

CRYOSURGERY FOR TREATMENT OF BENIGN CERVICAL LESIONS

(A Study of 300 Cases with follow up)

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SUMMARY

Our experience with use of cryosurgery for the treatment of chronic Benign Cervical lesions is presented. Overall symptomatic cure rate was 75.3%, while the overall healing rate of cervical lesions was 85.9%. There were no major complications. Minor ones included bleeding (3.6%), dyspareunia (0.7%), and Pruritis Vulva (0.7%). It can be concluded that cryosurgery is a safe, simple and an effective procedure in the treatment of benign cervical lesions.

Introduction

Cryosurgery is a relatively new therapeutic innovation that destroys tissues by use of low temperature. It is a very useful and safe method for the treatment of many benign and some premalignant cervical lesions. It causes localised tissue destruction by deep freezing followed by healing without scarring. It has powerful haemostatic and sealing effect on blood vessels and lymphatics, with rapid and predictable uniform healing. It has fewer complications like pain, discomfort, spotting during and following cryosurgery as compared to conventional electrical hot cautery.

We are presenting herewith our experience with use of cryosurgery for the treatment of 300 cases of chronic benign cervical lesions with special reference to diagnosis, symptomatology, side effects, complications of the procedure and follow up upto 3-18 months.

Material and Methods

300 cases of chronic benign cervical lesions such as cervical erosion, chronic

cervicitis, endocervicitis were selected at random from the out patient department of L.T.M.G. Hospital, Sion, Bombay 400 022, India.

Prior to cryosurgery, in each case detailed history taking and clinical examination was performed to determine the type and extent of the lesions. In all cases, vaginal cytology, colposcopic examination and biopsy if necessary was done to rule out malignant lesions. Associated vaginal and cervical infections such as trichomonal, monilial infections etc. were treated locally and systemically before cryosurgery.

Cryosurgery was performed immediately after menstruation in the out patient department without anaesthesia or analgesia using a new portable model of FRIGITRONICS. Nitrous oxide was used as refrigerant at 50 Kgm/cm sq. pressure and -80 degree C. The cervix was swabbed with 3% acetic acid to dissolve the mucous. A suitable probe was selected. Freeze-thaw-freeze technique was used in all cases. Freezing was continued till the ice ball was formed 2-3 mm beyond the lesion. If the erosion was too large to be covered by the probe two applications were done. For endocervical lesions, separate probes

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were used. Duration of the treatment and number of applications in each case were recorded. Any complications or side effects during the procedure were observed. After the first visit at one week, patients were followed up once a month for 3-18 months. No treatment other than cryosurgery such as vaginal douches, antibiotic vaginal pessaries etc. was allowed. They were requested to abstain from intercourse for six weeks. Potassium supplements were given for the first seven days.

Observations and Results

All patients were married. Majority of them were from the reproductive age group of 20-34 years. The average parity was 3. Only 17 were nulliparous. 12 had an I.U.D. in situ. Leucorrhoea with or without backache was the commonest symptom. Other symptoms included pruritus vulvae (6%), menstrual irregularity (2.3%), dysmenorrhoea (3%), dyspareunia (1.3%) etc. (Table I). Erosion on one or both cervical lips was the most common lesion. (Table II).

TABLE I
Symptomatology Before and After Cryosurgery (300 Cases)

Type of Lesion	Before cryo- surgery No. (%)	After cryosurgery			Relief (%)
		Cured	Persisted Lost	F. up	
Leucorrhoea	142 (47.3%)	113	12	17	90.4
Leucorrhoea & Backache	62 (20.6%)	50	9	3	84.7
Leucorrhoea & Pain in Abdomen	41 (13.6%)	29	7	5	80.5
Leucorrhoea & Pruritus vulvae	18 (6.00%)	16	1	1	94.1
Leucorrhoea & Irregular Menses	7 (2.3%)	4	3	..	57.1
Infertility	17 (5.6%)	7	10	..	41.1
Dysmenorrhoea	9 (3.0%)	4	2	3	66.6
Dyspareunia	4 (1.3%)	3	1	..	75.0
Total	300 (100%)	226 (75.3%)	45 (15%)	29 (9.6%)	

TABLE II
Type of Lesion Before and After Cryosurgery

Symptoms	Before cryosurgery	After cryosurgery			Cure Rate (%)
		Cured	Persisted	Lost to F. up	
Erosion	242	197	28	17	87.5
Endocervitis	46	30	7	9	81.1
Endocervical Polyp	3	2	—	1	100
Ectopion	9	4	3	2	94.1
Total	300	233	38	29	85.9

Table I also shows symptomatic cure after cryosurgery. Of the total number of 300 cases 29 (9.6%) were lost to follow up; 226 (75.3%) were symptomatically cured, while in 45 (15%) symptoms persisted.

Relief as regards individual symptoms (Table I) showed that leucorrhoea was cured in most of the cases (80.5%-90.4%); menstrual irregularities in 57.1%; dysmenorrhoea in 66% and infertility in 41.1% of the case respectively.

Table II also shows effect of cryosurgery on cervical lesions. Of the 271 cases available to follow up, lesions persisted in 38 (14.1%) and disappeared in 233 (85.9%).

Table III shows the types of probes and average duration of cryosurgery. It depended upon the extent and type of the

TABLE IV
Interval of Healing Following Cryosurgery

Interval in weeks	No. of cases	(%)
8	138	(50.9)
9	30	(11.1)
10	33	(12.8)
11	17	(6.3)
12	15	(5.5)
Total 271 (100%)	235 (Healed) (86%)	38 (Persisted) (14%)

Late complications included bleeding (3.6%), dyspareunia (0.7%), pruritus (0.7%), while the majority (88.5%) had vaginal discharge to a variable extent. In the beginning, discharge was clear or serosanguinous becoming mucoid later on.

TABLE III
Types of Probes and Average Duration of Cryosurgery

Type of Probe	No. of cases	Duration	%
Endocervical	60	1-1½ min.	20
Endocervical large	82	45 sec. — 1 min.	27.3
Endocervical small	58	1 min. — 1½ min.	29.3
Endocervical and Endocervical small	48	1 min. — 2 min.	16
Endocervical and Endocervical large	22	1 min. — 1½ min.	7.3

lesion. The maximum time was 2 minutes, while the minimum was 45 seconds.

Rate of healing following cryosurgery was also noted. (Table IV). 138 (50.9%) healed within 8 weeks, while 15 (5.5%) required 12 weeks to heal. In 38 (14%) lesions persisted.

Table V shows complications during and after the procedure. There were no complications in 270 (90%). Other complications during the procedure included minor complications like pain (7.6%), nausea (1%) and vasovagal attack (1.3%).

TABLE V
Complications

During Procedure (No. = 300)	No.	(%)
Nil	270	(90)
Pain or discomfort	23	(7.6)
Vomiting/Nausea	3	(1)
Vasovagal symptoms	4	(1.3)
After Procedure (No. = 271)		
Bleeding	17	(3.6)
Discharge	240	(88.5)
Dyspareunia	2	(0.7)
Pruritus	2	(0.7)
Systemic Complaints	—	—

Vaginal discharge started within 24 hours of cryosurgery and lasted for 7-21 days on an average.

Discussion

The cryosurgical process involves destruction of the enzymes of cells rendering them biologically non viable without formation of bleeding wounds. This cellular destruction is due to low temperature and depends upon degree and rapidity of freezing. Lower the temperature, greater is the depth of destruction.

In our series of 300 cases, the overall symptomatic relief rate was 75.3%. It was higher with symptoms like leucorrhoea (90.4%), backache (80.4%) as compared with symptoms like infertility (41.1%) and dysmenorrhoea (66%). Overall healing rate of the cervical lesions is 85.9%. Over a period of 8-12 weeks, healing rate was best in erosions. (87.5%) as compared to endocervicitis (81.1%) and ectopion (57.1%).

Similar results as regards symptomatic cure and healing rate were reported by Junarkar *et al*; 1978 (95% healing and 91.2% symptomatic cure), Khurana *et al*; 1980 (97% healing and 90% symptomatic cure), Ostergard *et al*; 1968 (90% healing rate). The best results so far were reported by Pappas and Collins, 1977 (98% healing rate at 8 weeks).

Many reports have been published about the usefulness of cryosurgery in treatment of dysplasias and carcinoma in situ. Crisp (1970), reported 90% cure rate in carcinoma in situ after study of 114 cases. Ghoneim (1971) suggested that cryosurgery can replace conization and is the ideal treatment of carcinoma in situ in child bearing women.

In our study of 300 cases, there were 31 cases of mild to moderate cervical dys-

plasias on cervical cytology. In all these cases, smears reverted to normal after cryosurgery. In 8 cases, although cells did not show dysplasia; chronic inflammatory cells persisted in spite of symptomatic cure and healing of the lesions. There were hardly any serious complications during or after the procedure.

Conclusions

It can be concluded that cryosurgery is a safe, simple and an effective procedure in the treatment of benign cervical lesions. Aesthetically, also it is preferred as there is no smoke or pungent odour. It can also be used with an I.U.D. in situ as it does not destroy the nylon threads of the device. It has high healing rate, fewer complications like pain, discomfort or spotting and it can be done without anaesthesia or analgesia. It is also useful in the treatment of cervical dysplasias.

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References

1. Crisp, W. E.: *Am. J. Obstet. Gynec.*, 107: 737, 1970.
2. Ghoneim, M. A.: *Obstet. Gynec. News*, 6: 20, 1971.
3. Junarkar, K., Dani, S. P., Sankholkar, P. G. and Anjaneyulu: *J. Obstet. Gynec. India*, 38: 662, 1978.
4. Khurana, B. D.: *J. Obstet. Gynec. India*, 30: 137, 1980.
5. Ostergard, D. R., Townsend, D. E. and Hiroje, F. M.: *Am. J. Obstet. Gynec.*, 102: 426, 1968.
6. Pappas, H. J. and Collins, R. J.: Quoted in Sciarra (*Gynec. Obstet.*, Vol. I) Revised Edition. Harper & Row Publications, London, Page 5, 1980).