Cryosurgical Treatment of Benign Lesions of the Cervix

Chaisit Sritongchai MD,
Apisak Luamprapat MD,
Pornchai Mekariya MD,
Sumrit Senapad Dr. med, FICS, FRTCOG,
Mongkol Benjapibal MD.

Department of Obstetrics and Gynaecology, Siriraj Hospital, Mahidol University, Bangkok 10700, Thailand.

Abstract : *The cryosurgery was performed in the treatment of benign lesions and neoplasia of the cervix. Group I patients who had glandular erosion or erosio vera were treated by single freezing of 3 minutes. Group II patients who had positive Papanicolaou smear consistent with CIN II-III but negative colposcopic biopsy and endocervical curettage, and group III patients who had colposcopic biopsy or endocervical curettage positive for CIN were treated by double freezing technique. The minimal pelvic pain during freezing was common (41.67%) The watery of serous bloody vaginal discharge occurred in second day after freezing and lasted for 1-2 weeks in all of cases. Group I, II and III patients had failure rate of 3.22%, 13.5% and 17.39%. This procedure was adequate in selected group I and II only. (Thai J Obstet Gynaecol 1995;7:105-108)*

Short title : *Cryosurgery of cervical benign lesions*

Key words : *cryosurgical treatment, benign cervical lesions*

The glandular erosion, true erosion or erosio vera and cervical intraepithelial neoplasia (CIN) usually manifested as abnormal vaginal discharge and contact bleeding. Local treatment by electric cautery and cervical conization required an adequate anaesthesia and perhaps hospitalization. In contrast, by cryosurgery these lesion could be treated as an out patient. The aim of this study was to basis our experience in the cryosurgical treatment for these lesions described.

Materials and Methods

The nitrous oxide cryosurgical apparatus of Spembly company with

the cryoprobe number 6 F diameter 2.0 cms was used in this study. The patients were ended into 3 groups. Group I, glandular erosion and erosio vera, group II, patients with abnormal Papanicolaou smear and normal colposcopic biopsy, group III, patients who had abnormal colposcopic examination either endocervical curettage or colposcopic biopsy showed CIN. The first group were treated by single freezing 3 minutes. Group 2 and 3 had double freezing (3 minutes freezing with 1 minute pause.)

The immediate postcryosurgical pelvic pain and late effects of increasing abnormal vaginal discharge or haemorrhage were recorded. Ampicillin or urfamycin was given as a prophylaxis following the procedure and sexual intercourse was prohibited for 3 months.

Patients were instructed to return to our clinic visit at 1.5, 3.0, 6.0 and 12.0 months. The Papanicolaou smear and colposcopy were indicated for group II and III patients. Abnormal Papanicolaou smear or colposcopy after 3-month visit would be called failure of treatment, as well as a persisting glandular erosion in spite of negative Papanicolaou smear or colposcopy. Cold knife conization, laser conization or loop electrocoauglation excision procedure would be used as a definitive treatment.

Results

From January 1992-December 1993, 96 patients were included in the study (Table 1). Group I patients (age range of 26-48 years) had glandular erosion, (n = 19) and erosio vera, (n = 12 cases). 20 cases had lesion size less than 2 cms, 8 cases had lesion size 2.0-2.5 cms and 3 cases > 2.5

Table 1

Patients characteristics	Number of cases	Initial success	Failure
Group I			
Glandular erosion	19	30/31 (96.77%)	1/31 (3.22%)
Erosio vera	12		
Group II			
Papanicolaou smear positive CIN II-III, Colposcopic biopsy and, endocervical curettage negative	37	32/37 (86.48%)	5/37 (13.5%)
Group III			
Colposcopic biopsy or curettage positive CIN-I	5	5/5 (100.0%)	0
CIN-II	12	11/12 (91.66%)	1/12 (8.33%)
CIN-III	11	8/11 (72.72%)	3/11 (27.27%)

cms. Patients returned to visit our colposcopy clinic after 3 months and found to have 1 persistent cervical erosion, (1/31 = 3.2%). This case had lesion size greater than 2.5 cms in diameter.

Thirty seven patients (age range of 18-50 years) had abnormal Papanicolaou smear (Group II) underwent cryosurgery with double freezing method. 5 of 37 cases (13.5%) had persistent abnormal smears and underwent diagnostic conization later. The pathologic results showed CIN II-III. Two of these had neoplastic change in the endocervical canal.

Twenty eight cases were in Group 3 (age range 20-40 years). Five had CIN I, 12 had CIN II and 11 had CIN III. After cryosurgery, 4 patients had persistent cervical neoplasia, CIN II-III diagnosed by cervical conization, (4/28 = 14.28%). The patient who preliminary CIN III had high risk for failure after cryosurgery (3/11 = 27%)

Forty cases had immediate pelvic pain during cryosurgical procedure (41%), serous bloody discharge was very common and lasted 1-2 weeks.

Discussion

The failure of cryosurgical treatment occured only in one case of group I and had lesion diameter greater than 2.5 cms. This might be explained by inadequate destruction because the freezed area by cryoprobe number 6F had the lateral spread only 0.6 cms from our observasion, and 0.62 cms by other,[1] which required repeated freezing after 3.0 months. The failure in this study occured 3.22%, whereas the other series had 5.0-15.0% failure rate.[2-4]

The group II patients had persistent symptoms after cryosurgery. The failure rate was 13.5%, and all had CIN II-III after conization. This outcome reflected our colposcopy inaccuracy.

The patients in group III had failure rate of 8.33% in CIN II, and 27.27% in CIN III respectively. Other series had failure rate for CIN I, II and III of 6.0-11.0%,[5-6] 7.0-24.2%,[6-8] and 7.0-39.0%[1,4,6,8-15] respectively

The cause of failure may be attributed to neoplastic change extending into endocervical canal (5/9 = 55.5%). Obviously, the flat cryoprobe number 6F was incapable of eradicating all CIN in the endocervical glandular clefts. For these reasons we would advocated the use of cryotherapy for CIN I or II after a well performed colposcopic evaluation. Those who had CIN III should undergo the other alternative ablative procedure.

Conclusion

The cryosurgery was an adequate treatment for benign cervical lesion and CIN I-II. This procedure was convenient, low cost and safely

performed in the office setting.

References

1. Ferris DG. Lethal tissue temperature during cervical cryotherapy with small flat cryoprobe. J of Fam Pract 1994;38 (2):153-156.
2. Fidler HK, Boyes DA, and Worth AJ. Cervical cancer detection in British Columbia. A progress report. J Obstet Gynecol Br Com 1968;75-392-404.
3. Creasman WT, Rutedge F. Carcinoma in-situ of the cervix. Obstet Gynecol 1972; 39:373-380.
4. Senapad S, Neungton S, and Usavaj-indawath C. Cryosurgery in management of benign lesion of the cervix. Thai Cancer J 1981;7:143-146.
5. Coney P, Walton LA, Edelman DA, and Fowler WE Jr. Cryosurgical treatment of early cervical intraepithelial neoplasia. Obstet Gynecol 1983;62(4):463-466.
6. Crum CP, and Taylor PT. Intraepithelial squamous lesions of the cervix. In: Knapp RC, Berkowitz RS, eds. Gynecol Oncol : McGraw-Hill Inc, 1993;179-191.
7. Andersen ES, and Husth M. Cryosurgery for cervical intraepithelial neoplasia : 10-years follow-up. Gynecol Oncol 1992;45 (3):240-242.
8. Walton LA, Edelman DA, Fowler WC Jr., and Photopules GJ. Cryosurgery for the treatment of cervical intraepithelial neoplasia during the reproductive years. Obstet Gynecol 1980;55(3):353-357.
9. Einerth Y. Cryosurgical treatment of CIN I-III. A long-term study. Acta Obstet Gynecol 1988;67(7):627-630.
10. Hatch KD, Shingleton HM, Austin JM Jr, Soong SJ, and Bradley DH. Cryosurgery of cervical intraepithelial neoplasia. Obstet Gynecol 1981;57(6): 692-698.
11. Hopp A, Hopp H, Heinrich J, and Buchholz A. Cryosurgical treatment of cervical intraepithelial neoplasia following cervical smears and curettage. Zentralb fur Gynakol 1986;108(11):659-664.
12. Javaheri G, Balin M, and Meltzer RM. Role of cryosurgery in the treatment of intraepithelial neoplasia of the uterine cervix. Obstet Gynecol 1981;58(1):83-87.
13. Ostergard DR. Cryosurgical treatment of cervical intraepithelial neoplasia. Obstet Gynecol 1980;56(2):231-233.
14. Van Lent M, Trimbos JB, Heintz AP, and Van Hall EV. Cryosurgical treatment of cervical intraepithelial neoplasia. Gynecol Oncol 1983;16(2):240-245.
15. Wright VC, and Davies EM. The conservative management of cervical intraepithelial neoplasia : the use of cro-surgery and the carbon dioxide laser. Br J of Obstet Gynecol 1981;88(6):663-668.