ROLE OF ETHACRIDINE LACTATE IN MIDTRIMESTER ABORTION

By

M. D. Raut and S. K. Agarwal

SUMMARY

Ethacridine Lactate (0.1%) was used intraamniotically for induction of midtrimester abortion in 100 cases. As yet there is no published report on the use of this method though this agent has been used extraamniotically extensively for the purpose. Ninety cases were used as control with extraamniotic Ethacridine Lactate and Intraamniotic 20% Saline. Though Induction-Abortion interval was longer in study cases than with 20% Saline, the duration of abortion process was significantly short and was more physiological, with Intra-amniotic Ethacridine Lactate ($p < 0.01$). Ethacridine Lactate was found to be as effective as 20% Saline when given intraamniotically. It is associated with significantly less complications than the latter and major complications like retained placenta and PPH are less common. Its greatest advantage is that it can be used in high risk cases like cardiac, renal disease and sickle cell disease where 20% saline is contraindicated. Thus Ethacridine Lactate is the safest method when given intraamniotically for abortion in the midtrimester.

Introduction

Alongwith reduction of population growth, M.T.P. has to safeguard the health of the woman having an unwanted pregnancy. If done with minimal risk, then it will be well accepted. The difficulty of inducing abortion in the midtrimester is well known as well as the risk of Hypertonic Saline which is most commonly used (Krishna *et al*, 1979; Bharati *et al*, 1980). Ethacridine Lactate has been used extraamniotically with less risk but also with a reduced success rate (Rajan *et al*, 1977; Anjaneyulu *et al*, 1977). It was contended that if it could be used intraamniotically, then it can improve the success rate with less risk in inducing abortion between 14-20 weeks of pregnancy.

From: Postgraduate Department of Obstetrics & Gynaec. V.S.S. Medical College, Burla, Sambalpur, Orissa-768 017.

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Material and Methods

The study was carried out in the Department of Obstetrics and Gynaecology, VSS Medical College, Burla, Orissa from January 1986 to December 1987. All cases seeking MTP between 14-20 weeks were included for this study. In each case 150 ml of Ethacridine Lactate (Emcredil) was given intraamniotically. Two other groups of cases were selected ran-

domly these 9 groups were given either (intraamniotic hypertonic saline). IAHS or extraovular Ethacridine. They were treated as controls. The induction-onset of uterine contraction interval and Induction—abortion interval were noted Any complecations were recorded and the results of the study was compared with those of the controls. The foetus, Placenta and membranes with cord in the study group were preserved for histopathological study.

Observation and Discussion

One hundred and ninety cases were studied. They are divided into 3 groups as shown in Table I.

TABLE I
Distribution of Cases

Group	Method	No. of cases
I	Intraamniotic Ethacridine Lactate (I.A.E.L.)	100
II	Intraamniotic Hypertonic Saline (I.A.H.S.)	50
III	Extraamniotic Ethacridine Lactate (E.A.E.L.)	40

The cases were distributed according to the period of gestation in each group as indicated in Table II.

The latent period, duration of abortion and the Induction-abortion interval in different groups is shown in Table III.

TABLE II

Period of Gestation (weeks)	IAEL		EAEL		IAHS		Total
	No.	%	No.	%	No.	%	
12 14	8	8	18	45	0	0	26
15-17	20	20	12	30	14	28	46
18-20	72	72	10	25	36	72	118
Total	100		40		50		190

TABLE III

Time interval	IAEL (hrs)	EAEL (hrs.)	IAHS (hrs.)
Latent Period			
Range	5-73.5	10-82.5	7.5-51.75
Mean	30.31	29.80	24.06
S.D.	17.15	16.88	9.91
Duration of Abortion			
Range	1-14.3	0.3-29.95	2-12.6
Mean	5.10	10.39	7.36
S.D.	1.97	6.61	2.95
Induction—Abortion Interval			
Range	11-79.66	14.5-94.3	13.25-59.25
Mean	35.42	40.61	31.42
S.D.	17.56	19.70	10.10

Though there is seemingly a difference in latent period in the three groups, it was not statistically significant except between group I and III ($p < .05$ at df 73).

Difference in duration of labour was very significant when compared between group I and II ($z = 3.91$, $p < .01$ at df 73) and group I and III ($z = 3.97$, $p < .01$ at df 73). Similarly the difference in abortion—induction—abortion interval between I and III ($z = 2.18$, $p < .05$ at df 73) and between II and III ($z = 2.07$, $p < .05$ at df 48) were significant whereas that between II and I were not.

The cumulative Induction—abortion interval is hown in Table IV. It will be seen that upto 60 hours, the rate was almost equal with IAEL and IAHS which rate was achieved by EAEL at 72 hours.

Syntocinon Supplementation

The causes and frequency of syntocinon drip given in different groups is depicted in Table V.

The number of cases requiring syntocinon drip was significantly less in group I than the other two groups.

Complications

The complications associated with different methods was observed and is outlined in Table VI.

Success Rate: In the IAEL (study) group, the success rate was 96% in 72 hours but no case required reinstillation. The corresponding rates with IAHS and EAEL were 100% and 92% respectively. The latter compares favourably with the finding of Anjaneyulu *et al* (1977, 82%) and Bharati *et al* (1980, 96%). In the ICMR study (1979) the success rate with Rivanol was 86.9%.

In Indian Literature there is, as yet, no published report of intraamniotic use of Ethacridine Lactate for inducing mid-trimester abortion. It has been found from this comparative study that Intra-amniotic Ethacridine Lactate is as effec-

TABLE IV

Cumulative Induction—Abortion Interval

Cumulative abortion in Hours	IAEL		EAEL		IAHS		Total	
	No.	%	No.	%	No.	%	No.	%
Less than 12	2	2	0	0	0	0	2	1.05
Upto 24	16	16	6	15	8	16	28	14.70
Upto 36	54	54	18	45	38	76	80	42.10
Upto 48	72	72	32	80	44	88	38	20.10
Upto 60	90	90	32	80	48	96	22	11.55
Upto 72	96	96	36	90	50	100	12	6.30
More than 72	100	100	40	100	50	100	8	4.20

TABLE V

Cause	IAEL		EAEL		IAHS		Total	
	No.	%	No.	%	No.	%	No.	%
P.P.H.	2	2	3	7.5	4	8.0	9	4.7
Retained Placenta	4	4.0	10	25.0	16	32.0	30	15.8
Prolonged Latency	10	10.0	8	20.0	2	4.0	20	10.5
Total	16	16.0	21	52.5	22	44.0	59	31.0

TABLE VI
Complications

Complications	IAEL		EAEL		IAHS		Total	
	No.	%	No.	%	No.	%	No.	%
Vomiting	—	—	5	12.5	2	4.0	7	3.7
Fever	—	—	8	20.0	12	24.0	20	10.5
Rigor	—	—	2	5.0	—	—	2	1.1
Headache	—	—	—	—	8	16.0	6	4.2
Haemorrhage	2	2.0	4	9.0	5	8.0	10	5.3
Retained Placenta	4	4.0	10	25.0	16	32.0	30	16.0
Total	6	6.0	29	71.5	42	84.0	77	40.8

tive as Intraamniotic Hypertonic Saline and more effective than when it is used extraamniotically. The most significant factor was the low incidence of major complications and almost absent minor ones when compared with IAHS. Thus it can be said that Ethacridine Lactate is more safe and highly successful when used intraamniotically for Midtrimester termination of Pregnancy.

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