MIDTRIMESTER ABORTION

by

GIRIJA DHAR,* D.R.C.O.G., F.R.C.S.,
WAZIRA KHANAM,** M.S. (Pat.),
SHEELA KACHROO,*** M.D.
and
BILQUIS JAMILA,**** M.D.

Introduction

Search is still being made for an ideal method of termination of pregnancy in second trimester. Various substances have been used such as hypertonic glucose, hypertonic saline, urea and manitol but none of the substances are found to be particularly safe. Purely mechanical stimulation of the uterus by intrauterine application of laminaria tent can induce labour at any time during pregnancy. Cervical dilatation with laminaria tent followed by artificial rupture of membranes with oxytocin or spartein sulphate can induce mid-trimester abortion. This method is quite safe and efficacious. Further results of the trials are still awaited.

Material and Methods

One hundred cases of termination of pregnancy between 14-30 weeks were studied. The technique of laminaria tent insertion is same as used in first trimester termination. The results were analysed as follows:—

*Professor and Head of the Department.
**Associate Professor.
***Assistant Professor.
****Assistant Professor.
Department of Obstetrics & Gynaecology, Government Medical Collge, Srinagar.
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Age. Majority of the patients belonged to the age range of 28 to 32 years.

TABLE I
Parity

Parity	No. of patients	Percentage
1-3 para	26	26%
4-6 para	46	46%
7-10 para	28	28%
Total	100	100%

Maximum parity varied between 4-6, highest parity seen was tenth gravida.

TABLE II
Gestational Age

Gestational Age	No. of patients	Percentage
14-20 weeks	70	70%
21-26 weeks	22	22%
27-30 weeks	8	8%
Total	100	100%

Most of the patients had their gestational period between 14-20 weeks.

TABLE III
Duration of Laminaria Tent Insertion in 100 Patients

Duration in hours	No. of patients	Percentage
6-8 hours	28	28%
8-12 hours	52	52%
12-24 hours	20	20%
Total	100	100%

TABLE IV
Method of Termination in 100 Patients

Method of termination	No. of cases	Percentage
Artificial rupture of membranes with syntocinon	70	70%
Artificial rupture of membranes with spartein sulphate	30	30%
Total	100	100%

TABLE V
Induction Abortion Interval

6-24 hours	24-36 hours	More than 36 hours	Failure
60 (60%)	24 (24%)	16 (16%)	Nil

TABLE VI
Main Complications

Complications	No. of patients
Incomplete abortion	4
Retained placenta	4
Pyrexia	6
Excessive bleeding	Nil
Uterine perforation	Nil
Cervical laceration	1
Pelvic infection	Nil

Only 16 cases took more than 36 hours to abort. No failures were encountered in our series. Most of the cases aborted within 24-36 hours.

Dilatation and Curettage was done in 8 cases because of incomplete abortion. Slight rise of temperature was noticed in 6 patients which was controlled by broad-spectrum antibiotics. Prophylactic antibiotics were given in all cases.

This Table shows comparative study of successful mid-trimester and late abortions using laminaria tents and metreurynter method and A.R.M. with uterotonics. Complications noted by Manabe, Yanagita and ourselves are summarised in Table VII.

Discussion

In absence of an ideal abortifacient for 2nd trimester pregnancy a constant search for better and safer agent is being undertaken. We have analysed 100 cases aged 18-40 years and above 14 weeks' gestation. They were induced with insertion of laminaria tents prior to artificial rupture of membranes and administration of oxytocin or spartein sulphate. Parity of these patients varied from 1-10, but most of them had 4-6 children. There were 70

TABLE VII
Complications of Mid-Trimester Abortions (Comparative Study of Different Authors)

Complications	Laminaria tent Manabe Nakajima (15-28 weeks gestation)	Metreurynter method Yangita et al (17-28 weeks gestation)	Laminaria tent and A.R.M. method with Oxytocin present study
Maternal death	0	0	0%
Retained placenta	18	0	8%
Temp. 38°C or above	15	6	6
Uterine haemorrhage	0	0	0
Uterine perforation	0	0	0
Difficulty in removal of tents	0	0	2
Cervical laceration	0	0	0
Total No. of cases	230	469	100

patients who were 14-20 weeks pregnant. 1-2 laminaria tents of small and medium size were inserted in the cervical canal with or without pre-dilatation of cervix with metal dilator. After 6-24 hours laminaria tents were removed and artificial rupture of membranes was done followed by either syntocinon drip or spartein sulphate in divided doses intramuscularly.

The interval between artificial rupture of membrane and abortion ranged between 6-24 hours in 60% cases and 24-36 hours in 24% of cases. It took more than 36 hours in 16% of cases. The mean time interval in the series of Lischke and Goodlin (1973) was 17.5 hours with a range of 8.25 to 37.5 hours; 3 per cent cases took more than 36 hours.

Naftolin *et al* (1974) have found the mean time from intra-amniotic instillation of prostaglandin to abortion as 9.6 ± 6.7 hours. There was a dramatic improvement with insertion of laminaria tents than when prostaglandin alone were used.

The main complications noted were retained placental fragments in 11% and endometritis with temperature in 4% cases according to Lischke and Goodlin (1973). In our series of cases retained placental fragments were found in 8% and pyrexia in 6% and cervical laceration in 1%.

Cervical fistula is a complication of mid-trimester abortion by intra-amniotic hypertonic saline infusion and oxytocin augmentation as seen by Goodlin (1972) in 4 patients. Such a complication has not been seen in our series of cases and in Goodlin's 1973 series. It has been assumed that the tent by inducing early internal os dilatation, channels the products along cervical canal, rather than allowing uterus to form fistulous tract.

Adachi and Spivack (1975) have reported intravascular haemolysis in two cases in a series of 1582 consecutive intraaminotic mid-trimester saline abortions. Such a complication has not been seen in our series of cases.

Gusdon and May (1975) have encountered difficulty in removal of tents in 2 cases only and in one of his cases hysterotomy had to be done to remove tent. We also faced this problem in 2 of our cases where tent was tightly gripped at internal os and steady traction was required for its removal.

In Japan hypertonic saline infusion technique has been abandoned. The laminaria-metreurynter procedure is currently the most frequently used mid-trimester abortion procedure. Manabe and Nakagima (1972) found that duration of abortion was 5-24 hours when laminaria tents were kept prior to metreurynter application. Proper use of laminaria curtails the duration of metreurynter application, since laminaria evokes uterine contractions and softens cervix to dilate. In our series of cases it took more than 36 hours in 16% cases only.

Summary

Determination of urinary estriol assays are considered a useful test of fetoplacental function. In this study urinary estriol value in high risk pregnancies (Threatened abortion, B.O.H., Toxemias, Vesicular mole, Intra uterine growth retardation syndrome, Hydramnios, Multiple Pregnancy, Post-date pregnancy) are evaluated in relation to the final outcome in 244 cases. The results emphasize the usefulness of this estimation especially during late pregnancy where low or falling values correlated very well with failing fetoplacental unit. This assay could thus serve as a useful guide in the clinical management of such patients.

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