

TERMINATION OF PREGNANCY IN THE SECOND TRIMESTER BY THE MECHANICAL METHOD

by

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Introduction

The demand for second trimester termination of pregnancy continues to be a common feature in the cities where many unmarried and primiparous young girls seek help. The reasons are:

1. The late diagnosis of the pregnancy due to a false sense of modesty, guilt and shame which prevents them from seeking help earlier.

2. Ignorance of the safety, reliability and legality of first trimester termination of pregnancy.

3. The social stigma of unwanted pregnancies make the young girls postpone the decision till the second trimester of pregnancy. Therefore, a significant number of young girls attend our outpatient department with a request for termination in the second trimester.

An ideal method of termination in this group has to be safe, reliable and effective. Search for this ideal has led to the use of rubber catheters, which act as mechanical stimulators to the uterus.

Intra-amniotic saline, which is extremely effective, has gone into disfavour because of high mortality and morbidity. Extra-amniotic ethacridine lactate is good but is often in short supply. Prosta-

glandins have given good results, but their drawback is their availability, besides high cost and side-effects.

Mechanical stimulation to the uterus in combination with oxytocin is said to be effective in causing uterine contractions, and is a safe method for termination in the second trimester.

Manabe (1968, 1969, 1972) from Japan, has already used the mechanical method extensively and has shown beyond doubt that it works very well. Rubber catheters, gumelastie bougies, metreurynters and rectal tubes have all been used to cause uterine contractions. We have preferred to use rubber catheters because of their simplicity and availability.

Material and Methods

We have used simple rubber catheters for carrying out mid-trimester termination of pregnancy in one of the Units of Cama Hospital, Bombay. This has been carried out over a period of 1½ years i.e. between June 1977 and December 1978. Since then, this method has been successfully adopted by the other units of the hospital.

This method of termination has been applied to any patient seeking termination after 14 weeks and below 20 weeks duration of pregnancy. The technique is simple, inexpensive and does not require

any complicated instruments or any anaesthetic or pharmaceutical agents. This can be used for cardiac patients as well as patients with renal insufficiency. We had 1 patient with asymptomatic V.S.D., and another with essential hypertension, in whom these methods were effectively used. Seventy-five women requested mid-trimester termination between 14-20 weeks duration of pregnancy, from June 1977 and December 1978, and the procedure was performed by the introduction of 4-6 autoclaved catheters.

Method

After disinfection of the vagina, a Sim's speculum was introduced and the anterior lip of the cervix was held by a vulsellum. No dilatation was required except in a few cases where we used laminaria tents prior to insertion of catheters. In all cases, (14-20 weeks gestation) 4 rubber catheters were introduced along the extra-amniotic space (i.e. between the decidua and the fetal sac) and pushed beyond the internal os of the cervix.

All women were given prophylactic antibiotics (Tetracycline and Ampicillin). Intravenous pitocin was used if no results were obtained by then. Usually the abortion occurred at the end of 36 hours.

Observations

The youngest patient was 15 years and the oldest was 45 years of age. 60% of the patients were primiparous.

Duration of Pregnancy

Out of 75 women, 47 were between 14-17 weeks of pregnancy, and 28 were between 18-20 weeks duration of pregnancy.

Results

Out of 75 women, 51 aborted within 24 hours, the average induction-abortion in-

terval being 12.6 hours. Nineteen women took 24-48 hours to abort. Thus, 92% (i.e. 70 out of 75 patients) of the total aborted within 48 hours. Five patients aborted after 72 hours, whom we considered as failure of this method.

TABLE I
Pitocin Drip

None	1 day	2 Days	3 Days	4 Days
23	27	15	4	1

Pitocin drip was used if the patients did not abort within 24 hours. This was necessary in 42 cases. No postpartum haemorrhage of significant degree was noted. Post-abortion syntocinon was given if uterus was atonic but was required in more than 10% of the patients. No cervical tears were noted during delivery of foetus.

In 36 patients, expulsion of the products of conception was complete and they did not need any further assistance. Thirty-nine patients required blunt curettage under sedation i.e. incomplete abortion occurred in 52% of the cases. This we considered to be a small price for the completion of pregnancy.

A comparison of all methods of second trimester terminations done in our hospital with that of extra-amniotic catheters is shown in the above Table II.

Post-abortion Contraception

Only 6 patients had puerperal ligation within 48 hours of abortion by mini-laparotomy. No intraperitoneal sepsis was seen in any of the patients.

Other methods of contraception are uniformly refused as the patients are unwilling to take oral pills and have some misgivings about 'Loop' insertions.

TABLE II
Comparison with Various Methods

Method	Cases	I.A.I.	Failures	Side-effects
I.A.S.	500	22.5 hrs.	3.2%	0.40%
E.A.E.L.	375	39.5 hrs.	10.0%	2.86%
I.A.P.G.	83	18.5 hrs.	7.6%	53.00%
E.A.P.G.	100	14.7 hrs.	40.0%	30.00%
P.G. Pessaries	30	16.2 hrs.	40.0%	43.00%
Catheters	75	36.45 hrs.	8.2%	Nil
Catheters and 50/units EAEL	20	28.20 hrs.	Nil	Nil

Failures and Complications

Five patients did not abort in 72 hours. Their details are shown above in Table III.

2-3 catheters were introduced in the extra-amniotic space. As we gained experience we realised the following disadvantages:

1. Difficulty in the insertion of subsequent catheters after the insertion of the

TABLE III
Failures

S. No.	Age	Para	Duration of Pregnancy	I.A.I.	3rd stage	Oxytocin (Days of use)
1	21	1	14 weeks	102.00 hrs.	Incomplete	2, 3, 4, 5
2	22	0	18 weeks	79.00 hrs.	Complete	4th day only
3	22	0	20 weeks	74.20 hrs.	Complete	2, 3, 4 days
4	30	2	20 weeks	77.7 hrs.	Complete	2, 3, 4. P. Ligation done
5	35	4	18 weeks	109.00 hrs.	Complete	2, 3, 4, 5

In most of these patients the duration of pregnancy was between 18-20 weeks gestation and thus the stimulus required by the refractory uterus was more. One case where duration of pregnancy was 14 weeks is unexplained.

No other interference was done and these patients eventually aborted on their own. We always tell our patients that the abortion process will take 3-5 days so that they do not expect quick results.

Evolution in Methodology and Discussion

Earlier in our series we used only I catheter in 4 cases. All the cases took very long to abort so that subsequently

first catheter, which had to be overcome by previous dilatation of the cervix by laminaria tents for 24 hours.

2. Catheter was expelled in 4 cases with risk of recatheterisation and long induction-abortion interval.

3. High risk of infection in the form of vaginal discharge or temperature.

In order to overcome the risk of infection, we could insert 2, 3, 4, or even 6 catheters beyond the internal os of the cervix, even in the case of nulliparous patients. In our view, this has helped in the reduction of the induction-abortion interval and none of the patients developed infection.

Initially we used immediately oxytocins to reduce the induction-abortion interval. This may not be necessary since 40% of the patients aborted in 24 hours. Hence, only those patients who did not abort in 24 hours required it. All fetuses aborted were fresh except in 5 cases where I.A.I. was more than 72 hours.

A check curettage was first performed on all patients under sedation, subsequently 50% patients with incomplete abortion required completion of abortion under local anaesthesia.

In order to improve our results in the last year we used 6 rubber catheters and have found a small but definite reduction in the induction-abortion interval, more so if 50 units (1 Bulb) of ethacridine solution is added. This latter method is definitely useful for unmarried primiparous who come with late pregnancies to our cities.

Summary

An attempt is made to evolve a safe and effective method for termination of second trimester pregnancies at our institution. We feel that this method has good scope

especially in our country as it is independent of sophisticated machinery or drugs.

Because of its simplicity and easy technique the mechanical method can be performed by junior resident staff or trained personnel in rural areas.

Unpredictability regarding the induction-abortion interval is the only drawback of this method. In spite of this, we feel that it is a good method and can be used in rural areas, where modern facilities are not easily available.

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References

1. Chandy, T.J.: *Obstet. Gynec. India*, 26: 234, 1976.
2. George, S.: *PERSONAL COMMUNICATION*.
3. Manabe, Y.: *Am. J. Obstet. Gynec.* 105: 132, 1969.
4. Manabe, Y.: *Am. J. Obstet. Gynec.* 103: 232, 1968.
5. Manabe, Y.: *Am. J. Obstet. Gynec.* 27: 701, 1972.