also avoiding serious complications like cervicovaginal injuries and rupture uterus.

Conclusion

Thus this study shows combination of ethacridine with 1 cc of carboprost instilled extraamniotically can be a better,

more effective method of second trimester termination of pregnancy, without compromising on safety of the procedure.

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