

## CONCEPTUAL STUDY OF CERVICAL EROSION WITH SPECIAL REFERENCE TO AYURVEDA

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### ABSTRACT

Women play an integral role in the society. They are the backbone of families and are crucial to the growth and development of communities contributing to the well-being of families and ultimately, the health of nations. Therefore, it is imperative that any medical condition causing physical or psychological distress to women be promptly addressed and given due consideration in medical research and practice. Abnormal vaginal discharge is the most prevalent gynecological conditions observed in outpatient departments, revealing cervical erosion on per speculum examination. This condition is affecting approximately 80% of women within the reproductive age group.<sup>[1]</sup> Clinically, cervical erosion is characterized by the presence of a red, velvety area on the portio vaginalis surrounding the external os. In *Ayurvedic* classical texts, most of the gynecological disorders are categorized under the term "*Yonivyapada*" In some aspects cervical erosion is correlated with *Garbhashayagreeramukhagata vrana*, *Karnini Yonivyapada*.

**KEYWORDS:** Ayurveda, Karnini Yonivyapada, Garbhashaya greevamukhagata Vrana, Cervical Erosion.

## INTRODUCTION

Cervical erosion, also known as cervical ectopy or ectropion or cervical eversion, is a benign condition commonly seen in women of reproductive age. It is commonly found on per speculum examination of a woman as red lesion over cervical area when she is presenting with abnormal vaginal discharge as a primary symptom.

Cervix is the cylindrical canal between vagina and uterus. Anatomically cervix is divided into 2 parts, the inner one is endocervix which is made up of glandular cells (columnar epithelium) & the outer one is ectocervix which is made up of squamous epithelium. When the glandular cells (columnar epithelium) from the endocervix are displaced onto the ectocervix, exposing them to the vaginal environment then it is known as cervical erosion.

It is a condition affecting women across mainly reproductive age groups, with approximately 80% experiencing this benign condition during their lifetime. Common symptoms include abnormal vaginal discharge, erythema, lesions in the cervical area, post-coital bleeding, dyspareunia (pain during sexual intercourse), low backache and pelvic discomfort. If this condition is not treated then it may lead to cervical cancer while in some cases, these symptoms can lead to psychological distress and challenges related to infertility.

Cervical erosion can be classified into two main types viz. Congenital and acquired.<sup>[2]</sup>

### Congenital Cervical Erosion

At birth, approximately one-third of female newborns exhibit a condition in which the columnar epithelium of the endocervix extends beyond the external os, covering the portio-vaginalis of the cervix. This occurs due to the influence of maternal estrogen. As the estrogen levels in the neonate decrease, this condition typically resolves, and the erosion heals spontaneously within a few days post-birth.

### Acquired Cervical Erosion

This type can be understood at histopathological level

1. Simple Flat Erosion- This type occurs during the early stages of established cervicitis, characterized by desquamation and shedding of the epithelium around the external os. This results in a red, glistening area that presents as a flat erosion. It has a smooth surface

with few glandular openings. Microscopically, the tissue beneath these raw areas is infiltrated with lymphocytes and plasma cells.

2. Papillary Erosion- In cases of chronic cervicitis, cervical erosion may proliferate, resulting in folded structures that form papillary projections on a granulation tissue base. This papillary effect primarily arises from localized proliferation, which increases susceptibility to infection.
3. Follicular/Cystic Erosion: During the healing phase of endocervicitis, as chronic discharge subsides, the squamous epithelium migrates towards the external os, replacing the columnar epithelium. If the mouths of the glands become blocked, retention cysts may form, creating elevations on the surface of the portio-vaginalis, known as Nabothian follicles.

### Cervical Erosion as Garbhashayagreevamukhagata vrana

In our classical text *Ashtang Samgraha Sutrasthana* the reference regarding *Yonivraneshkhana yantra* is present,<sup>[3]</sup> where the term “Yonivrana” is utilized and further elucidated in its commentary *Sarvangasundri* that *Yonivranekshana yantra* is used to visualize *Yonivrana*.

The definition of *vrana* is articulated as follows

“व्रण गात्र विचूर्णने व्रणयति इति व्रणः ।” (सु चि. 1/6)

“वृणोति यस्माद्वदे अपि व्रणवस्तु न नश्यति।

आदेहधारणात् तस्मात् व्रण इत्युच्यते बुधैः।” (सु.सू.21/40)

The term *Vrana* signifies a ‘*Gatra Vichurnana*’ as discontinuity in the healthy tissue of the body which can be understood by the replacement of columnar epithelium of endocervix by squamous epithelium of portiovaginitis in cervical erosion. *Acharya Dalhana* further explains it as *Gatra Vaivarny*<sup>[4]</sup> i.e. change in colour of normal tissue . This is similar to presence of red lesions over cervical area (abnormal) while normally cervix is pink in colour. The phrase “*Vrana Vastu Na Nashyati*” can be correlated with the scarring of cervical tissue, which may persist even after the erosion has healed. Based on the clinical characteristics, this condition can be associated with *Vatakaphaja Vrana* (An itching and piercing pain is felt in the *Vrana* due to the combined action of The deranged, *vayu* and *Kapha*, which becomes heavy and indurated, constantly Discharging a cold slimy secretion) and *Kapha Raktaja vrana* (It is red, heavy, slimy, glossy and indurated usually characterized by mild itching and yellowish blood

strained discharge).<sup>[5]</sup> and *Mamsaja Vrana*, particularly in the context of involvement of the tissue i.e. lesions are present at the cervical os involving the muscles.<sup>[6]</sup>

Common symptoms of cervical erosion like lesions in the cervical area, post-coital bleeding, dyspareunia (*Vedana*) and abnormal vaginal discharge (*Strava*) often with a foul odour (*Gandha*) bear similarities to the characteristics of *Vrana* (*Nijavrana*).<sup>[7]</sup>

### Cervical erosion as *Karnini Yonivyapada*

अकाले वाहमानाया गर्भेण पिहितोऽनिलः।

कर्णिका जनयेत योनौ श्लेष्मरक्तेन मूर्च्छित ॥27॥

रक्तमार्गाविरोधिन्या सा तया कर्णिनी मता ॥ 28॥ (च. चि. 30)

The term “*Karnini*” refers to the seed capsule of the lotus flower. It describes protuberance at the *Garbhasayagreevamukha*, resulting from an imbalance in *Pitta*, *Rakta* & *Vata* due to pushing efforts by a woman in absence of labour pain which resembles the *Padmakarnika* or pericarp of the lotus.

In the study of *nidanas* related to *Karnini Yonivyapada*, two primary classifications are identified: *samanya nidana* and *vishishta nidana*. *Samanya nidana* encompasses causes that contribute to 20 types of *Yonivyapada*, including factors such as *mithyachara*, *pradushta aartava*, *beeja dosha*, *daiva*, and excessive coitus with a partner of significant size of penis. In contrast,<sup>[8]</sup> “*akaale vaahmanaya*” (straining during labor in the absence of labor pains) serves as a *vishishta nidana* specifically associated with *Karnini Yonivyapada*,<sup>[9]</sup> Additionally, there are notable similarities in the *nidanas* between *Karnini Yonivyapada* and cervical erosion.

| Nidana                   | <i>Karnini Yonivyapada</i>  | Cervical erosion  |
|--------------------------|---|---|
| <i>Mithyachara</i>       | <i>Mithyachara</i> , characterized by an abnormal lifestyle and improper dietary practices, disrupts the balance of the <i>tridosha</i> , contributing to the development of <i>Karnini Yonivyapada</i> | This disturbance in lifestyle and diet can lead to hormonal imbalances, notably affecting estrogen levels, which is recognized as a significant factor in cervical erosion. |
| <i>Pradushta aartava</i> | <i>Pradushta aartava</i> is identified as a causative factor for all types of <i>Yonivyapada</i> .  | <i>Aartava</i> can be interpreted as encompassing ovarian hormones; therefore, <i>pradushta aartava</i> may be viewed as a representation of hormonal imbalance. This       |

|                                     |   |   |
|-------------------------------------|---|---|
|                                     |   | imbalance can subsequently contribute to the development of cervical erosion.                                     |
| <i>Beeja dosha</i>                  | The presence of <i>beeja dosha</i> in both parents may elevate the likelihood of their daughter developing <i>Yonivyapada</i> . | Under the influence of maternal estrogen there is physiological cervical erosion seen in infants.                 |
| <i>Daiva</i>                        | Unknown cause   | Unknown factor  |
| Coitus with a male having big penis | Cause for all <i>Yonivyapada</i> told by <i>Acharya Sushruta</i>  | There is possibility of trauma to cervix which can cause inflammatory changes & erosion of cervix                 |
| <i>Apadravya prayoga</i>            | Using inappropriate substances for coitus or self sexual gratification is one of the causes of 20 types of <i>Yonivyapada</i> . | Infection, Trauma or both caused due to Use of inappropriate substances for coitus may leads to cervical erosion. |
| <i>Akaale vahamanaya</i>            | Specific cause for formation of <i>Karnikakara shotha</i> .   | Trauma may be the cause .   |

### Similarities in Karnini Yonivyapada and cervical erosion in context of appearance

*Acharya Chakapani* defines *Karnika* as a growth resembling the pericarp of a lotus flower,<sup>[10]</sup> a description also supported by *Acharya Indu* (commenter of *Ashtanga Samgraha*)<sup>[11]</sup> and the commentary of *Acharya Madhava Nidan*<sup>[12]</sup> Additionally, *Acharya Dalhana* describes *Karnika* as a fleshy protrusion, referring to it as *mamsakandi*.<sup>[13]</sup> meaning a mass or bulge of tissue.

Thus, based on all the references, it can be concluded that minute elevations or protrusions resembling *Padmakarnika* at the *Yonimukha* are termed as *Karnini Yonivyapada* in *Ayurvedic* texts. *Acharya Sushruta* describes *Karnika* as an elevated condition caused by an imbalance of *Kapha*, characterized by symptoms such as *picchilta* (vaginal discharge) and *kandu* (vulvovaginal itching)<sup>[14]</sup> which are commonly associated with cervical erosion.

Hence *Karnini* can be compared to cervical erosion, where the cervix becomes hypertrophied, congested, and covered with small red projections that resemble sprouts. This condition is often associated with nabothian cysts, which are small, smooth nodular structures. Due to the presence of these small projections, the cervical erosion when accompanied by nabothian cysts (especially follicular or cystic erosion), it resembles the pericarp of a lotus flower.

## DISCUSSION

A detailed study of cervical erosion and *Garbhashayagreevamukhagata Vrana*, reveals similarities in their signs, symptoms, and the appearance of the *Vrana* such as discontinuity in the healthy tissue, change in the normal colour, discharge etc. Furthermore, we observe similarities in the causes of *Karnini Yonivyapada* and cervical erosion like *samanya* and *vishesha* *hetu* of *Karnini yonivyapada* as discussed before, as well as similarities in the clinical presentation and symptoms of both conditions.

## CONCLUSION

Considering the signs and symptoms of cervical erosion, it is concluded that this condition can be correlated with *Garbhashayagreevamukhagata Vrana* and *Karnini Yonivyapada* as described in *Ayurveda*. The allopathic treatment such as use of steroids, antifungals and antibiotics can disrupt the normal vaginal flora and compromise the defence mechanisms of the vagina where as procedures like cryosurgery, cauterization can cause cervical os stenosis, destruction of even healthy tissues with unhealthy tissues. Therefore, to minimise these complications the treatments for *Vrana* and *Karnini Yonivyapada* in *Ayurveda* can be applied to cervical erosion. The ayurvedic treatments like *yonipichu*, *yoniprakshalana*, *ksharakarma*, *agnikarma* along with lifestyle management etc will aid as a safe, convenient and brief procedure that offers cost-effective advantages and reduces the likelihood of complications & less chances of recurrence. So, it is worth considering ayurvedic treatments as better alternative.

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