

INDUCTION OF ABORTION WITH LAMINARIA TENTS

(Study of 200 cases)

by

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Introduction

Whilst a search for a new, safe and efficient method of dilating the cervix and thereby, inducing abortion continues, the older method, laminaria tent is being re-considered. In this trial the advantage of laminaria tent as cervical dilator and its usefulness in induction of abortion in the first and second trimesters of pregnancy and its safety as an out-patient procedure in low-risk 1st trimester cases and also as in patient in high-risk 2nd trimester cases is studied.

Material and Methods

Two hundred consecutive cases from those attending the out-patient department of Government Lady Goschen Hospital, Mangalore and S.M.T. Hospital, Mysore seeking abortion for various reasons between 1975 to 1979 have been chosen. After counselling, each patient had a general physical and pelvic examination to estimate the size of the uterus.

They were divided into two groups. The first group of 100 cases belonging to first trimester and 2nd group of 100 cases belonging to mid-trimester.

Management of First Group of 100 patients—First Trimester without Hospitalisation

The gestation period in this group

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varied from 10 to 12 weeks. The age spread over 18 years to 43 years. Ninety-two were multiparous women and 8 were unmarried primis.

Procedure: The patient having emptied the bladder is placed in lithotomy position. The vulva is painted with iodine and the vagina and cervix cleaned thoroughly with acriflavin in spirit. The speculum is then introduced and the anterior lip of the cervix stabilised with a tenaculum and the endocervix swabbed with antiseptic solution. Uterine sound is first passed through the cervical canal and after withdrawing the sound a sterile laminaria tent is inserted, so that its tip passes just beyond the internal os. The proximal thread is anchored to the gauze swab to maintain the tent in position. The size of tent inserted is either one of small or medium size. Patients were allowed to go home after insertion and advised to come the following day for evacuation.

All the cases were evacuated and curetted the following day and sent home after observing for half an hour in the out-patient department. Only 1 patient returned within 6 hours of insertion of the tent with severe lower abdominal pain. Dilatation and curettage was done immediately on her.

They were all seen one week and a month later. Only 1 patient had fever and complained of excessive bleeding on

the fourth day of evacuation, but responded to symptomatic treatment without hospitalisation.

Management of Second Group of 100 patients—Mid Trimester Pregnancy with Hospitalisation: Because of the high-risk involved in second trimester termination, all the cases were admitted to the Hospital.

Gestation period in these cases ranged from 14 to 20 weeks. Age spread was over 14 years to 40 years. Four were unmarried primis and 96 were married multiparous women. Laminaria tents required in each patient varied from 2-3 of different sizes, except in 1 unmarried multipara, only 1 tent of small size could be inserted. No antibiotics were given to any of these patients as a routine.

Results

In 76 cases whose gestational periods were between 18 to 20 weeks, expulsion was complete even without pitocin drip.

Twenty-four cases whose gestational ages were between 14 to 16 weeks, failed to establish pain for 18 hours from the time of insertion of tents received pitocin drip. Though they expelled the foetus within 24 hours, they failed to expel the placenta within the time limit of half an hour. They required instrumental removal of the placenta.

Four patients developed a temperature of 101, which subsided with antibiotics and antipyretics.

The patients were all discharged (except the few with fever), 24 hours after completion of abortion. They were seen after a week and one month later. In all the cases, laminaria tents after removal, were washed, dried and soaked in iodine stored in spirit for reuse.

Discussion

The factors responsible for any com-

plication, immediate or late, in induced abortion is related to the extent of dilatation of the cervix prior to evacuation.

If excessive cervical dilatation can be avoided, immediate risk of cervical injury and uterine perforation is reduced, so is subsequent danger of cervical incompetence which may lead to premature delivery. This abortion sequelae is suggested by Klinger (1970) from the studies in the Eastern Europe. Generally 4-8 mm. dilatation is recommended for cases between 4-7 weeks gestation, 9-13 mm. dilatation for 8-10 weeks and 11-14 mm. dilatation for 10-12 weeks of gestation. The cervix should be dilated no further than necessary for adequate evacuation, either instrumentally or by suction. The advantage of laminaria tent is that the extent of dilatation at the time of expulsion is proportional to the gestation size of the uterus, irrespective of the size of tent used. Eaton *et al* (1972) are also of the same opinion that cervical dilatation in any given sized tent increases directly with the gestational age of the uterus.

It is of interest to note that with the laminaria tent, the conceptus gets separated and lies free in the uterine cavity. This facilitates easy evacuation, either instrumentally or by suction, with minimal bleeding and with no damage to the cervix and uterus.

The methods commonly used in first trimester abortion are suction or D & C. The incidence of complications, like cervical tears, and lacerations ranges from 0.7 to 4.8%, perforation 0.12% and mortality of 2.5% in the studies reported. There were no such complications with the use of laminaria tents in the present study group.

The incidence of complications, like haemorrhage 2.2%, hypofibrinogenaemia

0.2%, and amniotic fluid embolism 0.1% in the studies reported in the saline induced abortion, is not encountered in the present series with laminaria tents in the second trimester pregnancy. Absence of death in the present series of cases, compared to heavy mortality rate of 16.2% with saline-induced abortion makes laminaria a comparatively safe method for termination of pregnancy, even in mid-trimester pregnancy in the absence of prostaglandins.

Summary

Two hundred cases of laminaria induced abortions in first and mid-trimester pregnancy is reviewed. Laminaria tents are well tolerated by the tissues and less damaging to the cervix and uterus. Even though there are chances of laceration of the cervix and perforation of the uterus, incidence of these complications is much less, as compared to other methods of termination. There were no recordable cases of sepsis or death due to the use of laminaria tents in this series, either in the

hospitalised or in the out-patient cases. The author feels that the danger of infection and uterine perforation with the laminaria has been very much exaggerated in the past. Laminaria tents judiciously used, is a far superior device in terminating either first or mid-trimester pregnancy.

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