

## EFFECT OF CRYOSURGERY ON BENIGN LESIONS OF UTERINE CERVIX

by

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### SUMMARY

One hundred cases having benign cervical lesions like erosion, endocervicitis and chronic cervicitis were treated by cryocauterization and studied for clinical and symptomatic relief. Cryocauterization was done by ASCON MTC 81 cryo unit using nitrous oxide as refrigerant by freeze thaw refreeze technique.

Overall symptomatic relief was 90.10% with clinical cure 85.54% and practically negligible complications. Healing was rapid and complete following cryocauterization.

### Introduction

Amongst all the gynaecological lesions incidence of cervicitis is maximum. It is rarely of primary origin and usually accompanies vaginal or uterine lesions. Mcvigar (1968) demonstrate difficulty in differentiating simple non-infected erosion and chronic cervicitis. Pinkerton and Calman considered that chronic cervicitis is a symptom complex comprising of leucorrhoea, deep dyspareunia backache and recurrent cystitis.

As there is no agreement for the symptoms associated with chronic cervicitis and erosions, most clinicians employ same treatment for both conditions. As these ailments stubbornly resists medical treatment they have been puzzling problem for treating physician. Other popular methods of treatment are chemical cauterization, electrocauterization, cryocauterization etc.

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Cryosurgery is a relatively new innovation and has gathered popularity due to high healing rate, fewer complications like pain, discomfort and or spotting during and following cryo-surgery. Other advantages with this procedure are that it can be done without analgesia or anaesthesia.

### Material and Method

One hundred patients having chronic benign cervical lesions were randomly selected from out patient department of Gynaecology and obstetrics of Government Medical College and Hospital, Jabalpur (M.P.) from February 1984 to May 1985.

Prior to cryosurgery a detailed history of patient was taken and any associated pelvic infection was ruled out clinically. Simultaneously smear was taken for cytological examination from squamo-columnar junction. Cervical biopsy was taken in patients having doubtful cervical lesion



or badly eroded cervixes. Thus after confirmation of benign cervical lesions patients were selected for cryotherapy.

Patients having vaginitis trichomonal, monilial or non-specific were treated accordingly prior to cryocauterization.

Patients were called in immediate post-menstrual period latest by one week for cryosurgery. Procedure was carried out in minor operation theatre with the consent of patient herself or of her husband. Cryocauterization was performed without any type of analgesia or anaesthesia, by an ASCON MTC-81 cryo unit having 3 types of interchangeable probes viz. endocervical, large and small exocervicals, with nitrous oxide as a refrigerant at 50 Kg/Cm<sup>2</sup> pressure and 80°C temperature.

Patients were put in lithotomy position and cervixes were exposed by cusco's bivalve speculum after cleaning and draping the parts. Cervix was caught with tenaculum and any mucus or debris present was removed by a wet swab or swabs soaked in 3% acetic acid. Extent and type of lesion was re-determined and accordingly type of probe was selected. In larger lesions where probe area was small or where probe was not able to cover whole of the lesion, arbitrary subdivisions of the lesion were made and each subdivision was frozen separately taking care that areas frozen should overlap each other and entire area in freed.

The probe was applied at room temperature and was activated. As cervix begins to freeze ice ball was formed. Freezing was continued till ice ball extended 5 mm on normal looking epithelium and then probe was removed after complete defrosting and thawing. A freeze thaw refreeze technique was used in cases where lesions were not adequately cauterized after 1st freeze thaw technique.

None of the patients were hospitalized and were sent home immediately after procedure. Following cryocauterisation no local medication, douching or packing was allowed. Patients were advised not to use intravaginal tampons and abstain from intercourse for one month. Patients were advised to take plenty of fruit juices or potassium salt to supplement potassium loss and were explained about the possibility of copious vaginal discharge following treatment. Patients were followed up at intervals of one week, 4 weeks, 8 weeks and 12 weeks for assessment of clinical and symptomatic relief and earlier in cases with bleeding P/V, pain in abdomen or pyrexia.

#### *Observations and Remarks*

Among 100 patients treated with cryosurgery all were married and staying with their husbands. 90% of the patients were between 20-40 years of age.

Average parity in the study group was 3.2%, only 2 patients were nulliparous with no history of abortion or operation. Three had IUCD in situ. Majority of the patients presented with leucorrhoea either alone or in association with backache, pain in abdomen and or irregular menses with average duration of various symptoms between 1-3 years. They were treated by frequent local and symptomatic and systemic medicines prior to cryotherapy by various local practitioners.

Cervical lesion in majority of patients was erosion, small or large with or without endocervicitis and or ectropion. Exfoliative cytology and histology in the study groups prior to cryotherapy is shown in Table I. Cervical biopsy was taken in 18 cases having suspicious lesions.



TABLE I  
Exfoliative Cytology and Histology

Type of report	No. of patients	Percentage
Normal smear Pattern	36	36
Inflammatory smear Pattern	45	45
Trichomonal Vaginitis	1	1
Chronic Cervicitis	18	18
	100	100

Table II shows incidence of types of probes used and average duration of time in study group.

TABLE II  
Incidence of Types of Probe and Average Duration of Time

Type of probe	No. of patients	Average time	%
1. Endocervical	25	1-1½ mt.	25
2. Endocervical Exocervical large	13	45-60 sec.	13
3. Endocervical + Exocervical small	15	1-2 mt.	15
4. Exocervical large	17	45 sec.	17
5. Exocervical small	24	1-2 mt.	24
6. Exocervical small + exocervical large	6	1-1½ mt.	6

In 42% patients single freeze thaw technique was used while in 58% freeze thaw refreeze technique was used.

#### Immediate Complaints

86% patients did not experience any discomfort during cryocauterization, while 5% had mild lower abdominal pain simulating dysmenorrhoea, 4% experienced backache, 1% had dragging pain in perineum, 2% had headache and remaining 2% had flushing. None of these side effects necessitated urgent or emergency treatment or stoppage of procedure. None of these patients asked for any medicines for their discomfort.

#### Follow Up

In patients who came for followup almost all had vaginal discharge following cryosurgery starting within 24 hours and lasting for 3-21 days. Discharge was at first clear than serosanguinous and later become mucoid requiring use of 3-5 diapers/day on an average for maximum 7 days. In 8 patients discharge persisted even after 4 months followup.

Effects of cryosurgery on symptomatology after 3 months of treatment is shown in Table III.

Majority had symptomatic relief and

were satisfied after treatment, 2% patients conceived after treatment. 5% required second cryosurgery where lesion was partially healed after 3 months and in one hysterectomy was done.

Effect of cryosurgery on cervical lesions are shown in Table III.

On clinical assessment by speculum examination of all cases at each follow-up visits it was found that in patients having endocervicitis, lesion was completely healed within 8-12 weeks, while in cases with bad erosions of cervix majority had improvement in lesion. In this group of patients lesions healed in 60% within 10-16 weeks and in remaining 6 patients recauterization was done in 5 and

TABLE III  
Effect of Cryosurgery on Cervical Lesions

Session	Number of patients				Percentage
	Before C/s		After Cryocauterisation		
	Cured	Per- sisted	Defaul- ters		
1. Endocervicitis	15	13	—	2	100
2. Bad Erosion	15	9	6	—	60
3. Erosion	64	46	4	14	92
4. Ecterooption	6	3	3	—	50
Total	100	71	13	16	

TABLE III  
Effect of Cryosurgery on Symptomatology After Cryosurgery

Symptoms	No. of patients before Cryo- surgery	Defaul- ters	No. of patients after cryosurgery		Percentage
			Cured	Per- sisted	
1. White Discharge	57	7	47	3	94
2. White Discharge + pain abdomen	16	1	12	3	100
3. White Discharge + Backache	13	1	11	1	80
4. White Discharge + Irregular menses	5	—	4	1	91.61
5. White Discharge + pain abdomen + Irregular menses	2	—	2	—	80
6. White Discharge + Pruritis Vulvae	1	—	1	—	100
7. White Discharge fever	1	—	1	—	100
8. Backache + Irregular menses	1	—	1	—	100
9. Pain abdomen	1	—	1	—	100
10. Primary sterility	1	—	—	1	
11. Irregular menses	1	—	1	—	100
12. White Discharge + Bachache + pain abdomen + Irregular menses	1	—	1	—	100
Total	100	9	82	9	100

hysterectomy in 1. In these 5 patients lesion healed after second application.

None of the patients in the study group reported recurrence in signs and symptoms following cryocauterization in 16 months period.

#### Discussion

In our series of 100 patients, 90 were between 20-40 years of age. 57% patients study had 3-4 issues and 2% had none, thus confirming that cervicitis is a



disease of parous women. This finding is also strengthened by report by Cashmen (1940) who reported an incidence of 78% in multipara and 20% in nullipara.

Leading symptoms in present study was leucorrhoea either alone or in combination with pain abdomen, backache or irregular menses etc. Clinical cervical lesion in our series are erosions ectropion and or endocervicitis.

Sheth (1977) and Junarker (1978) also described similar incidence of clinical features in their study group treated by cryotherapy.

#### Effect of Cryosurgery

In the present group 86% of patients had no complaint and overall symptomatic cure was observed in 90.1%. Ostergard *et al* (1971) stated 90% cure rate in their patients. Sheth (1977) reported 91.2% cure rate and Junarker *et al* (1978) had 90.4% symptomatic relief in vaginal discharge as compared to our study where 90.8% were cured of leucorrhoea.

Backache was complained by 15% prior to Cryotherapy, of these 92.85% were relieved of their symptom after cryocauterization in present study. Sheth (1977) reported 16% incidence while Junarker *et al* (1978) had 55.8% patients complaining of backache. In Sheth's series (1977) 75% were relieved while in Junarker's series (1978) 89% patients were relieved from backache, which co-relates with our results.

#### Healing

In our study 83% patients came for follow-up showing 85.34% cure. This results co-relates well with figures of

Sheth (1977) 86.6% while Junarker *et al* (1978) reported 95% cure and Khurana (1980) reported 97% cure rate. None of the patients experienced serious complications following cryosurgery in our series nor are reported in literature.

#### Conclusion

Thus it can be concluded that cryosurgery is a sophisticated safe and effective procedure with predictable uniform action and powerful haemostatic action and sealing effect on blood vessels and lymphatics with rapid healing effect in the treatment of benign cervical lesions as compared to other traditional methods.

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