MIDTRIMESTER ABORTION IN RURAL MEDICAL COLLEGE

by

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SUMMARY

Two hundred and sixteen cases of midtrimester abortions have been studied including 200 cases of hypertonic saline 9 cases of mannitol, 5 cases of ethacridine lactate and 2 cases of prostaglandin analogue intramuscular injection. Success rate in mannitol Group was 65%, 98% in hypertonic saline, 100% in ethacridine lactate. There was one death in mannitol group due to endotoxic shock and coagulopathy single death out of total 216 cases. Hypertonic saline is safe, effective and simple method even without syntocinon drip.

Some of the methods presently employed in midtrimester abortion are intra-amniotic hypertonic saline 20%, intra-amniotic mannitol 20%, hyperosmolar urea 20-40% both intra and extraamniotic, ethacridine lactate' 1% extraovular, Prostaglandin intraamniotic, extraamniotic and intraamuscular and hysterotomy. Intraamniotic and extraamniotic methods have almost replaced hysterotomy due to higher morbidity and stay in hospital.

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Accepted for publication on 10-10-83.

Two hundred and sixteen cases were studied since 1977 with different methods including hypertonic saline 20%, Hypertonic mannitol 20%; both intra-amniotic; Ethacridine lactate' 1% extra-amniotic, Prostaglandin 15 Methyl $F_{2\alpha}$ analoque intramuscular injection.

TABLE I

Method	Total No.	Duration of Pregnancy			
		14-16 Wks.	16-18 Wks.	18-20 Wks.	22-24 Wks.
Hypertonic Saline 20%	200	2	24	104	70
Mannitol 20%	9	3	2	2	2
Ethacridine lactate 1%	5	2	3	—	—
Prostaglandin	2	2	—	—	—
	216	9	29	106	72

Majority of cases were unmarried, nulliparous. (190 out of 216); only 26 cases were married and parous including 18 widows.

96% of cases are of 6 weeks duration and above. Both Hypertonic saline and

mannitol was administered intra-amniotically.

In hypertonic saline in case of bloody taps, needle was withdrawn and reintroduced in opposite side of the lower abdomen. When free flow of clear liquor was established; 150-200 ml of hypertonic saline were introduced according to duration of gestation. No liquor was withdrawn. In case of one repeated blood taps procedure was postponed for the time being.

Syntocinon drip was used after 24-28 hours if pain did not start.

Seven cases of mannitol and 96 cases of hypertonic saline had 2-3 bottles of Syntocinon drip, 10-20 units in each bottle per day. Drip had to be repeated on subsequent days in 20 cases Syntocinon was found to be effective even after cessation of drip.

Ethacridine lactate' 1% (Emcredil-M. M. Labs) was introduced extraamniotically per vagina through a foleys catheter 16-18 size which was retained for 4-5 hours. First 100 ml was introduced slowly after inflating the bulb with 20-25 ml of sterile water. 2nd introduction of 50 ml, were made after 4 hours. Catheter was withdrawn after ½ hour. 2 cases of ethacridine lactate were supplemented with syntocinon drip.

In 2 cases Prostagladin 15 methyl $F_{2\alpha}$. (Carbopros thromethamine) was used as intramuscular injection 250 μg in each injection repeated every 3 hours. Loperamide capsule and Triflupromazine injection were used for Diarrhoea and vomiting. Laminoria tents were used in both the cases to facilitate cervical dilatation and both the cases were of 14 weeks duration.

Effectivity: Hypertonic saline and Ethacridine lactate were found to be most effective in comparison to mannitol. Mannitol was chosen as it is available free in hospital and had less haemorrhagic complication (Rajan *et al* 1978) and was being used till death of one patient due to endotoxic shock and disseminated intravascular coagulation. In mannitol group, out of 9 cases apart from one death, 5 ended in abortion, one of which took 96 hours to complete, where repeat trans abdominal route was chosen after failure through trans cervical route. Two cases ended in hysterotomy and in 1 hypertonic saline was reintroduced after 10 days with success. It was treated as failure when abortion did not occur 72 hours after inducation.

Success rate in mannitol group was 62.5% with mean induction abortion interval of 52 hours. In hypertonic saline group success rate was 98%. Four failure were terminated by 2nd introduction of saline after 4-7 days with success. The induction-abortion interval is 20% within 22 hours and 64% within 36 hours and 90% within 50 hours.

TABLE II
Induction-abortion Interval

Items	5-7 Hrs.	20-22 Hrs.	28-30 Hrs	36 Hrs.	40-42 Hrs.	48-50 Hrs.	60 Hrs.
Mannitol (9)	—	—	—	2	1	—	1
Hypertonic Saline (200)	5	38	50	38	28	247	14
Ethacridine lactate (5)	—	1	2	—	—	1	1
Prostaglandin (2)	—	2	—	—	—	—	—

TABLE III
Complications

	Mannitol	Hypertonic saline	Ethacridine lactate	Prostaglandin
Excessive thrist Vomiting, diarrhoea	—	1	—	2
Haemorrhage	1	—	—	—
Cervical tear	—	5	—	—
Incomplete abortion	1	21	1	—
Pyrexia and sepsis	2	10	—	—
Rupture uterus	—	—	—	—
Endotoxic shock and death	1	—	—	—

Complications

There was one death in mannitol group from endotoxic shock and severe free bleeding from vagina after passage of gas accumulated in uterus on 2nd day after introduction of mannitol inside the amniotic sac. Quick hysterectomy was done on 2nd day as uterus failed to contract, but patient died on 4th day due to consumptive coagulopathy inspite of 3 bottles of blood transfusion. Apart from 1 death other complication were very few. Incomplete abortion was 1 in mannitol group, 21 in saline group, out of which in 15 cases odematous and thickened membrane was only found on digital exploration. In Ethacridine lactate 1 case had retained placenta which was evacuated under G.A. Sepsis was observed in 2 cases of Mannitol including one of endotoxic shock and death due to growth of Klebshella Aerogenes in blood sulture. Mild to moderate pyrexia was observed 6-8 hours after introduction of saline in 5% of cases; controlled by antibiotic. Five cases (2.5%) had cervical tear in saline group which was stiched after evacuation. In 2 cases of saline infusion cervical dilatation had to be done for cervical dystocia inspite of good contraction for fear of tear or laceration. Introduction of tent prevented cervical injury in prostaglandin group. In both cases patient had vomiting and diarrhoea.

Discussion

Intra uterine hypertonic saline for M.T.P. become popular due to its simplicity and high sucess rate. But there has been conflicting reports about complication including death by different authors. Hashijuma (1965) reported 13 death among 6111 collected cases. Deshmukh *et al* (1979) reported 4 deaths due to sepsis. Chowdhury (1980) reported 3 deaths in 600 cases. Attention has been drawn by Deshmukh *et al* (1980) to high mortality for saline termination (5 death in 507 cases) and plea is made to discotinue the drug. The causes of death was bleeding disorder and septicamia. On the contray, Tamaskar and Deshpande (1978) and Agarwal (1979) reported high sucess rate (95-97.5%) and no death in 224 and 400 cases respectively. They are of the opinion that provided due precaution is taken in the technique, hypertonic saline is a safe and effective method. According to Agarwal (1979) substitution by oxytocin will further complicate in the form of coagulation disorder than of advantage. Through syntocinon was used in

26 cases in the series it could not shorten induction abortion interval. There was no death in 200 cases of hypertonic saline in this series. Manabe (1969) studied in details the mode of action of Ethacridine lactate and observed that it produces more physiological labour unlike saline. Anantha Krishnan *et al* (1978) and Kama *et al* (1980) are of opinion that Ethacridine lactate has wide margin of safety due to its bacteriocidal action and wider efficacy in earlier weeks of midtrimester abortion. This series being small no concrete opinion could be made though it is advocated in earlier weeks of midtrimester abortion. Rajan *et al* (1978) reported 2 deaths one due to endotoxic shock out of 24 cases and Deshmukh *et al* (1980) reported single death out of 40 cases of intrauterine mannitol injection. There was also one death out of 9 cases in mannitol Group in this series due to endotoxic shock and cougulopathy. Prostagalandin analogue either intra-amniotic or intramuscular is also very efficient according to Kama *et al* (1980) and others. Apart from vomiting and diarrhoea, major complication is uterine trauma.

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