**REVIEW OF CLINICAL STUDIES ON KARNINI YONIVYAPAD VIS-A-VIS CERVICAL EROSION**

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**ABSTRACT**

Cervical erosion is a most common condition seen in women of reproductive age groups. Its prevalence is between 50-85% of all the gynecological conditions. In modern system of medicine diathermy cauterization or cryosurgery are generally advised for treatment but these procedures have their own side effects and complications like excessive vaginal discharge, secondary infertility, bleeding per vagina, infection, stenosis etc. So still it is one of the most troublesome diseases for patients as well as for gynaecologists. Due to the serious consequences of the disease it is the need of hour to develop an accurate therapy for pathological erosion. This is an attempt to throw some more light on the clinical studies on cervical erosion. On cervical erosion total eight clinical studies in PG level has been completed out at National Institute of Ayurveda, Jaipur. Out of eight clinical studies, five works on Kshara Karma Karma (application of caustics), two works on Agnikarma (cauterization), two works on Kushthadi churna, one work on Kushthadi varti, one work on Virechana. The drugs and procedures used in the research studies have Chedana, Bhedan, Sosahana, Lekhana, Shodhana, Shothaghna, Raktrpasadana, Vrana Shodhana (ulcer cleansing), Vrana ropana (ulcer healer), Krimihara, Kushthagha (anti-dermatosis), Kandugha (anti-pruritic) properties. Maximum studies are carried out on Bahya Parimarjana (external application).

**INTRODUCTION**

For healthy human society, it is necessary to give proper care to women because women are the source of health care of their family. Because of negligence towards her health she is landing with many health related problems. Among such health disorders cervical erosion occupies the vast area. Its prevalence is between 50-85% of all the gynecological conditions[1]. Cervical erosion itself is not life threatening, but is found to have a profound impact on the quality of life of women and may be results into serious consequences like cervical intraepithelial neoplasia and cervical cancer.[2]

Most commonly treatment used according to modern science is cauterization and cryosurgery but these procedures have their own side effects like excessive vaginal discharge, secondary infertility, bleeding per vagina, infection, stenosis etc. and limitations. So it is the need of hour to develop an accurate therapy for pathological erosion. Cervical erosion can be considered as, Karnini yonivyapada as it resembles the features of Karnini as explained in the classics. According to Acharya Charaka, due to straining during labor in the absence of labor pains, the Vayu gets obstructed by fetus with holding Kapha and getting mixed with Rakta produces “Karnika” in Yoni, which obstruct the passage of Rakta (raja). Due to presence of Karnika this condition is termed as Karnini[3], Acharya Susruta says that vitiated Kapha along with Rakta produces Karnika in Yoni. Other features of vitiation of Kapha i.e., uncourtousness and itching etc. are also present.[4]

After indulging into specific diet and life-style Vata (Apanavaya) gets vitiated and there by Kha- vaigunya takes place in the Artavaha strotas. The same vitiated Vata gets mixed with Kapha dosha and Raktadhatu and Doshasha sammuncha takes
place. Adhisthana of disease is the Garbhashaya Dvarakamukha i.e. cervix. In the stage of Vyaktaavasitha, Karnika is formed in the Garbhashayadvarakamukha, which is the cardinal symptom of Karniniyonivyapada. Karnika is mentioned as Granthi[5] Mansakandi[6], Mansankurt[7], Mansakandakar Granthi[8].

AIMS & OBJECTIVE
- To know various clinical studies on cervical erosion carried out at National Institute of Ayurveda, Jaipur.
- To provide the guidelines for further research studies in the area of cervical erosion.

MATERIALS AND METHOD
- All the thesis were collected from P.G. Department of Prasutitantra and Striroga and Central library of National Institute of Ayurveda, Jaipur.

Method: Hand search.

The procured theses were studied in detail and scientific review was done.

OBSERVATION
On cervical erosion total eight clinical studies in PG level has been completed out at National Institute of Ayurveda, Jaipur. Out of 8 clinical studies, five works on Kshara Karma, two works on Agnikarma, two works on Kushthadi churna, one work on Kushthadi varti, one work on Virechana. The details of clinical trials are in following paper.

Sangeeta (2009)
In this study 30 patients were treated in 3 groups. In Group I, 10 registered patients of cervical erosion were administered with 'Kushthadi varti' in the vagina daily for 7 days in two consecutive menstrual cycles. The study was completed in 9 patients in this group. In Group II, 10 registered patients of cervical erosion were administered with 'Jatyadi Taila Pichu' in the vagina daily during night (overnight) for 7 days in two consecutive menstrual cycles. In Group III, 10 registered patients of cervical erosion were administered with 'Apamarga kshara' on cervix and 'Jatyadi Taila Pichu' in the vagina for 7 sitting alternate day in a month for maximum two consecutive menstrual cycles after the bleeding phase of menstruation. Comparing the symptomatic improvement in both groups it was found that overall percentage relief was highest in group I 72.17% followed by group II i.e. 68.44% improvement.

Pragya Gupta (2012)
In this study 30 patients had completed the treatment in 2 groups. In Group I, 15 registered patients of cervical erosion were administered with application of 'Apamarga kshara' on cervix and 'Jatyadi Taila Pichu' in the vagina for 7 sitting alternate day in a month for maximum two consecutive menstrual cycles after the bleeding phase of menstruation. In Group II, 15 registered patients of cervical erosion were administered with 'Jatyadi Taila Pichu' in the vagina daily for 14 days in a month for maximum two consecutive menstrual cycles. Comparing the symptomatic improvement in both groups it was found that overall percentage relief was highest in group I 72.17% followed by group II i.e 68.44% improvement. It can be concluded that combined use of kshara karma with Apamarga kshara and Jatyadi taila pichu (Group I) is effectively helps in managing the disease cervical erosion.

Ranju kumari Chaurasia (2013)
This study was done on 30 patients; 15 patients in each group. In Group A patients of Cervical erosion were administered with Kushthadi churna as local application on eroded area and Udumbaradi tail pichu both are given maximum seven sitting alternate day for maximum two consecutive menstrual cycle. In Group B Udumbaradi tail pichu administered for fourteen days for maximum two consecutive cycles after the bleeding phase of menstrual cycle. Comparing the symptomatic improvement in both groups it was found that overall relief was highest in group A followed by group B. Hence it can be concluded that combined use of Kushthadi churna and Udumbaradi taila pichu is effectively helps in managing the disease cervical erosion.

Table 1: Ranju kumari Chaurasia- Shows the % improvement of symptoms and signs in both groups

| Cardinal Symptoms     | Result in Percentage |
|-----------------------|----------------------|
|                       | Group A  | Group B  |
| Vaginal discharge     | 75.75%   | 36.11%   |
| Dysmenorrhoea         | 75%      | 57.89%   |
| Pruritus Vulvae       | 75%      | 52%      |
| Lower abdominal pain  | 80%      | 64%      |

Observations and results, it can be concluded that Kushthadi Varti and Jatyadi Taila Pichu can be used collectively as an effective, safe, easily affordable, cost effective and dependable remedy for the management of cervical erosion without having any complications. [9]
Fatigue | 40.54% | 34.28%
---|---|---
Joint Pain | 42.85% | 69%
Lower Backache | 45.45% | 63.63%
Extent of erosion | 68% | 32.14%
Oozing of blood on rubbing with a gauze piece | 70.833% | 27.27%
Average Percentage of relief | 63.71% | 48.48%

**Manju Chouksey (2014)**

In this study, 30 patients had completed the treatment in 2 groups. In Group I, 15 registered patients of Cervical erosion were administered with application of ‘Palash kshara’ on cervix for 7 sitting on alternate day and ‘Dhatakyadi Taila Pichu’ in the vagina daily two times in a day for 14 days in a month after the bleeding phase of menstrual cycle for maximum two consecutive menstrual cycles. In Group II, 15 registered patients of Cervical erosion were administered with ‘Dhatakyadi Taila Pichu’ in the vagina daily two times a day for 14 days in a month after the bleeding phase of menstrual cycle for maximum two consecutive menstrual cycles. Comparing the symptomatic improvement in both groups, it was found that average percentage relief was higher in group A (71.40%) followed by group B (65.81%). It can be concluded that combined use of Palasha kshara and Dhatakyadi tail pichu is effectively helps in managing the disease cervical erosion. But in Pruritus vulvae and burning micturition, the relief was seen well in group B. Better results were observed in Group A patients suggest that probably both the drugs act synergistically, the therapeutic effects of are potentiated with the use of Palasha kshara and Dhatakyadi tail pichu.[12]

**Table 2: Manju Chouksey - Shows the % improvement of symptoms and signs in both groups**

| Cardinal Symptoms                      | Result in Percentage |
|----------------------------------------|----------------------|
|                                        | Group A   | Group B   |
| Vaginal discharge                      | 88.11%    | 74.23%    |
| Dyspareunia                            | 77.83%    | 75.47%    |
| Pruritus Vulvae                        | 73.40%    | 80.00%    |
| Low Backache                           | 51.67%    | 40.56%    |
| Lower Abdominal pain                   | 66.25%    | 50.00%    |
| Burning Micturation                    | 77.83%    | 91.78%    |
| Sickness Feeling                       | 55.56%    | 43.66%    |
| Vaginal discharge by P/S               | 85.71%    | 74.23%    |
| Oozing of blood from cervical erosion   | 66.75%    | 62.26%    |
| Area of eroded cervix                  | 72.08%    | 67.57%    |
| Cervical Tenderness                    | 66.75%    | 65.00%    |
| Nabothian cyst                         | 74.91%    | 65.00%    |
| **Average Percentage of Relief**       | 71.40%    | 65.81%    |

**Priyanka Sharma (2015)**

The study was done on 40 patients, 20 patients in each group. In Group A, Snuhi Kshara was applied on cervix for 7 sitting on alternate day and ‘Dhatakyadi Taila Pichu’ for 14 days daily once in a day two days after the bleeding phase of menstrual cycle for maximum two consecutive menstrual cycles. In Group B, Apamarg Kshara was applied on cervix for 7 sitting on alternate day and ‘Dhatakyadi Taila Pichu’ for 14 days daily once in a day two days after the bleeding phase of menstrual cycle for maximum two consecutive menstrual cycles. The study concluded that Snuhi Kshara & Dhatakyadi Taila Pichu showed better relief in signs than Apamarg Kshara & Dhatakyadi Taila Pichu.[13]
Table 3: Priyanka Sharma - Shows the % improvement of signs and symptoms in both groups

| Cardinal Symptoms                              | Result in Percentage |
|------------------------------------------------|----------------------|
|                                                | Group A   | Group B   |
| Vaginal discharge                              | 65.90%    | 68.88%    |
| Dyspareunia                                    | 88.89%    | 55%       |
| Pruritus Vulvae                                 | 85%       | 69.23%    |
| Low Backache                                   | 50%       | 39.02%    |
| Lower Abdominal pain                           | 31.03%    | 50%       |
| Burning Micturation                            | 77.78%    | 80%       |
| Sickness Feeling                               | 37.14%    | 36.67%    |
| Post coital Bleeding                           | 72.73%    | 75%       |
| Vaginal discharge by P/S                       | 72.41%    | 76.32%    |
| Oozing of blood from cervical erosion           | 80.77%    | 62.96%    |
| Area of eroded cervix                          | 65.85%    | 74.36%    |
| Cervical Tenderness                            | 80%       | 87.5%     |
| Nabothian cyst                                 | 40%       | 33.34%    |
| **Average Percentage of Relief**               | **65.19%**| **47.32%**|

Neha Chansauria (2016)

In this study 30 patients had completed the treatment in 2 groups. In Group A, 15 patients of cervical erosion were treated by Apamarg kshara and Hayamaradi tail pichu. In Group B, 15 patients of cervical erosion were treated by Kushthadi churna and Hayamaradi tail pichu. The treatment was started two days after bleeding phase of menstrual cycle. Comparing the symptomatic improvement in both groups it was found that average percentage of relief was highest in group B i.e. 67.66% followed by group A i.e. 58.05%. It shows that effect of therapy was more in group B in comparison to group A. \[14\]

Table 4: Neha Chansauria - Shows the % improvement of signs and symptoms in both groups

| Cardinal Symptoms                              | Result in Percentage |
|------------------------------------------------|----------------------|
|                                                | Group A   | Group B   |
| Vaginal discharge                              | 69.68%    | 75.18%    |
| Dyspareunia                                    | 70.15%    | 76.63%    |
| Pruritus Vulvae                                 | 57.85%    | 87.73%    |
| Low Backache                                   | 59.27%    | 44.45%    |
| Lower Abdominal pain                           | 42.85%    | 52.18%    |
| Burning Micturation                            | 44.33%    | 72.71%    |
| Sickness Feeling                               | 30.39%    | 34.76%    |
| Post coital Bleeding                           | 75.18%    | 79.87%    |
| Vaginal discharge by P/S                       | 50.00%    | 65.63%    |
| Oozing of blood from cervical erosion           | 80.00%    | 72.16%    |
| Area of eroded cervix                          | 74.98%    | 81.24%    |
| Cervical Tenderness                            | 60.06%    | 80.03%    |
| Nabothian cyst                                 | 39.93%    | 57.08%    |
| **Average Percentage of Relief**               | **58.05%**| **67.66%**|
In this study 104 patients were treated in 2 groups. In Group A, Agnikarma with Svarṇa salaka only for a sitting after that Yaśtimadhu powder mixed with Ghrita as required was applied over the wound once a day for 14 days, after two days of the bleeding phase of menstrual cycle. In Group B, Kṣhara Karma with Snuhi Kṣhara followed by Yaśtimadhu powder mixed with Ghrita for 7 sittings on alternate days after the two days of the bleeding phase of menstrual cycle. Yaśtimadhu powder mixed with Ghṛta was applied continue for 14 days. The study concluded that kṣhara karma therapy showed better relief in signs and symptoms than Agnikarman15.

Table 5: Suresh Kumar Solanki - Shows the % improvement of signs and symptoms in both groups

| Cardinal Symptoms                  | Result in Percentage |
|------------------------------------|----------------------|
| Group A                            | Group B              |
| Vaginal discharge                  | 27.08%               | 82.08%               |
| Dyspareunia                        | 52.28%               | 64.41%               |
| Pruritus Vulvae                    | 75.00%               | 61.64%               |
| Low Backache                       | 47.72%               | 18.29%               |
| Lower Abdominal pain               | 56.30%               | 31.25%               |
| Burning Micturition                | 25.00%               | 59.37%               |
| Post coital Bleeding               | 43.75%               | 39.47%               |
| Vaginal discharge by P/S           | 28.64%               | 82.08%               |
| Oozing of blood from cervical erosion | 84.88%               | 65.67%               |
| Area of eroded cervix             | 53.15%               | 95.60%               |
| Cervical Tenderness               | 65.78%               | 47.36%               |
| Nabothian cyst                    | 60.80%               | 50.42%               |
| Average Percentage of relief       | 47.72%               | 61.01%               |

Richa Tiwari (2020)

In this study 30 patients had completed the treatment in 2 groups. In Group A, 15 diagnosed patients of cervical erosion treated with Agnikarma. In Group B, 15 diagnosed patients of cervical erosion treated with Virechana karma. The study concluded that Virechana karma showed better relief in signs and symptoms than Agnikarma. But in post coital bleeding the relief was seen well in group A.[16]

Table 6: Richa Tiwari: Showing the percentage relief of signs and symptoms in both the groups

| Symptoms                          | Group A  | Group B  |
|-----------------------------------|----------|----------|
| Vaginal Discharge                 | 51.43%   | 90.32%   |
| Dyspareunia                       | 52.38%   | 86.67%   |
| Pruritus vulvae                   | 58.33%   | 89.99%   |
| Low Backache                      | 64.53%   | 78.28%   |
| Post Coital Bleeding              | 66.65%   | 50.00%   |
| Extent of erosion                 | 75.68%   | 85.73%   |
| Average Percentage of relief      | 61.50%   | 80.17%   |

DISCUSSION

Looking into the pathogenesis of cervical erosion it become clear that the Ayurveda treatment having the properties of Lekhana (scraping), Sodhana (cleansing), Ropana (healing), Kaphaghna can effectively cure this disease. On reviewing the theses works, the following points can be noted down. Many procedures and drugs were tested for cervical erosion. Maximum research works were done on local application, five works on Kṣhara Karma, two works on Kushthadi churn, and two work on Agnikarma, one work on Kushthadi varti, one work on Virechana. Comparative studies done between single drug and combination, Kṣhara karma and local application of Kushthadi churn, two different Kṣhara, Agnikarma and Kṣhara karma and Sthanik chikitsa and Sodhan chikitsa. Maximum works were done on Kṣhara karma by using different Kṣhara like Apamarga kṣhara, Snuhi kṣhara, Palasha kṣhara; are having properties Kaṭu (pungent),

Available online at: http://ijapr.in
Uṣṇa (hot), Tikṣṇa (sharp), Pacana (digestive capability), Vilayana (liquefaction), Sadhana (cleansing), Ropana (healing), Soshana (absorption), Stambhana (arresting or stopping nature), Lekhana (scraping), Krimighna (anthelmintic), Ama, Kapha Nasaka, Kusṭha, Vishaghaṇa and Medanasaka. It has so many properties which are able to correct cervical erosion or Karnini yonivyapad. In Ayurveda classics Kshara Karma is said to be superior to any other surgical or para surgical measures. [17] Agnikarma also found better alternatives in the management of Karnini (Cervical erosion). The ailments difficult to cure by Bheṣaja (drugs), Sastra (surgery) and Kṣhara can be cured by Agnikarma. The disease cured by Agnikarma do not recur. It completely eradicates the disease pathology and it can also result in the sterilization, so that chances of infection are not arises. Kusṭhadi varti found an effective, safe and easily affordable remedy for the management of cervical erosion without having any complication. Local application of Kushthadi churna found effective in disintegration of the pathogenesis of disease, which have property of Lekhana, Sadhana, Ropana, Stambhana, Kaphaghaṇa. Jayatiyadi Taila pichu, Udumbara Taila pichu, Dhatakyadi taila pichu and Hayamaradi taila pichu having wound healing properties were tested and found that the therapeutic effects of Varti, Kṣhara or Churna are potentiated with them. Only one research work on Sodhan therapy or Virechan has been done in this disease. From the pathogenesis of cervical erosion it is clear that any treatment of cervical erosion which is not capable to correct the microenvironment of cell; is not a complete and ideal treatment. Virechna dravya spreads throughout the body at cellular level and correct the disease due to its pharmacological properties.

CONCLUSION

After the scientific review of all these clinical trials we can say Sthanik chikitsa (local application) by Kushthadi varti, Kṣharakarma, Agnikarma, Kushthadi churna, Jayati Taila pichu, Udumbara Taila pichu, Dhatakyadi taila pichu and Hayamaradi taila pichu found better alternatives in the management of Karnini (Cervical erosion). We can use these treatments as per the need of individual. Virechan as holistic treatment of cervical erosion that not only treat the erosion but also prevent serious consequences of the disease like cervical intraepithelial neoplasia and cervical cancer by doing proper regression of erosion at cellular level. It needs more clinical trials with large sample size.

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REFERENCES

1. V.N.K. Usha, Streeroga- Vijnan (A Textbook of Gynaecology) Reprint 2016, Chaukambha Sanskrit Pratishthan Delhi, India. pp 292
2. Evidence for benefits from treating cervical ectopy: literature review. Sao Paulo Med J. 2008; 126(2):132-9. https://doi.org/10.1590/S1516-31802008000200014
3. Vaidya Yadavji Trikanjji Acharya, Charaka Samhita 2019, Varanasi, Chaukambha Surbharti Prakashan, 2019, p.636.
4. Vaidya Yadavji Trikanjji Acharya, Sushrut Samhita, Varanasi, Chaukambha Surbharti Prakashan; 2018, p.669.
5. Vaidya Yadavji Trikanjji Acharya, Charaka Samhita 2019, Varanasi, Chaukambha Surbharti Prakashan, 2019 p.636.
6. Vaidya Yadavji Trikanjji Acharya, Sushruta Samhita, Varanasi, Chaukambha Surbharti Prakashan; 2018, p.669.
7. Dr. Shiv Prasad Sharma, Ashtanga Samgraha 2019, Varanasi Chaukambha Sanskrit Series Office, 2019, p.831.
8. Narendranath Sastri, Madhav Nidan, Delhi, Motilal Banarasidas Delhi, 2009, p.852-3.
9. Sangeeta, Clinical evaluation of the efficacy of Kushthadi Varti and Jayati Taila Pichu in the management of cervical erosion (Karnini Yonivyapad), Thesis submission, National Institute of Ayurveda, Jaipur 2009.

| S.No. | Name of Scholar                | Average Percentage of relief | Group I  | Group II  | Group III |
|-------|--------------------------------|-------------------------------|---------|-----------|-----------|
| 1.    | Sangeeta (2009)                | 76.50%                        | 71.95%  | 84.43%    |           |
| 2.    | Pragy Gupta (2012)             | 72.17%                        | 68.44%  |           |           |
| 3.    | Ranju Kumara Chaurasia (2013)  | 63.71%                        | 48.48%  |           |           |
| 4.    | Manju Chouksey (2014)          | 71.40%                        | 65.81%  |           |           |
| 5.    | Priyanka Sharma (2015)         | 65.19%                        | 47.32%  |           |           |
| 6.    | Neha Chansauria (2016)         | 58.05%                        | 67.66%  |           |           |
| 7.    | Suresh Kumar Solanki (2017)    | 47.72%                        | 61.01%  |           |           |
| 8.    | Richa Tiwari (2020)            | 61.50%                        | 80.17%  |           |           |
10. Pragya Gupta, Clinical Evaluation of the Efficacy of Kshar Karma with Apamargaa Kshar and Jatyadi Taila Pichu in the management of Cervical Erosion (Karnini Yonivyapad), Thesis submission, National Institute of Ayurveda, Jaipur 2012.

11. Ranju Kumari Chaurasia, Clinical evaluation of efficacy of Kushtadi Churna with Udumberadi Tail Pichu in the management of Karnini Yonivyapad w.s.r. to cervical erosion, Thesis submission, National Institute of Ayurveda, Jaipur 2013.

12. Manju Chouksey, Clinical Evaluation of the Efficacy of Kshar Karma with Palasha Kshar and Dhatakyadi Taila Pichu in the management of Cervical Erosion W.S.R. Karnini Yonivyapad, Thesis submission, National Institute of Ayurveda, Jaipur. 2014.

13. Priyanka Sharma, A Comparative study of study of Snuhi Kshar and Apamarga Kshar in the management of Karnini Yonivyapad w.s.r. to Cervical Erosion, Thesis submission, National Institute of Ayurveda, Jaipur. 2015.

14. Neha Chansauria, A Comparative Clinical Study of Apamarga Kshara and Kushthadi Churna along with Hayamaradi Taila Pichu in the management of Karnini Yonivyapad w.s.r. to Cervical Erosion Thesis submission, National Institute of Ayurveda, Jaipur, 2016.

15. Suresh Kumar Solanki, Dr. Suresh Kumar Solanki, A Comparative Clinical study of Agnikarma with Swarna shalaka and Ksharkarma with Snuhi kshar in the management of Karnini Yonivyapad w.s.r. to Cervical Erosion, Thesis submission, National Institute of Ayurveda, Jaipur. 2017.

16. Richa Tiwari a Randomized Comparative Clinical Study of Agnikarma and Virechana Karma in the Management of Karnini Yonivyapad w.s.r. to Cervical Erosion Thesis submission, National Institute of Ayurveda, Jaipur. 2017.

17. Vaidya Yadavji Trikamji Acharya, Sushrutha Samhita, Varanasi, Chaukambha Surbharti Prakashan; 2018, p.45.