

# TERMINATION OF MID-TRIMESTER PREGNANCY WITH INTRA-AMNIOTIC DISTILLED WATER

(A Clinical Experience with 250 Cases)

by

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Termination of pregnancy in second trimester carries a greater risk of morbidity and mortality, whilst early-termination is less dangerous to the woman than delivering a baby at term. Incidence of complications like haemorrhage, shock, sepsis, RH isoimmunization (through transplacental haemorrhage), and embolism increases not only with the gestational age but it is also related to the agents and method used for termination. Prostaglandin in its various forms and routes, although now enjoying enormous popularity in termination of pregnancy in some countries, its use is limited because of its unpredictable oxytocic activity, distressing side effects and high cost. Hypertonic saline which was once used extensively in some countries has been given up later by some because of its alarming complications, like brain damage (Cameron *et al* 1969), intra-cranial dural sinus thrombosis (Goldman and Eckerling 1972) and blood coagulopathies (Burkman *et al* 1977) requiring massive transfusion. Instance of shock and death in the hospital cases due to intra-amniotic hypertonic saline was disappointing (author's experience).

Though every agent has got its own inherent hazard, experience of author in terminating mid-trimester pregnancy with intra-amniotic instillation of distilled

water is analysed and its safety and effectiveness compared to hypertonic saline is presented.

## *Patients and Methods*

Two hundred and fifty consecutive patients from those who were admitted for medical termination of pregnancy to Government Lady Goschen Hospital, Mangalore and S.M.T. Hospital, Mysore between 1977 and 1980 were included in this series. These cases were all of normal health status without any co-incidental renal or cardiac disease. Their ages varied from 18 to 42 years. One hundred and ninety-two were multiparous and 58 were unmarried primiparous. Gestational ages varied from 17 to 20 weeks.

## *Procedure*

After having emptied the bladder, abdomen was prepared for instillation. A 18 gauge lumbar puncture needle was introduced into the amniotic cavity between the fundus of the uterus and pubic symphysis, stylet was withdrawn and 20 c.c. syringe was fitted to the needle for aspiration. When clear liquor flowed into the syringe, distilled water was injected into the amniotic cavity without withdrawing any more liquor. Distilled water instilled varied from 150 to 200 c.c. at the rate of 10 c.c. per week of gestation.

Patients were observed in the ward. Their pulse, temperature and blood pressure recorded. Fluid balance chart main-

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tained. If the pain were not established within 24 hours a slow pitocin drip was given.

### Results

In 228 cases conceptus was expelled between 16 to 36 hours. In 18 cases, conceptus was expelled over 36 hours but within 48 hours of instillation of distilled water. In 4 cases there was a delay of 48 to 72 hours. One hundred and twenty-six cases received pitocin drip. Mean instillation abortion time (I.A. time) was 22 hours 30 minutes. In 28 cases instrumental evacuation was done. Check curettage was done in all the cases, irrespective of instrumental or spontaneous evacuation. Fifty-seven patients were sterilised and 15 cases had concurrent I.U.D. placement.

### Fever

Majority of patients had a temperature of 37.2°C. Five cases had a temperature of 37.8°C after instillation which subsided with antipyretics.

### Haemorrhage

There was no significant blood loss in any of these cases requiring blood transfusion and blood coagulatory defect were also not encountered.

### Retained placenta

In 28 cases placenta was retained for more than half an hour which was removed by instrument.

There were no significant changes in pulse rate and blood pressure before and after the instillation of distilled water.

### Discussion

The peculiar feature of distilled water induction is the wide variation obtained in the induction abortion time (I.A. time).

While some of the cases aborted as early as 16 hours and there were quite a few cases who aborted as late as 70 to 72 hours nearly 3 days. But the mean I.A. time was nevertheless 22 hours 30 minutes. Solution instilled for termination although plays a major role in determining the induction abortion interval, the extent of cervical effacement and gestational size of the uterus at the time of instillation also plays a part in influencing the abortion time. It is the experience of the author that small gestational uterus is less responsive to induction whatever may be the agent, and greater the cervical effacement, earlier the abortion.

Distilled water being more physiological is well tolerated by the patient. Chills and rigor which was very often complained by many of the patients with the instillation of hypertonic saline is not experienced with distilled water. It is quite effective especially when it is instilled without withdrawing much liquor. There was no necessity for second instillation nor there was any failure compared to 1.4% and .4% respectively of saline induced abortion, (Kereneyi *et al* 1973). No other serious complications like shock and blood coagulatory defect .2 (Burkman *et al* 1977) to .3% (Kereneyi *et al* 1973) as in hypertonic saline. Infection which has been a source of anxiety (Manabe 1972) has not been so in the present series.

### Summary

Distilled water termination is a comparatively safe, and in spite of its vagaries is an effective method. It is free of any fatal complications. It has got the added advantage of being cheap and its easy availability. Its economy and its safety make distilled water induction a valuable method in mid-trimester termination of pregnancy in developing countries.

