

Comparative analysis of cryotherapy and electrocautery in treatment of cervical erosion

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Abstract

Background: Cervical erosion is one of the commonly observed finding in women of reproductive age group. cervical erosion is treated with different modalities like electrocautery, cryotherapy, simple treatment with antibiotics and application of chemicals. In this study electrocautery and cryotherapy were compared. **Aim and Objective:** To study the comparative analysis of electrocautery and cryotherapy in cervical erosion **Methodology:** 100 patients with cervical erosion were studied in two groups. Group A (50 patients) received electrocautery and Group B (50 patients) received cryotherapy. Both groups were compared for intra operative ,immediatepost operative and follow up complications.

Key Words: cryotherapy and electrocautery.

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INTRODUCTION

Vaginal discharge is one of the most common complaint in gynaecology outpatient department. Cervical erosion is histologically defined as the replacement of squamous epithelium of some part of vagina by columnar epithelium beyond external os. Studies have proved that there is an association between cervical erosion and chlamydial trachomatis, HPV and immunodeficiencyvirus.^{1,2} There is also an association between ectopy and CIN as precancerous lesions and is vulnerable to oncogenic effects of carcinogens and can be treated.^{3,4} Cryosurgery is the application of cold to destroy abnormal or diseased tissue. Cryosurgery was introduced to gynaecology in the late 1960s to treat

cervical intraepithelial neoplasia and it is proven to be a reliable treatment modality, with limited side effects and morbidity. The method is used to treat cervical, vaginal, endometrial and vulvar lesions. During thawing, ice melts, the extracellular environment rapidly becomes hypotonic allowing water to enter within the damaged cells, causing cell membrane disruption. Cells shrink and membranes and cellular components are damaged. Electrocautery is transfer of energy by heat, such as hot wire, electrons do not move into the affected tissue only heat is transferred and temperature ranges between 45 to more than 500 degree centigrade.⁵ It is minimally invasive, out-patient procedure. with High cure rate but not effective in larger lesions. Electrocautery is effective but causes damage to surrounding tissue. Very few studies are available to compare these two methods so this study was conducted to compare electrocautery and cryotherapy for cervical erosion.

MATERIAL AND METHODS

This was a prospective study carried out in 100 patients attending OBG outpatient department of a tertiary care centre for cervical erosion. Patient were allocated in two groups. Group A patients underwent electrocautery and Group B underwent cryotherapy. 50 patients were randomly allocated in each group.

Inclusion Criteria

1. Female of reproductive age group
2. Only inflammatory changes in pap smear
3. Willing for follow up

Exclusion Criteria:

1. Pap smear with premalignant or malignant changes
2. Pregnant women
3. Patients with abnormal cytology
4. Large lesions.

Study was approved by ethical committee of institute. A written valid consent was taken from patients after explaining the study and procedures. At first visit pelvic examination was done, Pap smear taken and single course of antibiotics was given to both the groups. Data was collected with pre tested questionnaire. Data includes Name, age, socio-economic status, organic diseases, detailed obstetrics and menstrual history. Previous history and treatment of white discharge was taken and Perspeculumand Pervaginal examination was done. All patients were treated on outpatient basis in minor OT. Caution was done 2-3 days after cessation of menstruation. Pressure in the tank kept was 40 kg/cm² for cryocautery and time for freezing was 3 minutes. Electrocautery was done at medium current. Patients were followed up 3-4 days after cessation of menstruation at 4-6 weeks and 12-14 weeks. Both the groups were analysed with respect to intraoperative, immediate post operative and follow up complications. Data was analysed using appropriate statistical tests.

RESULTS

Patients were treated by two methods electrocautery and cryotherapy. Group A received electrocautery and group B was treated by cryotherapy. Mean age of the patients in group A was 34.36±2.41 years with range from 28-40 years. Mean age in group B was 33.27±3.1 years with age ranging from 27-38 years. Mean parity in group A was 2.5 with range from 2-5 while in group B mean parity was 2.8 with range of 2-6. Table 1 shows symptoms with which patients presented to the gynaecologist. Majority of the patients presented with vaginal discharge (group A 16 and group B 9). Pelvic pain was a complaint in 5 patients in group A and 4 patients in group B. Menstrual complaints included dysmenorrhoea, irregular menses, postcoital and intermenstrual spotting and oligomenorrhoea. They were 4 in group A and 2 in group B. multiple complaints means patients presented with more than one from above complaints. Most common complaint intra operative is discomfort. 7 patients of group A experienced discomfort while 4 patients of group B experienced discomfort. Backache was experienced by one patient of cryotherapy group and one patient of

electrocautery group experienced bleeding. Both groups were compared by T test, p value >0.05 so the difference is not statistically significant. Most common immediate postoperative complaint was pelvic pain. Three Cryotherapy patients experienced pelvic pain. Two electrocautery patients experienced discomfort and one patient experienced bleeding after procedure. Table 4 shows comparison of patients of both the groups according to symptoms after 4 weeks. Erosion was most common complaint among cryotherapy group (14 patients). Erosion was seen in five patients of group A. Intermenstrual bleeding was observed in two patients of electrocautery group. Backache was observed in electrocautery group. Watery discharge was observed in 4 patients of cryotherapy. This difference in post operative complication was statistically not significant (p>0.05).

Table 1: Comparison of patients of Group A and Group B according to symptoms before treatment

Sr no	Symptoms	Group A	Group B
1	Backache	01	02
2	Burning micturition	01	02
3	Vaginal Discharge	16	09
4	Dyspaurenia	03	03
5	Menstrual complaints	04	02
6	Pelvic pain	05	04
7	Multiple complaints	20	28

Table 2: Comparison of patients of Group A and Group B according to intra operative complaints

Sr no	Intraoperative complaints	Group A	Group B
1	Backache	00	01
2	Bleeding	01	00
3	Apprehension/discomfort	07	04
4	Pelvic pain	05	04

Table 3: Comparison of patients of Group A and Group B according to immediate postoperative complaints

Sr no	Immediate post op complaints	Group A	Group B
1	Backache	00	00
2	Bleeding	00	01
3	Apprehension/discomfort	02	00
4	Pelvic pain	00	03

Table 4: Comparison of patients of Group A and Group B according to symptoms after 4 weeks

Sr no	Symptom after 4 weeks	Group A	Group B
1	Backache	03	00
2	Burning micturition	00	00
3	Discharge	00	04
4	Erosion	05	14
5	Intermenstrual spotting	02	00
6	Pelvic pain	00	01

DISCUSSION

Group A and group B were comparable according to age and parity. Mean age of the patients in group A was 34.36 ± 2.41 years. Mean age in group B was 33.27 ± 3.1 years. Mean parity in group A was 2.5 while in group B mean parity was 2.8. Similarly groups were comparable in Monica Jindal *et al*⁶ and Shiraj Katakdhond *et al*⁷ where The largest number of patients belonged to age group between 26-30 years followed by 31- 35 years. Majority of the patients presented with vaginal discharge followed by pelvic pain. Similar results were seen in Shiraj Katakdhond *et al*⁷ where Abnormal vaginal discharge was the commonest complaint. Followed by pelvic or abdominal discomfort. Most common complaint intra operative is discomfort. 7 patients of group A experienced discomfort while 4 patients of group B experienced discomfort. that is similar to Chia Koo Lee *et al*⁸. Bleeding was seen in one patient treated with electrocautery that was controlled with vaginal packing. Difference of intraoperative complaints was not statistically significant. Similar results were observed in Monica Jindal *et al*⁶ Most common immediate postoperative complaint was pelvic pain. Three Cryotherapy patients experienced pelvic pain. Two electrocautery patients experienced discomfort and one patient experienced bleeding after cryo procedure. Erosion was most common complaint among cryotherapy group (14 patients). Backache was observed in electrocautery group. Watery discharge was observed in 4 patients of cryotherapy. Similarly Matanyi S observed in 1248 cervical cryosurgeries that side effects (hypogastric discomfort, vascular reactions) were negligible; profuse vaginal discharge was present following the treatment.⁹ This difference in postoperative complication was statistically not significant ($p > 0.05$).

CONCLUSION

Though in short term follow up electrocautery seems to be better than cryocautery. But if seen in long term follow up both are equally good.

REFERENCES

1. Machado Junior LC, Whitaker Dalmaso AS, De Carvalho HB; Evidence for benefits from treating cervical ectopy; literature review *saopulo med j* 2008;126:132-9.
2. Simms, Doltomak D, The cytologic progression from benign to malignant changes in cervical erosion; *gynec* 1966; 162(1); 48-56.
3. Sarkar PK, Steel PRM; routine colposcopy prior to treatment of cervical ectopy; is it worthwhile?. *Journal Obs gyn*, 1996;16:96-7
4. Dinshaw KA, Shastri SS ; Screening for cervical cancer in India *NaH Med J India*, 2001;14(1):1-3.
5. John A. Rock. Principles of gynecologic surgical techniques and management of endoscopy. Principles of electrosurgery as applied to gynecology. In: John A. Rock, Howard W. Jones III, eds. *TeLinde's Operative Gynecology*. 10th ed. Philadelphia: Wolters Kluwer/Lippincott Williams and Wilkins; 2008: 280-297.
6. Monika Jindal, Satwant Kaur, Sakshi Sharma, Kumud Bala Gupta, Poonam Pandotra, Bhavna . What is better: cryocautery or electrocautery for cervical erosion? *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* Jindal M *et al*. *Int J Reprod Contracept Obstet Gynecol*. 2014 Sep; 3(3):715-719.
7. Shiraj Katakdhond, Padmaja Samant. Cryotherapy for cervical lesions: efficacy and patient satisfaction. *International Journal of Reproduction, Contraception, Obstetrics and Gynecology* Katakdhond S *et al*. *Int J Reprod Contracept Obstet Gynecol*. 2017 Jun; 6(6):2331-2336
8. Lee CK. Comparative and electro-cauterization in treatment of cervical erosion *J Med Sci*. 1977;2(2):519-34
9. Matányi S. Side effects and complications of cervical cryotherapy. *Acta Chir Hung*. 1992-1993; 33(12):157-62.

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