

COMPARATIVE EVALUATION OF ETHACRIDINE LACTATE, NORMAL SALINE AND DISTILLED WATER IN MID-TRIMESTER ABORTIONS

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SUMMARY

Comparative evaluation of Ethacridine lactate, normal saline and distilled water used extra-amniotically for mid trimester abortion was done in 3 groups of 60 patients each. 95%, 91.7% and 88.3% cases aborted in the 3 groups respectively with mean induction - abortion interval (IAI) of 19.70 hours, 20.32 hours and 21.79 hours respectively.

Distilled water having comparable efficacy, safety, easy availability, cost effectiveness and with no contraindication to its use proves to be a good alternative to Ethacridine lactate and normal saline in mid-trimester abortions.

INTRODUCTION

Various drugs using different routes have been employed with variable success in the past for mid trimester abortions. Ethacridine lactate has been found to be effective (Gupta et al 1989) and safe with rare fatal complication (Karthak et al, 1993).

Extra-amniotic route has been found to be more effective as compared to intra-amniotic route by various workers using prostaglandins (Steyn and Pienaar, 1993). Extra-amniotic route has been found to be technically easier than intra-amniotic route (Sofat et al, 1994). In extra-amniotic route ethacridine lactate and normal saline have been proved to be equally effective with comparable safety (Dhall et al, 1989).

The present study was carried out to evaluate the comparative efficacy, safety and cost effectiveness of ethacridine lactate, normal saline and distilled water extra-amniotically.

MATERIAL AND METHODS

The study was carried out on 180 patients who presented themselves in O.P.D. of S.G.T.B Hospital, Department of Obstetrics and Gynaecology, Medical College, Amritsar and sought mid-trimester abortion (12-20 weeks). A complete work up regarding history, examination and routine tests was done. The patients were divided in three groups of 60 each as follows:-

Group I

150 ml of Emerdil was instilled by extra-amniotic route through a Foley's Catheter after it was pushed transcervically into uterine cavity and its bulb inflated with 30 ml of normal saline. After instillation catheter was tied with double knot. Prophylactic antibiotic (cephalexin 500 mg) 6 hourly was started immediately following instillation.

Group II

150 ml of normal saline was used.

Group III

150 ml of distilled water was used.

The same procedure was followed in all the groups.

In all the 3 groups augmentation with oxytocin drip was done after 6 hours of instillation starting with 10 units of oxytocin in 540 ml of 5% Dextrose bottle and increasing 5 units of oxytocin after every 100 ml of 5% dextrose solution infused till good uterine contractions were established after which oxytocin was not increased further. Catheter was removed

after 24 hours if not expelled spontaneously. Though all the cases expelled the product of conception with the primary procedure adopted but the cases who did not abort within 30 hours were considered as failures.

Completeness of abortion was judged by the expulsion of the foetus. The placenta was either expelled spontaneously or removed with the ovum forceps. Thereafter, check curettage was done in all the cases. Blood loss was graded as mild (50-150 ml), moderate (151-350 ml) and severe (>350 ml).

OBSERVATIONS AND RESULTS

All the 3 groups were comparable in age, parity and duration of pregnancy. Maximum number of patients were in the 3rd decade of life in all the 3 groups. All the patients had 1 to 2 living children. The distribution of cases according of uterine size in weeks is shown in Table I.

DISCUSSION

Ethacridine lactate has been accepted as an effective method by extra-amniotic route (Manabe, 1969; Bhosale et al, 1987). Normal saline has been used extra-amniotically by various workers (Anjaneyulu et al, 1980; Bauminger et al, 1982); Dhall et al, 1989). In a study by Dhall et al (1989) of Emerdil V/S Normal saline for mid-trimester abortion extra-amniotically, the results of success were comparable in the two groups and thus normal saline was proved to be equally effective and hence good alternative to Ethacridine lactate.

Table I
SHOWING DISTRIBUTION OF CASES ACCORDING
TO UTERINE SIZE

Uterine size in wccs	Group I	Group II	Group III
Upto 14	9	9	9
14.1 to 16	24	24	21
16.1 to 18	21	18	24
18.1 to 20	6	9	6

Table II
SHOWING INDUCTION ABORTION INTERVALS
IN SUCCESSFUL CASES

	Group I		Group II		Group III	
	Range	Mean	Range	Mean	Range	Mean
Induction abortion interval (Hours)	4.50 28.50	19.70	13.25- 39.80	20.32	9.00- 42.00	21.79

In a study by Anjaneyulu et al (1980) with normal saline, the mean IAI was found to be 46.53 hours with 60% success rate in 48 hours whereas in a study by Bauminger et al (1982) with normal saline, I.A.I varied from 25-29 hours.

In a study by Dhall et al (1989) with Emcredil versus normal saline, the mean I.A.I was 17.25 and 17.46 hours in the two groups respectively with 3 failures (1 in group I and 2 in group II).

In the present study, cut off time was fixed at 30 hours. In group I (Ethacridine lactate) 95% success rate with mean I.A.I. of 19.70 hours was achieved, In group II (Normal saline) 91.67% success rate with mean I.A.I of 20.32 hours and in group III (Distilled water) 88.33% success rate with mean I.A.I. of 21.79 hours was achieved (Table II).

Three patients (Trial failure) in group I (Emcredil) aborted between 31 and 36

Table III
SHOWING COMMULATIVE ABORTION RATES

Abortion within hours	Group I		Group II		Group III	
	Number	%age	Number	%age	Number	%age
Upto 6	3	5.00	0	0	0	0
Upto 12	7	11.67	0	0	2	3.33
Upto 18	16	24.00	8	13.33	13	21.67
Upto 24	46	76.67	41	68.33	44	73.33
Upto 30	57	95.00	55	91.67	53	88.33
Upto 36	60	100.00	56	93.33	55	91.67
> 36	0	0.00	60	100.00	60	100.00

hours. In group II (Normal saline) 1 patient aborted between 31 and 36 hours and 4 patients aborted after 36 hours. In group III (Distilled water) 2 patient aborted between 31 and 36 hours and 5 aborted after 36 hours (Table III).

Only mild blood loss was observed in majority of patients. Only 2 cases (3.33%) in each group had moderate blood loss. No case had severe bleeding. None of the patients required blood transfusion. No case developed post-abortal infection. It was concluded that the distilled water being almost equally effective, safe, easily available and relatively cheaper, holds a lot of promise for midtrimester abortions.

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