

Management of Cervical Erosion

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ABSTRACT : Cervical erosion, a benign lesion is sometimes much troublesome due to its chronicity and nature of recurrence. It is the replacement of the stratified squamous epithelium of the portio-vaginalis by the columnar epithelium of endocervix. Considering the feature of cervical erosion, it can be correlated with Garbhashayagrivagata Vrana. The treatment is designed to destruct overgrowth columnar epithelium either by chemical substances or cryosurgery or electric cautery. In Ayurvedic classics for destruction of any such lesion kshara is prescribed. Keeping these points in view, the present work a clinical comparative study has been made to assess the effect of Snuhi Kshara cauterization and electric cautery cauterization in cervical erosion cases. The Kshara and Electric cautery were applied locally on eroded cervix and results were assessed on the basis of epithelization of erosion and improvement in symptoms. The study reveals that Snuhi Kshara (*Euphorbia neriefolia*) cauterization showed better results than electric cautery cauterization.

Key words : Cervical Erosion, Snuhi Kshara, cauterization, *Euphorbia neriefolia*, Electric cautery.

INTRODUCTION

Cervical erosion is one of the commonest gynaecological condition seen in OPDs. About 85% women suffer from the cervical erosion i.e. benign condition of female genital tract during their lifetime. Though it is not a fatal one, yet the long term association with the disease and a number of symptoms both related to genitourinary system as well as psychological imbalance in the patient, needs attention.

While going through the Ayurvedic literature it becomes evident that all the gynaecological disorders are included in Yoniroga and Streeroga. Direct reference regarding the cervical erosion can not be traced in Ayurvedic Classics. However, considering the pathology and main symptoms of Cervical erosion that is discharge and erosion, it can be correlated with Garbhashayagrivagata Vrana. This can be supported by the term "Yonivranekshana Yantra" (Ashtanga Sangraha Su. 34/12) and Prajanana Vrana (Su. Su. 23/5). Considering the features of Cervical erosion, it can be stated that it is usually Nija/Agantuja, Kapha-Pittaja, Twaka-Mamsaja type of Vrana which occurs at Griva of Garbhashaya.

Cervical erosion may be a cause of many gynaecological symptoms like as vaginal discharge, backache, dyspareunia, intermenstrual bleeding and bladder irritability, etc. It can show malignant changes in chronic stage. It is also a cause of sterility and constitutional ill health and sometimes it produces great psychological upsets in women.

So treatment must be started as soon as the diagnosis of erosion is confirmed. The aim of treatment is to destruct the over grown columnar epithelium by use of local chemical, electrical or diathermy cauterization, cryosurgery or even excision of diseased area. After this destruction normal squamous epithelium from basal cell grows and heals the erosion. To enhance this process of epithelization use of certain enzymes, hormones, vitamins and antibiotic creams are prescribed. Ksharas are the substances, which act as caustic or corrosive agent for any growth when used externally. In Ayurvedic classics Kshara Karma is said to be superior to any other surgical or para surgical measures due to chhedana, bhedana, lekhana and patana karma instead of its saumya nature. It can be applied in a narrowest place.

Electrocautery is the process in which burning of diseased tissue is done by a red-hot electric cautery. In this process a platinum wire is maintained at the required red heat by an electric current and temperature ranging between 200 to 800°C. This heat causes local tissue destruction followed by sloughing of dead tissue. Once the slough is washed off, normal squamous epithelization takes place.

In present work a comparative study has been made to see the effect of electric cautery and Snuhi Kshara cauterization in cervical erosion. The stem of *Euphorbia neriefolia* (Snuhi) along with leaves were collected in October month, dried in shade, weighed and burnt and Kshara was prepared by the method described in Rasa Tarangini. The Snuhi Kshara was found strongly alkaline in reaction and hygroscopic. It was analyzed for identifying the inorganic acid and basic radicals and the pH of a water suspension. The results of this study were

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pH as 10.95, acidic radicals as CO_3^{--} and basic radicals as Ca^{++} , Mg^{++} , Na^+ , K^+ .

MATERIALS AND METHODS

Total 50 female patients of different age groups attending the O.P.D. of Prasuti Tantra, S.S. Hospital, B.H.U. Varanasi, with various complaints and on examination being diagnosed as cases of cervical erosion were subject of this study. Age, Parity, Chief complaint with duration in chronological orders, Menstrual and Obstetric history etc. were recorded and detailed general, systemic, and gynaecological examinations were done. Patients having systemic disease like Diabetes, Tuberculosis, any other organic pathology of uterus and adenaxa e.g. benign or malignant growth, 2nd or 3rd degree prolapse of uterus were excluded from the study.

In the first visit when patient was diagnosed as case of cervical erosion few investigations like blood for Hb gm%, T.L.C., D.L.C., E.S.R., G.B.P., Urine for routine and microscopic examinations, vaginal and cervical pH, vaginal cytology, vaginal swab culture, cervical punch biopsy were advised. If all investigations were normal and the patients had no other pathology then only these cases were selected for this study. Type of location of cervical erosion was diagnosed by visual examination of gross appearance and special measurement of cervical erosion was done. Cervix was measured at six to eight different angles with modified compass and measurements were marked on a graph paper having 100 divisions in one square inch and shape and size of cervix was drawn. Now the area covered with erosion was also measured and drawn on the graph over diagram of cervix. The squares of graph paper covered with cervix and erosion were counted separately and percent area of cervix covered with erosion was calculated by following formula.

No. of squares covered with erosion X 100

No. of squares covered with cervix

Erosion covering less than 20% area of cervix was labeled as [+], 21 to 40% as [++], 41 to 60% as [+++] and 61 to above as [++++]. On the basis of treatment these cases were divided in to two groups.

Group 1 : Electric cauterization + Udumbara ointment application.

Group 2 : Snuhi kshara cauterization + Udumbara ointment application

Patients were called for Kshara application on 2nd or 3rd day after clearance of menstrual flow. Patient was kept in lithotomy position and parts preparation was done with savlon solution. Cervix was exposed with cusco's speculum and cleaned properly. Snuhi kshara was applied over the erosion with the help of swab stick and kept in contact for two minutes. When cauterized area became dark violet in colour, then washed with luke warm plain water and Udumbara ointment was applied over the cauterized area of cervix. Next day again after cleaning the cervix, ointment was applied. For electric cautery pre preparation and post application process was same as Kshara application. Red-hot loop of cautery was applied in linear [radical] fashion on the eroded area. Cauterization starting from below the internal os down to the erosion bearing portio vaginalis. When cystic glands were present then these glands were puncture by the cautery tip and strokes were applied radially.

All these cases were called regularly at weekly interval to see the symptomatic improvement and initiation of healing in erosion. During each follow-up period of beginning of epithelization, change in specific symptoms, and associated symptoms were noted.

TABLE NO. 1 : INCIDENCE OF AGE, GRAVIDITY, PARITY, PERIOD OF BEGINNING AND COMPLETION OF EPITHELIZATION OF CERVICAL EROSION IN BOTH THE GROUPS :

Variables	Mean \pm SD and statistical values in different groups		
	Group-1 (Elect. Cau.) (n= 25)	Group-2 (Ksh. Cau.) (n= 25)	't' & 'p' value
Age in years	27.60 \pm 6.01	27.04 \pm 5.65.	t < 1, p> 0.05; NS
Gravidity (in numbers)	2.92 \pm 1.61	2.40 \pm 1.47	t < 1, p> 0.05; NS
Parity (in numbers)	2.48 \pm 1.76	2.84 \pm 2.23	t < 1, p> 0.05; NS
Period of beginning of epithelization (in weeks)	7.20 \pm 2.75	2.0 \pm 0.28	t = 9.39, p< 0.001 Highly Significant
Period of completion of epithelization (in weeks)	15.50 \pm 4.31	4.80 \pm 0.87	t = 11.03, p< 0.001 Highly Significant

NS : Non Significant

TABLE NO. 2 : CHANGE IN VAGINAL DISCHARGE IN CASES OF CERVICAL EROSION :

Vaginal Discharge	Total cases (n = 48)		Group 1 (n = 24)		Group 2 (n = 24)	
	No.	%	No.	%	No.	%
Initial increase	24	100.0	24	100.0	0	0.0
Unchanged	4	08.33	4	16.66	0	0.0
Partial relief	1	02.08	1	04.16	0	0.0
Complete relief	43	89.58	19	79.16	24	100.0

TABLE NO. 3 : RESULTS IN CASES OF CERVICAL EROSION :

Results	Total cases (n = 48)		Group 1 (n = 24)		Group 2 (n = 24)	
	No.	%	No.	%	No.	%
Cured	45	90.00	20	80.00	25	100
Improved	1	2.00	1	04.00	0	0.0
Unchanged	4	8.00	4	16.00	0	0.0

DISCUSSION

Cervical erosion was found maximum in active reproductive life of women i.e. 20-30 years in both the groups. Mean age was 27.60 years in group 1 and 27.04 years in group 2, which indicates that this disease is common problem of reproductive life. Further, none of the groups had significant difference in age distribution. Majority of the women were either multigravid or multiparous. Mean gravity and parity were 2.92 and 2.48 in group one respectively and 2.40 and 2.84 in group two respectively. Although gravidity and parity had more or less similar distribution between group 1 and 2. It is possible that repeated pregnancies or deliveries produce some local trauma and denude the infra-vaginal cervix from squamous epithelium and columnar epithelium grows over it, this produces erosion. It is evident that the incidence of nulligravidous was lowest in present study.

Out of total 96% cases had complained for vaginal discharge. It may be due to hyperplasia of cervical glands, which causes the excessive vaginal discharge.

After application of electric cauterization immediate change in colour of erosion as white was noticed due to the death of superficial cells changing them into slough. As soon as this slough was removed by washing the same, underlying vessels were directly exposed giving bright red appearance with some oozing of blood. After application of Snuhi Kshara the colour of erosion was changed to dark violet in colour due to vasoconstriction and death of superficial cells. None of the case of 2nd group needed second application of Kshara.

After cauterization, epithelization of erosion was started much earlier in group 2 in comparison to group 1, mean period of beginning of epithelization was 2.0 weeks in group 2 while it was 7.20 weeks in group 1, difference

was highly significant. Identical trend was noted in completion of epithelization of erosion. The period of complete epithelization in group 1 was considerably delayed as the mean period was 4.80 weeks in-group 2 while it was 15.50 weeks in group 1, the difference was highly significant. Corresponding to epithelization of the erosion the vaginal discharge was one of the most important symptoms also disappeared earlier in more number of cases in-group 2 than the group 1, the difference was highly significant. Initial increase in vaginal discharge was seen in all the cases of group one, which was not noticed in-group 2. It is just possible that after cauterization with electric cauterization there is ulceration and reactionary transitory hyperaemia, which might have stimulated the cervical glands, and then there was increased vaginal discharge. After Snuhi Kshara cauterization due to vasoconstriction of underlying vessels, naturally the question of hyperaemia even reactionary does not arise because blood can not flow in obliterated vessels. Hence no increased vaginal discharge was seen.

Results were assessed on the basis of epithelization of erosion. It was seen that all the cases were cured in group 2, while in group 1 only 80% cases had complete epithelization of erosion. In group 1 no trace of epithelization was seen in 16% cases.

Destruction of erosion with Snuhi Kshara showed much better results in comparison to electric cauterization. Present work corroborates the hypothesis lay down in Ayurveda thousands of years back that Kshara Karma gives better results, when it is used to be soft structure.

Electric cauterization causes local tissue destruction or coagulation followed by sloughing of dead tissue. Once the slough is washed off normal squamous epithelization takes place. Application of Snuhi Kshara causes vasoconstriction, death of superficial cells, shed off,

regeneration of underlying basal cells with growth of squamous epithelium. Use of Udumbara ointment probably prevented congestion or hyperaemia following fibrolysis or thrombolysis, thus prevented regeneration of superficial few columnar cells left over after destruction and helped in better epithelization.

CONCLUSION

Snuhi Kshara cauterization along with Udumbara ointment is safe, less painful, easy to apply, cheap, easily available and highly effective treatment for cervical erosion and most suitable for developing countries like India.

REFERENCES

1. Ashtanga Hridaya : Edited by Yadunandan Upadhyay, commentary Aridev Gupta, Chowkhambha Sanskrit Sansthan, Vidyavilas press Varanasi. Uttar Tantra 33/218, 27, Sutrasthana 30/3-7, 26, 31, 32, 33.
2. Ashtanga Sangraha of Vagbhatta, Text English translation, notes indices etc. Translated by Prof. K. R. Srikanta Murty, 3rd Edition, Chowkhambha orientalia, Varanasi, 2000.
3. Ashtanga Sangraha : Translated by Atridev Gupta, Published by Narayan Sagar press, Bombay, Uttar Tantra, 38/3,7,32,51.
4. Bhaishajya Ratnawali by Shri Govind Das, Chowkhambha Sanskrit Sansthana, Varanasi.
5. Bhav Prakash of Shri Bhava Mishra edited with the Vidyarthi, Hindi commentary, Chowkhambha Sanskrit Series.
6. Charak Samhita : Ayurveda Dipika Vyakhya by Chakrapani Dutt edited by Narendra Nath Shastri, Published by Motilal Banarsi Das Lahore, 1929.
7. Charak Samhita : Vidyotini Hindi commentary by Kashi Nath Shastri and Gorakh Nath Chaturvedi 18th edition. Published by Chowkhambha Bharti Academy.
8. Dawn's Text book of Gynaecology by C.S. Dawn, Published by Dawn books Calcutta, 1993.
9. Dewhurt's text book of obstetrics and Gynaecology for post graduate edited by D. Keither Edmonds.
10. Dravyaguna Vigyan by Prof. P.V. Sharma vol. II 1974, Published by Chowkhambha Vidya Bhawan, Varanasi, 1974.
11. Fluhamann C.F. : Histogenesis of acquired erosion of the cervix uteri, Am. J. Obstetrics and Gynaecology 82, 970, 1961.
12. Forsberg J.G., Morphogenesis and differentiation of the cervicovaginal epithelium in Jordan J. Singer A (eds). The cervix, Saunders, London Ch. 1, p.3. 1976.
13. Geoffrey, V.P. Chamberlain : contemporary obstetrics and Gynaecology 1Pub. Northwood Publication Ltd., 1977.
14. Neelam, Mishra D. N. et al., M.D (Ay) thesis, "Comparative Study of Kshara and Agni Kshara in Karving Yoni Vyapad 1981.
15. Shushruta Samhita : Dalhan Acharya Chowkhambha orientalia Varanasi 1980.

हिन्दी सारांश

सर्वाङ्कल इरोजन का चिकित्सीय प्रबन्धन

नीलम एवं नीरज कुमार

सर्वाङ्कल इरोजन में कोलुम्नर इपीथिलियम जो कि सर्वाङ्कल केनाल में रहती है, बढ़कर गर्भाशय ग्रीवा मुख को ढक लेती है। जिसके कारण योनि से लगातार श्वेत स्राव होता है। इसकी चिकित्सा न होने पर यह व्याधि कैंसर का रूप धारण कर लेती है। इस व्याधि की मुख्य चिकित्सा बढ़ी हुई कोलुम्नर इपीथिलियम को नष्ट करना है। आयुर्वेद में इस तरह की वृद्धि के लिये क्षार एवं अग्निकर्म का वर्णन किया गया है। इस शोध पत्र में स्नुही क्षार और दग्ध चिकित्सा की गई है। जिसमें से स्नुही क्षार से की गई चिकित्सा द्वारा, दग्ध चिकित्सा की अपेक्षा अच्छे परिणाम प्राप्त हुए।

