

MIDTRIMESTER ABORTIONS BY EXTRA-OVULAR ETHACRIDINE LACTATE AND HAZARDS OF OXYTOCICS USED FOR SYNERGISM

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SUMMARY

In 261 patients 150 ml of 0.1% ethacridine lactate was injected in extra-ovular space through Foley's catheter which was removed after 6 hours. For failed induction first and second reinsertions were done 72 and 48 hours after the preceding one respectively. Oxytocin was administered in some of them for augmentation.

88.08% patients aborted within 72 hours with average induction-abortion (I-A) interval of 35 hours 14 minutes. 14 out of 17 reinserted cases aborted within 48 hours, 2 aborted within 52 hours of second reinsertion.

Method was equally successful in early and late second trimester. 77.7% aborted within first 48 hours. Thus 48 hours would be considered as optimal time for cut off and further intervention. Retained placenta and cervical injuries occurred in 27.58% and 1.92% patients respectively.

No beneficial effect of oxytocin for augmentation was observed but it appeared to prolong the I-A interval and had increased incidence of retained placenta and haemorrhage.

Introduction

While there is no ideal, safe, easy and effective method for midtrimester abortions, for various known reasons demand for it still exists. Extra-ovular instillation of ethacridine lactate has proved more acceptable than other existing methods.

The following is the study of 261 patients

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subjected to midtrimester abortions with extra-ovular instillation of ethacridine lactate from January 1981 to December 1983 in Sassoon General Hospitals and B.J. Medical College, Poona.

Material and Methods

Emcredil 0.1% (Ethacridine lactate) 150 ml was slowly injected in the extra-ovular space through cervical canal via Foley's catheter, where its bulb was in-

flated with 20 ml normal saline. Catheter lumen was occluded with gauze tie. Catheter was removed after 6 hours. If patient did not show any signs and/or symptoms of impending abortion within 72 hours, reinsertion was done with same technique and 150 ml Emcredil. Further observation of 48 hours was done and in case of failure again reinsertion of Emcredil was done. After onset of uterine contractions oxytocin drip of 10-20 units with progressive concentration was administered in 500 ml of 5% dextrose intravenously over variable period to accelerate the process of abortion in some of the patients. No antibiotics were given prophylactically.

Observations

Out of total 261 patients, 58.24% (152) and 22.90% (60) belonged to age group of 16-20 and 21-25 years respectively.

76.63% (200) patients were nulliparous. 64.37% (168) were either married, widowed or divorced. Fifty-eight patients (22.22%) had pregnancy of 12-16 weeks duration and 203 patients (77.78%) had pregnancy of 17-20 weeks duration.

The procedure was said to be effective when abortion (expulsion of foetus) had occurred within 72 hours of first instillation. Out of 261, 229 patients (88.08%) aborted within 72 hours. Thirty-one patients (11.95%) failed to do so. In one patient hysterotomy was done before

72 hours (46 hours) for posterior cervical tear with transverse lie of the foetus.

Amongst 31 failed patients, reinsertion was carried out in 17 patients (6.51%). Three patients with 12 to 16 weeks pregnancy aborted within 31 hours 15 minutes and 11 patients with 17 to 20 weeks pregnancy aborted in 8-70 hours i.e. average 27 hours and 14 minutes. One patient was subjected to isapent insertion 48 hours after reinsertion and evacuation was done 12 hours later. Second reinsertion was done in 2 patients after which they aborted within 52 hours.

Amongst the 14 patients those who were not subjected to reinsertion after 72 hours because of symptoms of impending uterine contractions, 13 aborted within 48 hours with average 12 hours and 4 minutes of excess period.

Induction of abortion by ethacridine lactate is equally successful in both early (upto 16 weeks) and late (from 17 to 20 weeks) second trimester pregnancies (Table I). Success of induction was not related to parity.

All the patients excluding those who required reinsertion could be grouped into two comparable groups A and B. No oxytocics were administered before abortion to Group A patients (121), whereas Group B patients (123) received oxytocin drip for augmentation of uterine contractions till completion of abortion. Table II shows observed induction abortion (IA) interval.

TABLE I
Correlation Between Period of Gestation and Effectiveness

Weeks of Gestation	No. of cases	Successful cases	Percentage
12-16	58	48	82.76
17-20	203	181	89.16

TABLE II
Induction Abortion (IA) Interval (Hours-min)

Group	12-16 weeks			17-20 weeks			Cumulative		
	Mini- mum	Maxi- mum	Mean	Mini- mum	Maxi- mum	Mean	Mini- mum	Maxi- mum	Mean
A	14	78	31.53	9.30	144	36.21	9.30	144	35.23
B	12	74	36.19	10.30	86	34.49	10.30	86	35.7
Cumulative	12	78	34.6	9.30	144	34.32	9.30	144	35.14

Table III shows complications and side effects encountered. Cervical tears occurred in 2.5% primigravidae. All were young (14-22 years) and had pregnancy of 17-20 weeks duration. Eight patients with reinstillation required surgical evacuation for retained placenta, though 4 out of these were given oxytocin drip.

Majority of patients (77.79%) aborted within 48 hours of induction with or without oxytocic augmentation and after that there was almost a plateau of the number of cumulative abortions (Fig. 1). Thus, 48 hours would be considered optimal time for cut off and for further intervention such as reinstillation etc. This will

TABLE III
Complication and Side Effects

Type of complications	Group A		Group B		Total
	No.	%	No.	%	%
Retained placenta	31	22.46	41	33.33	27.58
Partial	4	2.90	12	9.76	6.13
Complete	27	19.56	29	23.57	21.46
D & E needed	27	19.56	35	28.46	23.75
Digital evacuation	4	2.90	6	4.88	3.85
Hysterectomy required	1	0.72	1	0.81	0.77
Cervical tear	3	2.17	2	1.63	1.92
Haemorrhage	1	0.72	5	4.07	2.30
Pyrexia	1	0.72	0	0	0.38

Discussion

The present study shows 88.08% effectiveness of first instillation, 82.35% effectiveness of first reinstillation and 100% effectiveness of second reinstillation.

These results are compared with those obtained by other workers (Table IV). Amongst 225 patients Gogte *et al* (1977) have reported 89.8% success.

reduce hospital stay and anxiety on the part of patient.

Here it is seen that failures are not related to parity or induction in early or late midtrimester. In fact in group A during latter half of midtrimester, IA interval was more (36 hours and 21 minute) than that of earlier half (31 hours and 53 minutes) (Table II).

Interestingly, no beneficial effect of

TABLE IV

	No of cases	Dose	Time of removing catheter	Effectiveness of procedure
Kabayashi (1957)	82	50 ml	Till abortion occurred	100% in 114 hours
Nabriski and Kalmanovitch (1971)	72	150 ml per lunar month	100 min after instillation (oxytocin drip in 90% cases)	93% in 24 hours
Ingemanson (1973)	53	10 ml/wk max upto 150 ml	Till abortion occurs	90% in 72 hours
Anjaneyulu <i>et al</i> (1977)	54	10 ml/wk upto 150 ml	4 hours after instillation	81.4% in 72 hours and 100% after reinstillation
Rajan <i>et al</i> (1978)	50	100 ml + 50 ml Sulphate Spartein	5 hrs after primary instillation	91% in 72 hours in 96 hours
Krishna <i>et al</i> (1982)	68	100 ml + 300 mg Spartein Sulphate	4 hours	82% in 48 hours
Present study (1981-83)	261	150 ml	6 hours after instillation	88.08% in 72 hours & 82.35% after 1st instillation 100% after second reinstillation

oxytocin for augmentation of uterine contractions was seen in lowering the IA interval. At 12-16 weeks of gestation IA interval in group B was more (36 hours and 19 minutes) than that of group A (31 hours and 53 minutes) (Table II). 79.67% patients from group B aborted within 48 hours while 85.95% patients did so in group A (Fig. 1).

Cervicovaginal injuries were encountered in 1.92% (5 patients) of 261 patients. Ganguli *et al* (1982) and Rajan *et al* (1978) have reported this incidence as 1%, where Anjaneyulu *et al* (1977) had observed none in 54 patients. In this study, oxytocics do not seem to increase

cervical injuries which are peculiar to prostaglandins.

Pyrexia was not much of the observed problem while Rajan *et al* (1978) have reported 53% patient showing raised temperature.

Pre-abortal or post-abortal haemorrhage sometimes necessitating blood transfusion was encountered five times more in patients who received oxytocin drips.

Retained placenta either partial or complete was observed in 27.58% patients of this series as against 7.4% and 30% reported by Anjaneyulu *et al* (1977) and Rajan *et al* (1978) respectively. Krishna

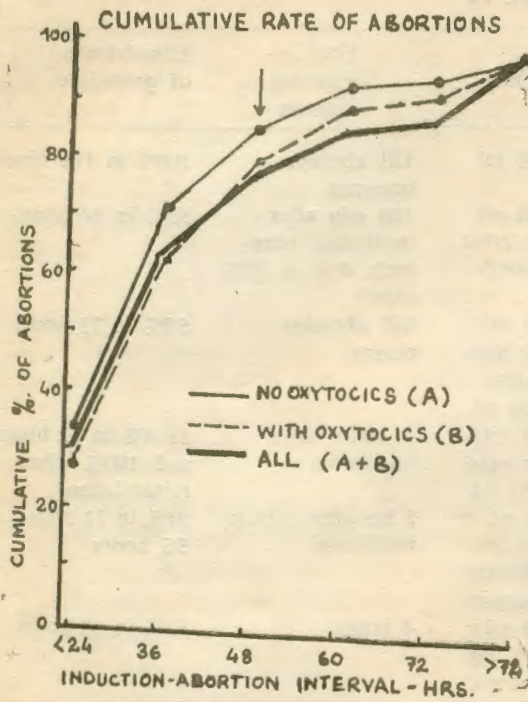


FIG. 1

et al (1982) have observed 16% incidence of incomplete abortions with ethacridine lactate plus spartein sulphate.

Oxytocin did not seem to help the placental expulsion, either because of inadequate responsiveness of myometrium in midtrimester or due to interference in uterine contractility similar to the phenomenon of inco-ordinate uterine contractility triggered by concentrated oxytocin infusion at full-term. Though not statistically significant ($P > 0.1$) oxytocin had increased incidence of retained placenta and haemorrhage. This agrees with the observations of hazards of synergism in midtrimester abortion reported by Rajan *et al* (1980).

Tendency towards incomplete abortion is seen more amongst the patients (47.1%) requiring reinstillation irrespective of oxytocic augmentation. Failure after primary instillation and tendency to incompletely abort reflect on improper responsiveness of uterine musculature. This depends upon the biochemical tissue preparation which may be instrumental through endocrinologic signals.

Thus augmentation with oxytocin has failed to show its beneficial effect regarding reduction of IA interval and incidence of complications.

Conclusion

Extraovular instillation of ethacridine lactate is simple and effective in inducing the midtrimester abortion. Cut off level for intervention can be taken as 48 hours after first instillation. Oxytocin is found unnecessary and possibly harmful. Thus we discourage its use for synergism.

Acknowledgement

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