

COMPARATIVE STUDY OF CRYOSURGERY AND ELECTROCAUTERY IN CERVICAL EROSION

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SUMMARY

A prospective case controlled comparative study of cryosurgery and electrocautery for treatment of cervical erosion has been carried out in 150 patients. It was found that cryosurgery was more effective in alleviating the symptoms faster. It was more complete in curing the lesion but more expensive than electrocautery. It was also found that actively managing cervical erosions by either cryosurgery or electrocautery was definitely better than not treating the erosion at all.

Introduction

During recent years the extent of distress and ill health caused by chronic infections of the cervix is well recognised. Amongst women attending Gynec. O.P.D., 50 to 60% have symptom of leucorrhoea and 30% have cervical erosion (Browne, 1955).

A cervical erosion persisting after eradication of infection tends to be treated by Gynaecologists by either cryosurgery or electrocautery. With an aim to evaluate the pros and cons of each of these systems and if possible to find out which one is superior, the present study was carried out.

Material and Methods

The present study is a case controlled prospective study carried out in the

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department of Obst. & Gynec., S.S.G. Hospital and Medical College, Baroda, from 1st April 1987 to 31st March, 1988. 150 consecutive cases of cervical erosion were selected. Trichomonal, fungal or any vaginal infections were treated. Malignant changes ruled out and in spite of this in those cases of cervical erosions, symptoms attributable to the erosion persisted were enrolled for the study. Detailed history and examination were carried out. Puerperial patients were not enrolled for the study.

These patients were divided into 3 groups, each of 50 as follows:

Gr. I—Treated by Cryosurgery.

Gr. II—Treated by Electrocautery.

Gr. III—Not treated at all serving as controls.

Cryosurgery was carried out with the help of N₂O at 500 lbs/inch-square pressure by standard method.

Electrocautery was carried out by cervical cautery by standard radial method.

After both procedures patients were

advised abstinence for 4 weeks and vaginal antiseptics.

All patients were followed up for 3 months.

The results were judged for their statistical significance by standard X^2 test, which at DF: 1 and 5% error, brought X^2 value at 3.84.

Results

All patients were between 20-39 years of age and all were married. The highest incidence of cervical erosion was found in para 3.

Of these 150 patients, 40% had the lesion on both the lips and 30% had circumferential, 18% had it only on posterior lip and 12% only on anterior lip.

As shown in Table I, 132 cases (88%) had leucorrhoea, 117 (78%) had backache and nearly 96 (64%) had lower abdominal pain, besides other complaints.

Table II compares the effectivity of cryosurgery and electrocautery in alleviating the symptoms of patients. Leucorrhoea was nearly equally relieved by both but remained poorly relieved in controls. However backache was more

TABLE I
Symptomatology
(Before Treatment)

Symptom	Cases	%
Leucorrhoea	132	88.00
Backache	117	78.00
Lower abdominal pain	96	64.00
Debility and weakness	82	54.60
Dyspareunia	61	40.66
Dysmenorrhoea	56	37.33
Irregular periods	44	29.30
Urinary symptom	38	25.30
Contact bleeding	09	06.00

significantly relieved by cryosurgery ($X^2 = 4.83$). None of the controls was relieved of backache.

Relief from lower abdominal pain by cryosurgery or electrocautery was not statistically significant ($X^2 = 1.2\%$). However in the control group (that is when not treated by any method) the relief was only in 7.4% as compare to around 50% when treated. Feeling of generalised weakness and debility was relieved in more than double the number of patients by cryosurgery than by electrocautery (52% vis-a-vis 25%). Even in dyspareunia, there was a relief observed

TABLE II
Comparative Evaluation of Different Management Techniques in Symptoms

Symptom	Gr. I Cryosurgery			Gr. II Electrocautery			Gr. III Control cases		
	a	b	c	a	b	c	a	b	c
Leucorrhoea	44	34	77.27	48	37	77.08	40	05	12.5
Backache	37	22	59.46	43	15	34.87	37	00	00.00
Lower Abdominal Pain	32	19	59.38	37	17	45.95	27	02	7.41
Debility and Weakness	25	13	52.00	36	09	25.00	21	04	4.76
Dyspareunia	25	15	60.00	21	06	28.57	15	01	6.65
Dysmenorrhoea	20	12	60.00	22	10	45.45	14	00	00.00
Irregular periods	15	09	60.00	14	07	50.00	15	02	11.13
Urinary symptoms	15	10	66.67	06	03	50.00	17	01	5.8
Contact bleeding	00	00	00	06	03	50.00	03	00	00.00

Abbreviations:

a — Number of cases having symptoms. b — Number of cases relieved from symptoms. —c Percentage of cases relieved from symptoms.

in 60% of patients treated by cryosurgery as compared to 28.57% when treated by electrocautery. The difference being statistically significant ($X^2 = 4.45$).

As shown in Table III, at 12 weeks, in 90.9% patients, the lesion healed when treated by cryosurgery whereas the same was only 77.08% when treated by electrocautery and 12.5% in control group.

TABLE III
Time Taken for Healing

Duration	Gr. I Cryo- surgery %	Gr. II Electro- cautery %	Gr. III Control %
4 Weeks	04.55	06.25	02.5
8 Weeks	22.73	20.83	05.0
12 Weeks	90.90	77.08	12.5

As shown in Table IV, hot sensation was felt by 32% of patients when treated by electrocautery as compared to 12% by cryosurgery. However in cryosurgery the sensation of giddiness was felt in 8% of patients, whereas none of those treated by electrocautery felt it. Around 80% of patients had vaginal discharge by both procedures which started within 24 hours and lasted longer with cryosurgery than electrocautery.

Both procedures can be used in out patient department which allows the use of hospital beds for other major procedures. However a little drawback of both procedures is abstinence which may be cumbersome for the patients.

Discussion

Traditionally, cervical erosions invite treatment plan ranging from hysterectomy on one side to no treatment at all on the other. In the present study of 150 cases, in which 50 cases were treated by cryosurgery, 50 by electrocautery and 50 by no treatment at all, we found that cryosurgery has an advantage over electrocautery as regards the clinical outcome, symptoms like backache, lower abdominal pain, debility and weakness and dysmenorrhea get better relieved by cryosurgery. This is in concurrence of finding of Fergusson (1974), Shai (1985). Also the lesion tends to heal faster and more completely when treated by cryosurgery. Similar reports have come from other workers also (Ostegard, 1968; Jackson, 1972; Gupta, 1984; Shai, 1985).

The complications by electrocautery were slightly more than that with cryosurgery, hot sensation being the commonest in the former and giddiness in the latter.

TABLE IV
Complications

Complication	Gr. I (Cryosurgery)		Gr. II (Electrocautery)	
	No. of cases	%	No. of cases	%
Hot sensation	6	12.00	16	32
Giddiness	4	8.00	00	00
Lower abdominal pain	2	4.00	06	12
Secondary Haemorrhage	1	2.00	00	00
Cervical stenosis	0	0.00	00	00

Amiram Baram (1985) suggested that cryosurgery treats the cervical factor in patients with infertility. In the present study there were two infertile patients who conceived after subjecting to cryosurgery. However this number is too small to prove or refute this claim.

One more point which distinctly comes out in the present series is that the concept of no treatment at all in patients of cervical erosion needs second thought. After eliminating infections and malignancy, it is imperative to treat cervical erosion which are symptomatic as clearly brought out in the present study.

Conclusion

The present case controlled prospective study clearly brings out the facts that all symptomatic cervical erosion required to be treated actively. Also amongst currently employed methods of treatment, cryosurgery is easy, safe, less

apainful, of-course with its limitations of cost and maintenance of equipment.

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