

TRANSVAGINAL INTRA-AMNIOTIC SALINE FOR EARLY MID-TRIMESTER TERMINATION OF PREGNANCY

(A review of 200 cases)

by

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Termination of early midtrimester pregnancy poses a problem in induction of abortion. This is a period when the size of the uterus is too large for vaginal evacuation and too small for abdominal instillation of saline into the amniotic cavity. Transvaginal instillation though suitable in such cases, the quantity of liquor is too little for successful amniocentesis and technique as such is not very popular. Most people would wait for a week or two for the liquor to increase in quantity and the uterus to rise to a sufficient height, enabling easy puncture of the amniotic cavity. Extra-amniotic instillation is rather easier but it is of lower efficacy, bleeding and infection are slightly more common after extra rather than intra-amniotic injection. Karim (1976). Other methods of leaving foreign bodies like bougies and catheter in the genital tract involves the risk of infection.

In this communication, the technique of terminating midtrimester pregnancy by the instillation of hypertonic saline into the amniotic cavity, by the vaginal route and its success is discussed.

Materials and Methods

Two hundred cases wherein transvaginal hypertonic saline was instilled

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into the amniotic cavity between 1975 and 1978 in Govt. Lady Goschen Hospital, Mangalore and S.M.T. Hospital, Mysore, by the vaginal route for midtrimester termination of pregnancy are analysed.

The patients were all of good health status with normal blood pressure and haemoglobin and without any cardiac or renal disease.

The gestation age varied from 14 to 17 weeks. The age spread was 18 to 42 years. There were 191 multiparous and rest 9 unmarried nulliparous women.

Technique

The patient was put in the lithotomy position after emptying the bladder. The vulva was then painted with iodine and the vagina washed thoroughly with acriflavin in spirit and draped; a bimanual examination was carried out to ascertain the uterine size and position. The speculum was then introduced and the anterior lip of the cervix stabilised with a tenaculum. The bladder was retracted up and an 18 gauge lumbar puncture needle was then introduced through the anterior fornix. When entry into the amniotic cavity was distinctly felt, the stylet was removed from the needle, and when there was free flow of liquor into the syringe 20% saline was injected into the amniotic cavity (without withdrawing any more liquor) at the rate of 10 c.c. per week of gestation. (Alwani *et al* 1975).

The quantity of saline injected ranged from 140-170 c.c.

The patient was then moved from the operating room and was allowed a regular diet without confining them to bed until the onset of pains. The patient's pulse, temperature, blood pressure were recorded and fluid balance chart maintained. They were all given prophylactic antibiotics. The uterine contents were allowed to expel spontaneously without any interference unless the expulsion was incomplete or profuse bleeding intervened. If the pains were not established within 24 hours, a slow pitocin drip was started. A check curettage was done at the end of the procedure in all cases. They were all discharged 18-48 hours later.

Results

In 156 cases the product was expelled within 24 hours (Table I). The mean time for instillation and abortion (I.A. time) was 22 hours. This compares very well with Rutner series (1966) of 20 cases the I.A. time was 25 hours.

TABLE I
Results

	No. of cases
Within 24 hours	156
More than 24 hours with pitocin drip	44
Placenta retained for more than an hour	0
Bleeding requiring blood transfusion hypofibrinogenaemia	0
Amniotic fluid embolism	0
Fever above 100°F and peritonitis	0
Required 2nd instillation	0
Failure of induction requiring hysterotomy	0
Cervical laceration and tear	0
Re-admission for complication	0

Forty-four cases required pitocin drip at the end of 24 hours and expelled the product within 48 hours. The mean induction abortion time in these group of cases was 28 hours.

The majority of the cases had a mild temperature after the instillation of saline. Two cases complained of chillness and 1 had rigor at the time of expulsion. In 1 case only, the temperature elevated to 39.6°C., but this subsided with aspirin.

There was no significant blood loss in any of these cases, requiring blood transfusion and blood coagulatory defect were also not encountered. No difficulty was experienced either in puncturing the amniotic sac or in inducing abortion. The chances of sepsis, though more in the vaginal route are not so serious, compared to the peritonitis and death (1% Kerenyi *et al* 1973) by the abdominal route.

Discussion

The technique of vaginal instillation of saline into the amniotic cavity is definitely a more difficult procedure, but eminently suitable to this stage of pregnancy. Difficulty may be experienced in puncturing the amniotic sac and what is more annoying, is the chance of accidental puncturing of the bladder in inexperienced hands. To avoid this mishap, the amniotic sac can be approached through the posterior fornix but it is the author's experience that the posterior fornix approach is unsatisfactory.

Induction/abortion time by this route is raised to 22 hours, compared to 18 hours in saline induced abortion through the abdominal route. This prolonged induction abortion time is not necessarily related to the route. It is the author's experience that the small uterus is less responsive to induction. A slow pitocin

drip certainly helps to reduce the induction/abortion time. As there is no controlled study wherein 20% saline is injected through the vaginal route for early mid-trimester abortion, comparative evaluation of incidence of complication of 20% saline, like shock, amniotic fluid embolism and haemorrhage specially related to the route of administration is difficult to estimate. But in the present series, there has been no complications in the 200 cases.

Summary

Instillation of saline into the amniotic cavity through the anterior fornix, though technically difficult is worth a trial in early midtrimester termination, especially when the height of the uterus is not above the public symphysis. With strict aseptic precaution and prophylactic antibiotics, chances of infection may be minimised. Pitocin drip is an adjuvant in cases of prolonged I.A. time.

Transvaginal instillation though practiced by some is very poorly reported and complication rate is rather difficult to estimate. Except for the possibility of

complication of hypertonic saline transvaginal instillation is an effective and a suitable method in early midtrimester termination of pregnancy.

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