



**A COMPARATIVE CLINICAL STUDY ON THE EFFICACY OF
PALASHA KSHARA AND TANKANA IN KARNINI YONI VYAPAT
(CERVICAL EROSION)**

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ABSTRACT

Introduction: Cervical erosion is one of the very common gynaecological ailments of women of active reproductive age. While considering symptomatology and treatment, the disease cervical erosion simulates *Karnini yonivyapat* described in Ayurvedic classics. **Objective:** The objectives of the study are 1. To evaluate the effect of *Tankana bhasma* application in *Karnini Yonivyapat* (Cervical erosion). 2. To evaluate the effect of *Palasha kshara* application in *Karnini Yonivyapat* (Cervical erosion). 3. To compare the effect of *Tankana bhasma* and *Palasha kshara* in *Karnini Yonivyapat* (Cervical erosion).

Materials and methods: A total 32 patients were registered and divided in two groups viz group A (*Tankana bhasma*) and group B (*Palasha kshara*). Out of them 31 patients completed the course of treatment. *Kshara* application was done only one sitting, after the menstrual bleeding stopped. First follow up was taken on 7th day and second follow up on 30th day. **Results:** For statistical analysis, Friedman test, Wilcoxon Signed Rank test and Man Whitney U test were done for different subjective and objective parameters. There was statistically significant improvement observed in the Signs and Symptoms of cervical erosion in both the groups. **Conclusion:** In group A, *Tankana bhasma* has shown highly significant effect in relieving the symptoms of cervical erosion. In Group B, *Palasha kshara* has also shown highly significant effect in relieving the symptoms of cervical erosion. Statistical analysis between the groups did not show any significant difference between efficacies of the drugs.

Keywords: Ayurveda, *Karnini Yoni Vyapat*, *Kshara*, *Tankana bhasma*, *Palasha kshara*, Cervical erosion.

INTRODUCTION: Cervical erosion is a common condition seen in most of the women and in all the age groups. It is a condition where the squamo columnar epithelium of the ecto cervix is replaced by columnar epithelium which is continuous with endocervix¹. Most common treatment used according to modern science is cauterization and cryosurgery². Cauterization is the known treatment for cervical erosion. It is proved that the effect of

cauterization is temporary one and the chances of the recurrence of the disease are high. The complications which have been described after cauterization of the cervix are haemorrhage, pelvic infection and atresia or stenosis of the cervical canal (Dell 1938; Henkin 1937 and others). Certain studies states that during cauterization most patients experienced aching lower abdominal

pain similar to that of which they had previously complained.

The cervical erosion simulates mostly with *Karnini yonivyapat* described in ayurvedic classics, where *kshara karma* is one of the treatment modality explained^{3,4}. An attempt is made to apply principles of ayurveda in resolving the problem of cervical erosion. Clinically the development of reddened area on the portio vaginalis around the external os is seen in cervical erosion. Cervical erosion as such is not an ulcer and it will never ulcerates unless it turns into malignancy. In cervical erosion there is no loss of surface tissue from the cervix, but cervical ectopy may become a gateway for chlamydia, gonococci, herpes simplex virus. There are many studies done on various parasurgical procedures in cervical erosion^{4,5,6,7}. Present study was aimed at modulating a method of treatment and its effectiveness, which impart cure to the condition without any side effects. Many methods are available in the classics both in the form of *shodhana* as well as *shamana*. Keeping all these things in view, the drugs as well as the procedure were selected. *Kshara karma* is found to give good results in cervical erosion. *Palasha kshara* is mentioned as *kshara shreshtha* by *shodhal nighantu* and *tankana bhasma* is mentioned under *kshara varga* in *rasatarangini*. Thus these are used for external application over eroded area.

Hence, in this study, an effort was made to reduce the signs and symptoms of cervical erosion and associated symptoms such as vaginal discharge, low back ache, lower abdominal pain etc by application of *kshara*. It was conducted as an

interventional study with comparison of the effects before and after the study.

MATERIALS AND METHOD: 32 patients who fulfill the inclusion criteria were selected from outpatient department and inpatient department of *Prasuti Tantra evam Stree Roga* Department of SDM College of Ayurveda and Hospital, Hassan. The Ethical Clearance for the study was obtained from Institutional Ethical Committee. The informed consent and specifically designed case proforma were prepared.

AIMS AND OBJECTIVES

- To evaluate the effect of *Tankana bhasma* application in *Karnini Yonivyapat* (Cervical erosion).
- To evaluate the effect of *Palasha kshara* application in *Karnini Yonivyapat* (Cervical erosion).
- To compare the effect of *Tankana bhasma* and *Palasha kshara* in *Karnini Yonivyapat* (Cervical erosion).

Patients were diagnosed as per diagnostic criteria of Cervical Erosion which included:

- Detection of erosion by per speculum examination
- Associated with any of the following -
- Vaginal discharge
- Vulval itching
- Low back pain
- Lower abdominal pain.

Exclusion criteria

- Pregnant women
- Cervical polyps
- Carcinoma of cervix
- Patients suffering from sexually transmitted diseases
- Other systemic disorders like uncontrolled Diabetes mellitus.

Investigations

Routine hematological, including hemoglobin, total count, differential count and ESR were carried out in all patients. Mainly Pap smear test was done to rule out major illness like CA Cervix.

Trial drugs: *Palasha Kshara-* *Palasha kashtha* was taken in an iron vessel and subjected to fire till it turns into *bhasma*. That *bhasma* was taken in a vessel and six times water was added in it and mixed well. The vessel was kept still for overnight. Then the contents of vessel were filtered with a three times folded cloth. The procedure was repeated for 21 times. The obtained filtrate was heated over moderate flame. When the consistency of filtrate changed to semi solid and when the water content was evaporated, it was kept under sun to dry. Then the *kshara* which was collected at the bottom of the vessel was taken and stored in an air tight container⁸.

Tankana Bhasma- *Tankana* is taken and powdered. Then it is put into an iron vessel. Thereafter it is heated on a medium flame and stirred well continuously. When the water content of the powder is evaporated, *tankana* blossoms up. Then it is taken off the heat source and allowed for *swangasheeta*. Thereafter it is powdered and stored in an air tight container⁹.

Grouping: A total of 32 patients were randomly grouped into A and B. Group A (n=16) received treatment with *Tankana Bhasma* and Group B (n=15) received treatment with *Palasha Kshara*.

Intervention (Treatment Plan)

The selected patients were subjected to *Ksharakarma*¹⁰.

Purva karma- Vaginal examination was performed to note condition of Vulva, Vagina, Cervix, Size, consistency,

position, mobility of the uterus and adenaxe. *Ushnajala* for *yoni prakshalana* particularly before *kshara karma*.

Pradhana karma – After the *yoni prakshalana* was done, the cervix was exposed with the help of Cusco's speculum. The affected part was to be rubbed with the help of gauze piece till it reaches the point of laceration. The *Kshara* was applied over the affected area with the help of a cotton swab. It was allowed to be in place till *pakwajambu phalavarna* was observed. Then the *kshara* was removed and the area was wiped with cotton swab dipped in *nimbu swarasa*.

Pashchat karma - The surrounding tissues were examined carefully to any untoward effects, like irritation or sign and symptoms of inflammation or any discomfort to the area. Thereafter *yashtimadhu taila pichu* was applied over the treated part and covered with sterile gauze piece. *Pichu* was changed twice daily. *Yoni pichu* was kept twice daily every day for 7 days.

Duration of study

- Application of *kshara* – once after the menstrual bleeding completed
- *Ushna jala prakshalana* and *yashtimadhu taila pichu* twice daily for 7 days
- First follow up – at 7th day
- Second follow up – at 30th day

Assessment criteria

The effect of therapy was assessed on the following signs and symptoms by assigning self-graded score in terms of relief observed in amount of *yonisrava*, *yonikandu*, *katishula* and *udarashula* condition of erosion – extent, appearance, degree of erosion.

Statistical analysis

Obtained data were statistically analyzed using Friedman's test, Wilcoxon signed rank test with Bonferroni correction, and Mann Whitney U test.

OBSERVATIONS AND RESULTS

62% of the cases were of more than 30 yrs of age i.e. active reproductive phase. 72% of them belonged to lower middle class. 69% of the cases were multipara. 88% of them had normal vaginal delivery.

AGE	FREQUENCY	PERCENTAGE
18-22 yrs	2	6%
22-26 yrs	4	13%
26-30 yrs	6	19%
30-34 yrs	10	31%
>34 yrs	10	31%

SOCIO ECONOMICAL STATUS	FREQUENCY	PERCENTAGE
Middle class	4	12%
Lower middle class	23	72%
Poor	5	16%

NO. OF DELIVERIES	FREQUENCY	PERCENTAGE
Nullipara	1	3%
1	9	28%
>= 2	22	69%

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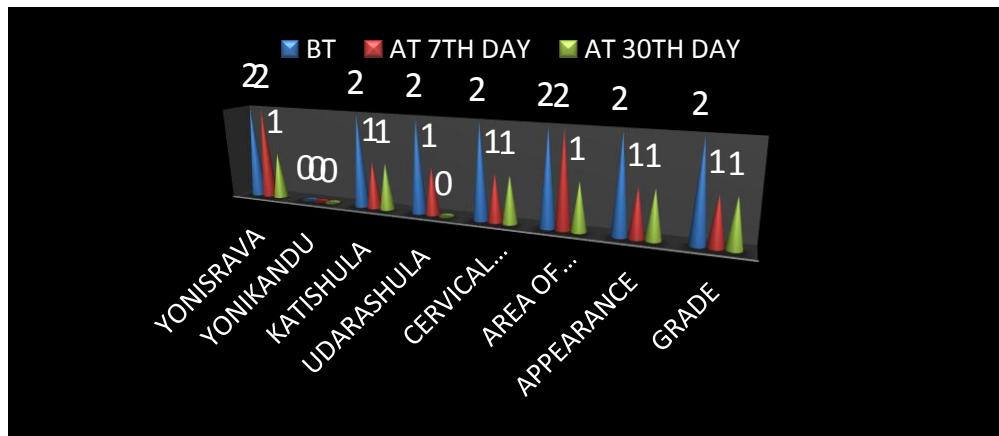
Effect of therapy on Subjective parameters: In Group A, 75% cases got reduction in *yonisrava* whereas in Group B, 100% cases got reduction in *yonisrava*. In Group A 100% cases got reduction in *yonikandu*, whereas in Group B, 100% cases got complete relief from *yonikandu*. On comparing the effect on *katishula*, in Group A, 87% cases got reduction and in Group B, 92% cases got reduction. Comparing the effect on *udarashula*, in Group A, 81% cases got reduction whereas in Group B, 80% cases got reduction. In Group A, 87% cases got reduction in

severity of cervical tenderness and in Group B, 86% cases got reduction.

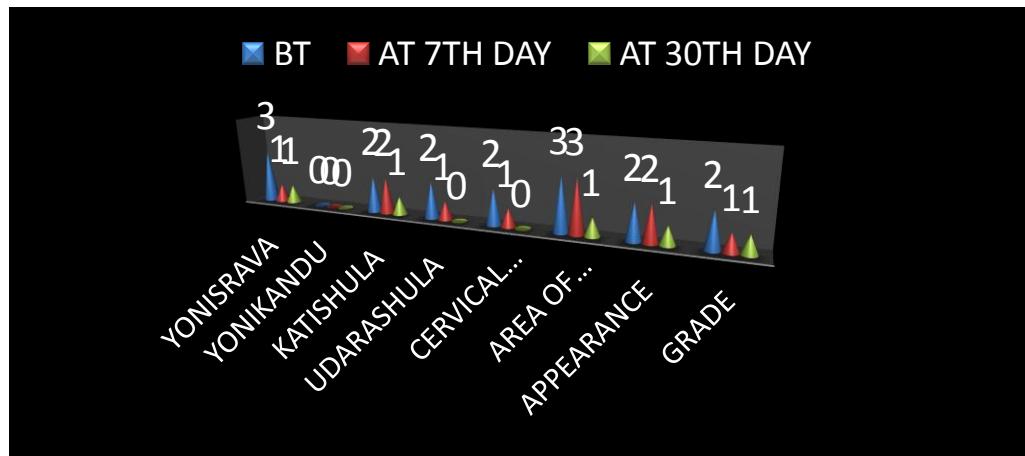
Effect of therapy on Objective parameters

Reduction in area of erosion was seen in 50% of cases in Group A and in 74% of cases in Group B. appearance of erosion was improved in 87% of cases in Group A and in 86% of cases in Group B. In Group A, overall improvement in the condition of erosion was observed in 75% cases whereas in Group B overall improvement was observed in 94% of cases.

EFFECT OF TANKANA BHASMA (MEDIAN)



EFFECT OF PALASHA KSHARA (MEDIAN)



RESULTS: The most important parameter for assessing the efficacy of the drug was decrease in the extension of cervical erosion, together with the decrease in the severity of associated complaints. For the purpose of comparison of the efficacy before and after treatment, the complaints were converted into scores in the following manner. The obtained results

were statistically analyzed using SPSS VER. 20. Completed 31 patients were taken for statistical analysis excluding the drop outs (1). Friedman's test was used to analyze the significance of change. Wilcoxon signed rank test was done with Bonferroni correction on parameters which show significance in friedman's test, to interpret the time of significant change. Mann Whitney U test was done to compare the outcome between two groups.

1. TANKANA BHASMA

Parameter	Bt mean rank	At 7 th day mean rank	At 30 th day mean rank	Chi sq. Value	Asymp. Sig.	Remarks
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<i>Yonisrava</i>	2.56	2.06	1.38	17.756	0.000	HS
<i>Yonikandu</i>	2.22	2.06	1.72	7.444	0.024	S
<i>Katishula</i>	2.59	2.06	1.34	20.150	0.000	HS
<i>Udarashula</i>	2.47	1.27	1.56	14.552	0.001	HS
<i>Cervical tenderness</i>	2.81	1.75	1.44	24.182	0.000	HS
<i>Area of erosion</i>	2.31	2.16	1.53	14.000	0.001	HS
<i>Appearance of erosion</i>	2.72	2	1.28	23.000	0.000	HS

2. PALASHA KSHARA

Parameter	Bt mean rank	At 7 th day mean rank	At 30 th day mean rank	Chi sq. Value	Asymp. Sig.	Remarks
<i>Yonisrava</i>	2.93	1.90	1.17	26.735	0.000	HS
<i>Yonikandu</i>	2.37	1.93	1.70	10.300	0.006	S
<i>Katishula</i>	2.60	2.07	1.33	19.158	0.0000	HS
<i>Udarashula</i>	2.47	1.97	1.57	13.556	0.001	HS
<i>Cervical tenderness</i>	2.80	1.93	1.27	23.130	0.000	HS
<i>Area of erosion</i>	2.43	2.27	1.30	19.824	0.000	HS
<i>Appearance of erosion</i>	2.77	2.03	1.20	23.532	0.000	HS

3. BETWEEN THE GROUPS

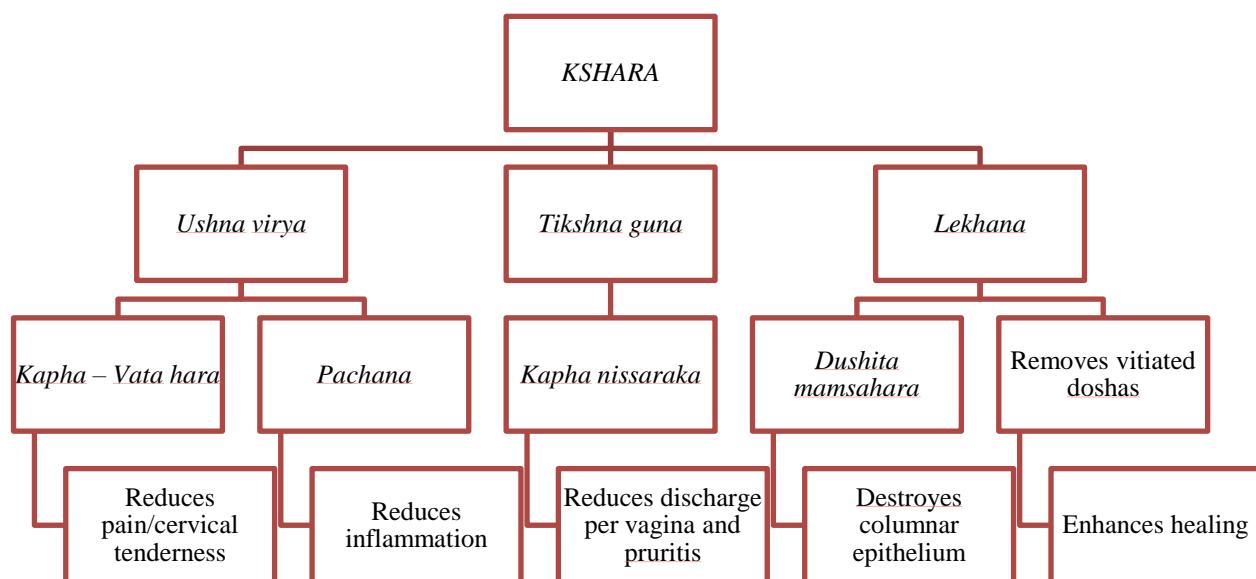
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2*(1-tailed Sig.)]	Remarks
<i>Yonisrava</i>	86.500	206.500	-1.294	0.196	0.285	NS
<i>Yonikandu</i>	105.000	225.000	-1.000	0.317	0.775	NS
<i>Katishula</i>	110.500	230.500	-0.093	0.926	0.935	NS
<i>Udarashula</i>	78.500	198.000	-1.765	0.078	0.161	NS
<i>Cervical tenderness</i>	82.500	202.500	-1.466	0.143	0.217	NS

Area of erosion	105.000	225.000	-0.354	0.730	0.775	NS
Appearance of erosion	112.500	232.500	0.000	1.000	1.000	NS

Overall effect of therapy : Both the groups showed highly significant results within the groups in improving the overall condition of erosion. To analyze which group has got more significant results Mann-Whitney test was applied, which showed no significant difference ($p>0.05$) between the groups. Both are equally effective statistically. But when we observed clinically, In over all grading of erosion, *palasha kshara* exhibited better results by acting on *yonisrava*, appearance of erosion and the *shula* by its *tikshna*, *ushnaguna*, faster healing property.

DISCUSSION: Ayurvedic medicine has unique features and it emphasizes on the promotion of positive health and prevention of disease. *Kshara* is a better treatment for cervical erosion because of its lesser side effects^{10,11}. According to Susruta, *kshara* itself is *chedan*, *bhedan*, *shoshan*, *lekhaniya karma* by its *tiksna*, *usna* and *laghu guna*¹². The drugs having *katu rasa*, *laghu*, *tiksna guna*, *usna*, *virya*

and *katu vipaka* corrects *kapha dusti*. *Kshara* has various qualities¹³. *Kshara* because of its *ushna virya*, does the *kaphavata nirharana*, which inturn reduces the pain or cervical tenderness and it also does the *pachana* which accelerates the phase of *paka* and thus reducing the inflammation in lesser time. Because of its *tikshnaguna*, it does the *kapha nissarana* which helps in reducing the *yonisrava* and *yonikandu* which are pure *kapha* conditions. Finally because of its main property of *lekhana*, it does the *dushita mamsa haran*. This can be correlated to strong alkaline nature which is responsible for its corrosive action i.e. destruction of columnar epithelium, after destruction of this epithelium re-epithelisation of squamous epithelium occurs. Also it removes the vitiated *doshas* which enhances the healing process. *Kshara* gives better results in chronic and recurrent cases¹⁴.



CONCLUSION

- In group A, *Tankana bhasma* has shown highly significant effect in relieving the symptoms of cervical erosion. **12(75%)** patients got reduction in *yonisrava*, **5(100%)** patients got reduction in *yonikandu*, **13(87%)** patients got reduction in *katishula*, **9(81%)** patients got reduction in *udarashula*, **14(87%)** patients got reduction in cervical tenderness, **8(50%)** patients got reduction in area of erosion, **14(87%)** patients got reduction in grade of appearance of erosion and **12(75%)** patients got reduction in overall grade of erosion. It might have acted because of its *kshariya rasa*, *rukshatikshna guna*, *ushna virya*.
- In Group B, *Palasha kshara* has also shown highly significant effect in relieving the symptoms of cervical erosion. **15(100%)** patients got reduction in *yonisrava*, **6(100%)** patients got complete relief from *yonikandu*, **12(92%)** patients got reduction in *katishula*, **8(80%)** patients got reduction in *udarashula*, **13(86%)** patients got reduction in cervical tenderness, **11(74%)** patients got reduction in area of erosion, **13(86%)** patients got reduction in grade of appearance of erosion, **14(94%)** patients got reduction in overall grade of erosion. Probable mode of action might be because of its *katu-tikta-kashaya rasa* and *ushna virya*.
- Statistical analysis between the groups did not show any significant difference between efficacies of the drugs.
- If cost effectiveness is concerned, then *tankana bhasma* would be better choice. If severity is concerned *palasha kshara* is more efficient.

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Source of support: Nil

Conflict of interest: None

Declared

Cite this Article as : Lumi Bhagat et al :A Comparative Clinical Study on the Efficacy of Palasha Kshara and Tankana in Karnini Yoni Vyapat (Cervical Erosion) IJAAR VOLUME III ISSUE III JUL-AUG 2017 : 684-692