

Clinical observation of electrocauterization alone and post-electrocauterization MEBO application therapy in the treatment of cervical erosion

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Date Submitted: 31/3/2015

Date Accepted: 31/5/2015

Abstract

Background and Objectives: MEBO is a Chinese burn ointment has been introduced recently for local management of burn injuries with a USA patented formulation since 1995. In this study we try to prove that MEBO is more effective if applied vaginally after electrocautery than electrocautery alone in treating cervical erosion.

Method: This study performed from 1st of May 2013 to the end of April 2014 in private clinic in Baghdad, a clinical comparative study was done on 100 patients who had cervical erosion (by clinical examination), group 1 (50 patients) were treated with electrocautery once time alone. group 2 treated with electrocautery once time followed by MEBO application vaginally once daily for 20 days, all patients in both groups seen weekly to assess the start and completion of healing of erosion and any sign of infection and improvement of any symptom especially vaginal discharge.

Results: The mean time required for start and completion of healing was significantly shorter for group 2 (1.5 ± 0.5) weeks, (2.2 ± 0.6) weeks, respectively than group 1 which was (3.5 ± 1.0) weeks, (4.2 ± 1.0) respectively and it was statistically significant (P value less 0.001). More patients in group 2 had decreased vaginal discharge (44) than group 1 (33) and it was statistically significant difference. Also the incidence of vaginal infection was less in group 2 (6%) than group 1 (24%), it was significant statistical difference. More patients in group 2 healed completely (45) than group 1 (38) but the difference was statistically not significant.

Conclusion: MEBO is very efficacious in treating cervical erosion and is superior to electrocautery alone.

Key words: Cervical erosion, MEBO, electrocautery.

INTRODUCTION

Cervical erosion is the replacement of squamous epithelium that covers the vaginal wall and ectocervix by columnar epithelium that covers the cervical canal, i.e. the endocervix. This condition has many terminations like cervical ectropion.^(1,2,3)

The pathogenesis involve many factors but all of them has a relation with high level of estrogen. It is more in women of reproductive age group, rare in menopausal women. Also it is more common in pregnancy due to high level of estrogen and users of oral contraceptive pill

containing estrogen.⁽¹⁾ It is a common gynaecological condition and it is seen in about 85% of women. In spite of the benign nature of this condition, it constitute a troublesome problem due to its chronic nature and high percentage of recurrence. Although it is not fatal but associated with many genitourinary symptoms and psychological upset. It is associated with vaginal discharge, backache, dyspareunia, abnormal vaginal bleeding especially intermenstrual, dysuria, frequency, urgency.^(4,5) Many researches had been found that cervical erosion can be treated with an ointment called MEBO.⁽⁶⁾

MEBO is a chinese herbel ointment that first discovered and used by chinese. It is newly used for treatment of burns with a USA patented formulation since 1995. It consists of a B-sitosterol in a base of beeswax, sesame oil and others. (7,8,9) It ensures the needed moist environment for optimal healing and re-epithelialization without the need of dressings. (7,8) MEBO produces faster wound healing, less pain with good analgesic effect, no side effects and toxicity, and on the long term, low scar rate and disability. (10)

The goal of our study is to prove, whether MEBO can induces a fast and rapid healing after electrocauterization accompanied by a low hazard of infection and decreased vaginal discharge than electrocauterization alone in treatment of cervical erosion.

MATERIAL AND METHOD

This study was conducted in private clinic from the period first may 2013 to the first may 2014. A total of 100 women with different age group were enrolled in this study and on examination was diagnosed as a case of cervical erosion. They have different complaint but most of them have troublesome vaginal discharge (about 99%). Age, parity, chief complaint and duration, menstrual, obstetrical and gynaecological history were taken from all patients. detailed general, systemic and gynaecological examinations were done. patients having systemic diseases like diabetes mellitus ,tuberculosis, any other organic pathology of the uterus and adenxia e.g benign or malignant growth, and second or third degree prolapse of the uterus were excluded from the study. In the first visit few investigations were done like hemoglobin, fasting blood sugar, complete blood film, general urine examination, and vaginal swab for culture. If the patient have normal investigations and had noOther pathology then only these cases selected for the study. Pap smear was done to every patient and any case with suspesion of premalignant disease of the cervix were excluded from this study.

On the basis of treatment these cases were divided into:
Group A: 50 patients treated with electrocautery alone.

Group B: 50 patients treated with MEBO application after electrocautery of the cervix.

All patients in group A and B were examined in lithotomy position with cusco's speculum and cervix cleaned properly . Those women in group A were treated with electrocautery alone once time while patients in group B treated with electrocautery at first also once time followed by MEBO (Julphar-Gulf Pharmaceutical Industries) application to the cauterized area. We placed the client on the lithotomy position. Speculum Inserted,

gently the cervical wound wiped .We sent the MEBO cotton ball or piece with long forceps or long hemostatic forceps. After that all patients instructed to apply MEBO once daily for 20 days at home by special applicator supplied from our private clinic. Both groups were given systemic antibiotics(ciprofloxacin capsule 400mg once daily and metronidazole tablets 500mg three times daily) for 5 day post-cauterization. All patients adviced that during menstrual period the application of the ointment should be stopped. When the ointment is applied, vaginal douching and sexual intercourse should be forbidden.

All these cases were reviewed regularly at weekly interval to assess the time of start and completion of re-epithelization, presence or absence of infection, change in specific symptoms specially vaginal discharge, percentage of healing were noted and reported.

Statistical Analysis:

Each pregnant patient assigned a serial identification number. The data were analyzed using Statistical Package for Social Sciences (SPSS) version 20. Shapiro-Wilk test was used to assess the normality of distribution of the continuous data. The continuous variables were presented as mean, standard deviation, median and interquartile range.

The categorical variables were presented by (frequency and percentages in tables). Pearson's Chi-square test was used to assess statistical association between categorical data. Independent student t and Mann-Whitney U tests were used to assess the difference between the continuous variables depending on its normality of distribution. A level of P- value less than 0.05 was significant.

RESULTS

Table 1: Shows the demographic characteristic of both groups. As shown there is no significant difference statistically between the two groups regarding age ,parity, n=100.

Table 1: Shows the demographic characteristic of both groups.

Character	Group A	Group B	p-value
Age (Years) Mean ± Standard dev.	25.3 ± 4.7	23.9 ± 3.5	0.094 (NS)
Parity Median (Inter-quartile range)	1 (0 – 3)	1 (0 – 2)	0.06 (NS)

Independent t-test, Mann-Whitney U test, NS= not significant at alpha < 0.05

Table 2: Comparison between the study groups concerning the period of starting and completion of

healing. As shown the time required for group (1) to start healing was (3.5 ± 1.0)weeks while the time to start healing in group (2)was shorter(1.5 ± 0.5)weeks, the difference was statistically significant(P value less than0.001).Also the time required for group (1) for complete healing was (4.2 ± 1.0)weeks while the time for complete healing in group (2)was also shorter (2.2 ± 0.6)weeks, the difference was statistically significant(P value less than 0.001) , n=100.

Table 2: Comparison between the study groups concerning the period of starting and completion of healing.

Period of healing (Days)	Group A (n=50) Mean ± Stand. dev.	Group B (n=50) Mean ± Stand. dev.	p-value
Initiation of healing	3.5 ± 1.0	1.5 ± 0.5	<0.001*
Completion of healing	4.2 ± 1.0	2.2 ± 0.6	<0.001*

Independent t-test, * significant at alpha < 0.05

Table 3: Shows changes in vaginal discharge in both groups. As shown the number of cases in group(1) with increase in discharge was(17)cases while in group(2) was(6) and the number of cases in group(1) with decrease in discharge was(33)cases while in group(2) was(44) and the difference was statistically significant,(P value =0.009), n=100.

Table 3: Shows changes in vaginal discharge in both groups.

Vaginal discharge	Group A Number (%)	Group B Number (%)	Total Number (%)
Increase	17 (34)	6 (12)	23 (23)
Decrease	33 (66)	44 (88)	77 (77)
Total	50 (100)	50 (100)	100 (100)

Pearson's chi-square= 6.832 p-value= 0.009 (Significant at alpha < 0.05)

Table 4: Shows the incidence of vaginal infection among the patients in both groups. As shown the number of cases with vaginal infection was (12) cases in group1 while it was (3) cases in group2.The difference was statistically significant, n=100.

Table 4: Shows the incidence of vaginal infection among the patients in both groups.

Infection	Group A Number (%)	Group B Number (%)	Total Number (%)
Yes	12 (24)	3 (6)	15 (15)
No	38 (76)	47 (94)	85 (85)
Total	50 (100)	50 (100)	100 (100)

Pearson's Chi-square= 5.952 p-value= 0.015 (Significant at alpha <0.05)

Table 5:Shows healing rate of cervical erosion in both groups.As shown from the table that number of cases in group B with complete and partial healing were 45 , 5 patients respectively while in group A was 38, 12 patients respectively and both were statistically not significant ,n=100.

Table 5:Show healing rate of cervical erosion in both groups.

Change in cervical erosion	Group A Number (%)	Group B Number (%)	Total Number (%)
Complete healing	38 (76)	45 (90)	83 (83)
Partial or no healing	12 (24)	5 (10)	17 (17)
Total	50 (100)	50 (100)	100 (100)

Pearson's Chi-square= 3.473 p-value= 0.062 (Not significant at alpha <0.05)

DISCUSSION

In the current study, the rate of initiation and completion of healing was markedly faster in group 2 compared to that of group1(P value less than 0.001). MEBO had been found to prepare a suitable environment for regeneration.⁽¹⁰⁾Treatment with MEBO lead to liquification and removal of necrotic tissue and cervical erosion healing without further damage.The abundant natural nutritional ingredients that MEBO contain, supply important materials to the dividing cells, stem cells activation, division, and differentiation.⁽⁶⁾ Our study agree with XIEiao-lin et al 2012,who found that MEBO can significantly shorten the healing time of cervical erosion but he used it after microtherapy.⁽¹¹⁾ As shown from the study that the incidence of vaginal discharge was significantly reduced in group2(12%) compared to group 1(34%),P value =0.009.this may due to decreased incidence of vaginal infection in group2, and because of the oily contents of MEBO that prevent invasion of microbes in a watery environment.⁽¹²⁾ In this study, it was found that in group2, the incidence of infection was significantly reduced compared to that in group1, indicating that MEBO is efficient in preventing infection. By enhancing the resistance of tissue to infection and changing the characteristic and decreasing the toxicity and invasion of bacteria. ⁽¹⁰⁾ MEBO provides environment that is impermeable to bacterial invasion, it inhibit bacterial reproduction and invasion and virulence.⁽⁶⁾

From the results we found that there were patients failed to heal in bothgroups.This may be because these patients did not follow the instruction of the doctor properly, did not pay attention to their menstrual hygiene, did not apply MEBO in a proper way(donot use

the applicator because of vaginal discomfort) and may be because of small sample taken in the study.

Conclusion:

1. In addition to its simplicity and safety, application of MEBO significantly promotes the healing of cervical erosion as early as two weeks following initiation of treatment and has the advantage of decreasing vaginal discharge and incidence of vaginal infection.

2. All patients treated with MEBO recovered with smooth cervix. No scar and no side effect.

3. MEBO is very efficacious in treating cervical erosion with electrocautery and is superior to electrocautery alone.

Recommendation:

Further studies are suggested to study the effect of MEBO alone on cervical erosion and after other types of cauterization.

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