

# OUR EXPERIENCE WITH LAMINARIA TENT IN MEDICAL TERMINATION OF PREGNANCY

(Analysis of 907 Cases)

by

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In recent years, the role of laminaria tents (LT) has been well established as an aid to M.T.P. Our aim is to study its advantages and disadvantages by analysing 907 cases, where LT was inserted for slow and steady cervical dilatation. We have compared our series to other authors who have reported on the use of LT favourably for dilatation and evacuation, especially in midtrimester abortion. Girija Dhar, Niswander, K. R. (1973), Rajan and Nayar (1977), Palaniappan B. (1979).

## Material and Methods

During the period between December, 1976—March 1980, patients requesting MTP were chosen for LT insertion, specifically according to the parity, history of long period of infertility, size of uterus and the nature of cervix i.e. whether hypertrophied, elongated, firm, fibrosed, thick or with pin hole external os etc. According to the patulous nature of the

cervix, one or two small, medium or large size sterile LT were inserted either 3 hours or 24 hours prior to operation under the coverage of antibiotics. Later LT were removed. Suction evacuation was done. Depending upon the patient's request either SE alone or concurrent CuT, or TA was undertaken. Patients were discharged 4 hours after following SE or 6 days following tubectomy. Patients were followed up every month for 3 months and our results have been analysed as follows:

## Observation

Total number of MTP done during the above period was 5630. LT inserions were done in 907 cases forming 18% of total cases.

*Age:* 76% belong to 21-30 years of age group. Youngest 15 years. Oldest—46 years.

*Parity:* 78% belonged to the group 2-4 living children. 2.3% belonged to nulliparous—unmarried group.

*Gestational size:* 90.9% belonged to first trimester. 9.1% to second trimester group (13-18 weeks).

*Duration of LT:* 27.5% belonged to short duration (3 hours) and 72.5 belonged to long duration (24 hours) LT group.

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TABLE I  
Mode of Evacuation and Post Termination Contraception

Mode of Evacuation and Post Termination Contraception	With L.T.			
	No. of patients	Percentage	No. of patients	Percentage
SE alone	120	13.2	291	6.1
SE with IUD	308	33.9	496	10.5
SE with TAT	472	52.0	2983	63.0
Hysterotomy with TAT	7	0.7	960	20.4

In 83 cases, belonging to II Trimester group LT were used for cervical dilatation followed by evacuation with Ovum forceps which resulted in successful outcome, thereby reducing the number of hysterotomy during 79-80 in our Hospital (Rajan et al 1980).

TABLE II  
Complications in I-Trimester

Complications	With LT		Without LT		Rajan et al (1977) Percentage
	No. of patients	Percentage	No. of patients	Percentage	
Retained products	6	0.6	33	4.0	2.5
Pregnancy continuing	3	0.3	5	0.5	0.5
Uterine perforation	1	0.1	7	0.7	0.2
Pelvic infection	6	0.6	3	0.3	1.2
Post abortal bleeding	8	0.8	19	2.0	
Cervical spasm	0	0	4	0.4	
Mortality	0	0	0	0	

All complications were found to be decreased with LT dilatation. But there was a marginal increase in pelvic infection in SE after LT insertion.

Short duration LT was found to be equally effective as compared to the long duration LT for initiating atraumatic cervical dilatation.

**Failed Cases: (8.4%)** In the II trimester group, 7 cases out of 83 cases of failure were encountered due to the impaction, incarceration, fragmentation and retention of pieces of L.T. This needed laparotomy and hysterotomy and removal of LT in 5 cases along with tubectomy, 1 case of hysterotomy alone was done as the patient

was not willing for tubectomy. One ended in total hysterectomy as the LT could not be removed even by hysterotomy as it was found to be incarcerated forming a false passage and was deeply penetrating the myometrium just above the internal os.

#### Discussion

Generally the main problem encountered during termination of pregnancy is

TABLE III  
Complications in II Trimester

Complications	With LT		Hysterotomy	
	No. of patients	Percentage	No. of patients	Percentage
Retained products	2	0.2	—	—
Pelvic infection	1	0.1	6	0.6
Impacted LT	7	0.7	—	—
Uterine perforation	2	0.2	—	—
Hemorrhage	—	—	12	1
Wound sepsis	—	—	42	5
Painful scar	—	—	1	0.1
Inisional hernia	—	—	4	0.4
Scar endometriosis	—	—	5	0.5
Mortality	—	—	1	0.1
				(cardiac arrest)

In our series Morbidity was found to be definitely increased with hysterotomy.

cervical dilatation. LT has been used in preventing the unnecessary forcible dilatation of cervix by dilators. Forcible rapid dilatation may result in future complications like cervical incompetence, repeated abortions and repeated premature deliveries. In our experience LT introduction for only 3 hours (Palaniappan, 1979) has given us the crucial preliminary dilatation of 1 cm at the internal os, which was found to be extremely useful in overcoming the initial resistance for further dilatation.

Our complications were compared to Rajan series (1977). Pelvic infection, foul smelling discharge were found to be minimal in our series. We have also attempted to reuse the LT after carefully selecting the LTs which were without distortion, cleansing them with spirit and drying them and again resterilised by keeping them soaked in ethicon fluid for 7 days. Reuse of LT twice or thrice repeatedly has not been found to increase the incidence of either foul smelling discharge or pelvic infection. In our series,

in about 300 cases LT were reused and complications were found to be almost nil. Reuse of LT has helped us to reduce the prohibitive cost of LTs. This is an important consideration while providing termination of pregnancy services to large number of patients, as in our hospital.

When compared to abdominal hysterotomy, dilatation with LT and evacuation was found to be easier, caused less bleeding, less trauma, shock and smaller abdominal incisions for TAT. Hospital stay was found to be minimised. Thus long term complications like scar endometriosis and adhesions were avoided.

Strauss *et al* (1979) reported migration, incarceration and fragmentation of LT. In our series also incarceration, fragmentation of LT has been found in 7 cases and prompt treatment were undertaken. The type of cases which gave problem to us were due to the improper selection of cases, introducing LT well beyond the internal os, stenosed cervix which grips the LT midway giving rise to difficulty in removal so that LT have to be removed

either in piecemeal or by hysterotomy. It was found long duration LT also contributed to the complications.

#### Conclusion

Use of LT has been found to favour effective safe, adequate preliminary valuable dilatation as demonstrated in our series in both first and second trimester abortions. Complications were minimal. Border line cases (13-18 weeks) can also be tackled by vaginal evacuation thereby avoiding hysterotomy. Rare Hazards like incarceration has to be borne in mind and they should be treated promptly.

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