COMPREHENSIVE APPRAISAL OF GARBHASAYA GREEVAVRANA (CERVICAL EROSION) IN AYURVEDA & CONTEMPORARY SCIENCE

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ABSTRACT
In the childbearing age more than 70% female population involvement the symptoms of vulvo-vaginal itching, white discharge vaginally, dyspareunia and menstrual irregularities. Predominantly in rural population women never turn up to a Gynecologist to grow relief from the problem. Women struggle undergoing vaginal examination in rustic areas, giving manner to miss the diagnosis of any abnormal vagaries on the cervix. Commonly the drug choices for treating such conditions are orally and locally with metranidazole, clindazole and anti fungal drugs. Infections like Trichomonasvaginalis, candidiasis can be treated with these drugs but cervical entropy will be continuing which need obliteration of abnormal epithelium either by thermal cauterization or cryoautery, which are having their own detriment like persistent vaginal discharge for more than 20 days which is very irritating for the patient. Ayurvedic principle of Ksharachikitsa, which contains of application of alkaline substance to perform the cauterization and can be measured chemical cauterization, proved effective in treating such complaint without any side effects. The major issue lies in discussing cervical lesions like ectopic without ruling out the possibility of premalignant lesions, as the signs and symptoms does not much in both the conditions. Timely detection of premalignant lesions relieves to prevent cervical cancer. Though several effective treatment have been stated for various gynecological disorder in Ayurveda at existing, most of them are still deficient in systemicclinical and biological studies with the best parameters making them rational. In beginning of sampraptis GarbhshayaGrivavatraprominent Doshas are Tridoshas. The Doshas have role in all type of Yoniyaapad. The sampraptivahanastart with elimination of Doshadusti. Ultimately proper Vrana(wound) healing occur and which may cure GarbhshayaGrivavatraprana. GarbhshayaGrivavatraprana can compare with Cervical erosion in modern science. Agni karma, Kshar karma and Panchakarma like Niruhabastii, AnuvasanBastii, Uttar Bastii, Yoni dhawan, Yoni pichu and Yoni seka are best modality to treat Cervical Erosion.

KEYWORDS: Garbhasaya Greev Vrana, Cervical erosion.

1. INTRODUCTION
In the childbearing age more than 70% female population involvement the symptoms of vulvo-vaginal itching, white discharge vaginally, dyspareunia and menstrual irregularities. Predominantly in rural population women never turn up to a Gynecologist to grow relief from the problem. Women struggle undergoing vaginal examination in rustic areas, giving manner to miss the diagnosis of any abnormal vagaries on the cervix. Commonly the drug choices for treating such conditions are orally and locally with metranidazole, clindazole and anti fungal drugs. Infections like Trichomonasvaginalis, candidiasis can be treated with these drugs but cervical entropy will be continuing which need obliteration of abnormal epithelium either by thermal cauterization or cryoautery, which are having their own detriment like persistent vaginal discharge for more than 20 days which is very irritating for the patient. Ayurvedic principle of Ksharachikitsa, which contains of application of alkaline substance to perform the cauterization and can be measured chemical cauterization, proved effective in treating such complaint without any side effects. The major issue lies in discussing cervical lesions like ectopic without ruling out the possibility of pre-malignant lesions, as the signs and symptoms does not much in both the conditions. Timely detection of premalignant lesions relieves to prevent cervical cancer.
Cervical erosion is also notorious as cervical ectopy. It is benign lesion and is the communalgynaecological complaint seen in the OPD. It is a communal finding on routine pelvic examination during the fertile age group. It is not a lethal condition. The squamous covering of the vaginal aspect of the cervix is substituted by columnar epithelium, which is usually continual with the lining of the endo cervix.\[^5\] It is not an ulcer. In this condition we can see the symptoms like YonigataStrava (white discharge), Katishula (backache), Yonikanu, cervical tenderness, along them white discharge is the most common finding may be due to overgrowth of cervical crypts. Most commonly used treatment according to modern science is cauterization and cryosurgery, which have their own side effects like secondary infertility, excessive bleeding per vagina, infections etc. which may also move/destroy the healthy tissue. To diminish these impediments, we have to treat it by Ayurvedic medicines. Cervical erosion is treated as GarbhashyaGrivaVrana, as it all shows features of Vrana which are described in classics.\[^4\] Where, here vranarefers totissue obliteration and which causes the Discolouration of the tissue or body parts.\[^3\]

\[Dipaniya, Tridoshaganiya, Agnikar, Ruksa, Kaphaghna, Rechana, laghoudh Vatapittagna properties, which supports in VranaShodhana sand Ropana of Kapha-VatavataVrana(i.e. cervical erosion). Niruhabasti, Anuvasanabasti, Garbhasayagatabasti , Yoni praksahan, Yoni pichu & Yoni seka are best panchakarma modalities for treating GarbhasayagreevagataVrana (Cervical erosion).\]

2. AIMS & OBJECTIVES

✓ To Appraisal GarbhasayaGreevaVrana (Cervical erosion) in Ayurveda
✓ To Appraisal GarbhasayaGreevaVrana (Cervical erosion) in Contemporary Science

3. GarbhasayaGreevaVrana in Ayurveda

In Ayurvedica palence there is no direct of detail description of "GarbhasayagrigavataVrana". But reference of "Yoruvrana" is available in AstangaSangraha Su. 34/12; in the context of "YonivraneksanaYantra". Also words like "Yoniksata" (HansarajaNidanSrirogaLaksana), "PrajananVrana" in the context of SukhsadhyaVrana. The Yantra used for examination of Yonivrana its function being "Eksana" directly resembles speculum; with the help of which maximum part of vaginal path could be viewed up to the cervix. Yoniypad being the chapter explained by all the author of classical Syurvedic texts but not mentioned about Yonivrana as a disease or as a symptom directly. So it may be summarised from above findings as.

♦ It was included in Vranasotha Vicara.
♦ During that period prevalence may be less or nil.
♦ May be it was "missed subject"

\[^{3/4}\] Actually missed due to unexposural or nature of female and society customs.

**Nidana of vrana**

In the classics the Hetu of Vrana are taken as Nija and Agantu. In NijaHetu the tridosas are taken as Hetu. As the DosaPrakopakaBhavas are discussed in various chapters, in the classics the tridosas are taken as direct hetu of Vrana.

1. NijaVrana - The vitiation of all three dosas.
2. AgantuVrana - Purusa, Paksi, HinsakaJiva, by falling accidents, Agni, Ksara, Visa, Tiksnaausadhhi, Sringsa, TiksnaSastra, all are the Hetus of AgantuVrana.

**Yonigata Hetu**

YonigataSrava is one of the important differential character of cervical erosion, as well as Srava is one of the main character of Vrana and Yonivypad. Cervical erosion is one type of Vranaoccurring in Yoni as Sthana. Therefore, taking the SravaLaksana in Yonivypad the Hetu of those Yoniyapad are taken into consideration for the Hetus of cervical erosion.

**Nidana of Yonivypad**

**Common:** According to Caraka
1. Mithyacara (Aahara, Vihara, Acara)
2. Pradustartava (Sthanika)
3. Bijadosa
4. Daiva

A. H. U. 33 mentions following Nidana

**Specific:** Ca. Ci. 30
1. VatajaYonivypad: VatalaAhara, Vihara, Cesta, VatalaPrakriti
2. PittajaYonivypad: Katu, Amla, Lavan, KsaraSevana
3. KaphajaYonivypad: Abhisyandisevana
4. AsrujaYonivypad: Rakta Pittakara Ahara, Vihara Sevana
5. Upapluta: KaphakaraAhara, Vihara, suppressions of sneezing during intercourse
6. Paripluta: PittakaraAhara, Vihara, suppression of sneezing during intercourse
7. Sannipataja: all Dosa vitiating Ahara, Vihara

**Predisposing causes**

It includes factor responsible for breaking down the normal barriers of infection viz. changes into anatomical structure of cervix. Outflow of alkaline, mucus, glycogen, menstrual flow variation in hormones, of those most important is change into anatomical structure which is mainly brought by trauma. e.g. Excessive coitus Instrumental contraceptives Cu. T. loop Local chemicals Irritants as douche, creame, jelly etc. Introducing foreign body in vagina Local unhygieneInfection is most important cause according to Palak (1926) with incidence 85%.
(2) Precipitating factors are infections
Mainly with bacteria as gonococci, strepto, staphylo, pneumo, deptheria etc. works are conducted recently to find the association of various organisms with cervical erosion. Chlamydia trachomatis was significantly associated with ectopy greater than 50% of total cervical area. He also written that acute as well as chronic cervicitis plays main background for the formation of the cervical erosion. Acute cervicitis : local tissue (i) Swelling - cervical congestion / oedema(ii) Excessive secretion of glands due to that mucous membrane ulcerates, superficially erodes, Erosion. Chronic cervicitis: infection period 2-3 weeks. Process of ulceration (destruction) and repair continues that changes histology of cervical erosion. Chronic cervicitis leads to erosion and recurrences also because unless infection is not cured process repeats.

Wollner’s view
As stated previously ovarian participation in cervicitis leads to erosion. Due to any cause after changing normality that is via change in anatomy, physiology pH change due to douche, chemicals etc. histology - hyper metaplasia transformation ultimately results into gradual denudation of epithelium process continues, forming erosion repair.

![Samprapti Chart](image)

Signs: Srava Presence of its own symptoms, Vivarnata, Daha, VedanaAvadarana of Mamsa
SAMPRAPTI
It is not hard and fast rule that one must get reference of each clinical conditions by its name.

Vaghbhath himself declared Also some Dosas with same Dushya can present variety of diseases in which each of them may not have name specially. But with the help of them one has to interpret the underlying pathology.

Here, one have to employ the same. So after screening the concept of Vrana very next step is Samprapti. If one want to set in the Ayurvedic light one has to design it on the basis of following aspects. Dosa Dusti Dusya Dusti Actual manifestation of the disease

Eventhough there is no direct indicator of such clinical manifestation which may perfectly match with cervical erosion; but concentrating on "As it matches or correlates with Vrana of Garbhasayagriva" (site specifically) i.e. for interpretation of Samprapti one has to consider all three entities equally those are:
1. Garbhasayagrivagata Vrana
2. Cervical erosion
3. Yonivyapads as its site is Yoni. One can put the "area of consideration" as Yoni on the basis of - Vrana - Lakshana. As just like vrana of any Sthana it is on Garbhasaya Griva and being site of Yoni as Yonivyadhi.

Causes of Garbhasayagrivagata Vrana can be divided into two categories.

(A) Dosa Dustikar Hetu
From above list one can said as
1. Mithya Ahara - Improper dietatic regimens
2. Mithya Vihara - Environmental factors, Improper habits, infections
3. Dushtagata - Harmonal imbalance Natural Induced by oral Contraceptives
4. Bija Dosa - Congenital
Considering Dusti of Bija (ovum and ovary) Ovarian - cervical axis damage
5. Daiva Idiopathic causes.

(B) Dusya - Dustikar Hetus / Khavaigunyakara Hetus
Actually after vitiation of dosas, the themselves vitiates Dusya and simultaneously by specifically Khavaigunyakara Hetus. Here these Hetusdose Dusya of Sthana resulting in local damage.

These Hetus can be enlisted as - one can consider Hetus of Agantujavrana for Sake of local pathology According to basis of Apanadusti Hetus as Yoni is Apanaksetra (As. Hr. Ni. 16/27-28).

Actually Dosa Prakopaka Ahara - Vihara covered this point.

Yonidustikara Hetus: local causes (As. Hr. Utt. 33/28).

Formation of disease
After considering aetiological factors, process of formation can be understood into two steps:
1. As with due course of time, vitiated Dosas passes on Sancaya, Prakopa, Prasaravastha, respectively.

Generally these are subclinical stages in Vranasamprapti. All three Dosas gets involved as it is told
Secondly they vitiates Rasa, Raketa, Mamsa etc. All three Dosadustitakes place via predisposing and precipitating Hetus like Usna, Tikshagunaof Pitta results Swinnata of Mamsa and Drava, Picchila Gunas of Kaphaincreases excessive Kleda and by Ruksa, Cala Gunas of Vata results Patanata Mamsa Along with Kaphapraprokapa Hetu Kledapotapūtringers and it comes on Samprapti process whole process ultimately leads to Vidarana, Darana Vinasa of Mamsa of Garbhashayagriva; which is covering of Mamsadhatuforming or presenting Vrana of that site i.e. Cervical erosion. Second side of it is Dusti of Rasa and Raktaaalong with local causes present as Sotha of Garbhashayagriva. Gradation of Sothavasthavaries with local irritability as acute; subacute, chronic inflammation. Accordingly severity of DosaDusyaDusti presentation differs as Srava quantity; Swarupa, Gandha, VranaSwarupa etc. varies but uniquely main Dosa in picture remains showing KaphaVrana. In Vyaktavastha in discussion of second set, wherever local deformity or Khavaigunyata comes in existence; may be slight or complete, potentially vitiated; Dosaenlodges in it and present as far. In present context Pittadosa and Kaphadosa play major role as damaging of normality of cervix. As with help of Kaphadosa, Pitta produces Sopha of cervix which is nothing but Purvavastha of Vrana as In this stage prolongs for long duration Rakta via Pitta dusti provokes signs of it. In local increased Pitta Vikriti does Swedana of Mamsa of Grivvwhich results into increase in Srava as Kledavat producing softness of localmembraneous tissue which easily erodes (Vidarana) resulting - Erosion. Symptoms starts VyaktavasthaAt this level.

Samprapti Ghatakas
Dosa - Tridosa mainly Vata, Kapha Dusya - Rasa, Rakta, Mamsa Mala - Khamala (Mamsalama)
Srotas - Artavaha, Rasavaha, Raktavaha Agni - Manda or Visama
Upadhatu - Artava, Raja
Sthana – Garbhashayagriva
Rogamarga – Bahyamarga
Here to quote or study Bhedavastha is interesting thing. One can state Bhedavastha of cervical erosion present with different clinical presentation.

Bhedavastha
If there is strong or positive involvement of VataDosa, since starting (mainly Apanavata) it presents with
associated symptoms related with abnormal or improper functions of vitiated Apana. It looses its potency to work which shows improper function or hamper the functions. Normal Function Abnormal Function
(1) Sukagrahana Leads to infertility - primary or secondary
(2) Artavaniskramana Shows Alpa or AtiPravrtti irregular menses
(3) MalapravrttiMalavastambha
As Ksetradusti persists Gambhirata and Visarapanata of disease provokes.

**Prognosis**
When whole process progresses disease produces other impairment as Upadravarupiya disease. In this casesUpadravas are very strong and can not be checked only by Vyadhicikitsa. Erosion can change into malignancy Re-infection of erosion as tuberculosis, syphilis etc.,Infertility due to Cervical factor Dyspareunia, Menstrual problems i.e. due to any cause. Concluding one can say that it is main the clinical presentation from patient to patient differs with underlying cause cervical erosion / Vrana of Garbhasayagriva.

**Concluding**
In this chapter it is concluded that Vrana concept of Ayurveda keepsmaximum similarity with erosion. i.e. Garbhasayagrivagata Vrana cervical erosion. It is Nija or Saririka and Kaphaja Vrana, Mamsavrina with accordance of DhatuAdhisthan and Dosika involvement at locally at Griva. Cervical erosion - not exactly presents any one single Yoniyyapada but its clinical presentation keeps similarity in symptomatic base and maximum correlation arrest at sign of Srava. Since, Ayurvedic classical reference about cervical erosion is not available directly or in details, but tried to compare erosion with above said angles.

**Cikitsa of Garbhasayagrivagata Vrana**
For assessment of (Potency) the efficacy of the selected drugs, last phase is clinical trial.
GarbhsayagrivagataVranais a variety of Vrana. Vrana of Agantuja origin, if not healed after 7 days, it is considered as NijaVrana and the treatment remains same as that of DosajaVrana. *Susruta has devoted a separate chapter in which he has mentioned the management of DosajaVrana starting from the Vranasotha. In Sutrasthana he has broadly mentioned seven measures and in Cikitsasthana these measures are elaborated into sixty varieties. *Susruta has uttered Agni as in Agropaharaniya Upayantra, Anusastra and one of the sixty measures of Vrana.

**Agni**
Dahanopakarana means which are the accessories like drugs, articles and other substances helpful in the act of cauterization. All the Acarya of Brhattrayi have enlisted the Dahanopakarana like Pipali, Salaka, Guda, Ghrita, Madhuetc. According to Su. Su. 12/10 Agnikarma chapter described to apply Agnikarma to treat the Vrana. In cervical erosion the epithelium of endocervix protrudes out and replaces the epithelium of ectocervix.Considering above SlokasPipali, Ajasakrud, Salaka used for the Agnikarma in TwacagataRoga, JambavaushtaSalaka and appliances made from other metal should be used for the Agnikarma in MamsagataRoga. Behalf of JambavaushtaSalaka, here Garbhasayagrivagata Vrana considering as MamsagataVrana. appliances made from Herbal VranaRopakaSalaka (contents already told) is used for the Agnikarma.

**Ksararkarma**
Treatment by Ksara is technically termed as Ksara karma. AcaryaCaraka has mentioned 18 parts of herbal drugs which can beused in medicinal purpose and Ksara is one among them. AcaryaSusruta has utteredKsara in Anusastra,Upayantra, Agropaharaniniya and one of the Upakrama of Vrana.

AcaryaCaraka considers it as one of the three fold treatment i.e. SastraPranidhana, AcaryaSusruta defines the Ksara, the substance possessing Ksarana and Ksalana properties. Explanation of these two words by Dalhan - Ksara means one which mobilises and removes the deformed skin, flesh etc or which removes the vitiated Dosas.

**4. Cervical erosion**
Cervical erosion is interplay between two epithelium.

(i) Pathology
Though cervical erosion is variety of Vrana. The opinion is divided in the process of formation of cervical erosion. Here most acceptable process of cervical erosion based on histological appearance is given: Which includes two processes.
(i) Process of formation - Denudation or - Formation of erosion
(ii) Process of Reepidermization - regression of erosion.

(i) Formation of erosion
In the active phase of erosion, squamocolumnar junction moves out from the os due to inflammation, infection, trauma, hormonal changes, changes in pH results into swallowing of squamous epithelium. It becomes very delicate gradually it goes off viz. continuing process leading to "Erosion". Gradually that part gets covered with columnar epithelium. Columnar epithelium may be arranged in a regular pattern, sometimes it proliferates and forms villious projection as a papillary erosion. Among all causes may Erosion has indicated. Infective "inflammatory reaction" is major one. As due to chronic infection which depends denudation - forming erosion among another theories.
Also Rugi and Veight (Masani) stated that single layer of cells covering the erosion represents the basal layer of stratified squamous epithelium of vagina and not the extent of columnar epithelium of the cervix. And according to them the branching glandular crypts which are formed by columnar cells of the basal layer dipping into fibromuscular layers. Interplay between two epithelium attributes to change in patients of vaginal secretion. So of all theories, about production of erosion or mechanism of progression of erosion is mainly based on histology. An erosion is not a static condition and line of demarcation between two types of epithelium moving from external os. Whenever it is towards os it is said to be healing and away from os it is said to be spreading erosion.

(i) Progress of Regression (Reepithelization)
Whenever aetiological factors disappears, then alteration in pH takes place reverse mechanism of cells goes on columnar epithelium over erosion which is sensitive to this pH.

It retracts towards canal or dies and again gets replaced by squamous epithelium. In this process healing takes place via two types.
(1) According to Mayer - ascending healing (Masani) As the endocervical infection subsides, the squamous epithelium from sides advances along the basement membrane and columnar epithelium is lifted up and destroyed. Squamous metaplasia / epithelisation. This is called Ist stage of healing.
(2) Not only eroded surface once again gets covered with squamous stratified epithelium but this epithelium appears with advancing tongue like projections into newly formed glands in fibromuscular surface destroying columnar epithelium lining them. The entire gland lumen is filled by this advancing squamous epithelium, when all glands get destroyed then healing is over. This is called 2nd stage of healing.

Various forms of erosion Division of Erosion
(a) Congenital (b) Acquire: 1. Simple flat 2. Papillary 3. Follicular / cysticarious forms of erosion which are morphologically described as:

(a) Congenital
It is not a pathological condition with incidence 30% Fischel / 64% Terruhun. During intrauterine life, vagina and vaginal portion of the cervix are lined by transitional epithelium. This epithelium extends into the cervical canal until 6th months. Towards end of intrauterine life, columnar epithelium grows down from cervical canal and in 1/3 of all newborn females is extends to some degree over the vaginal part of cervix. This condition persist for only a few days until the level of oestrogen from mother falls and 'congenital' erosion heals spontaneously. The real congenital erosion occurs or reappears under the influence of oestrogen at puberty and may persist into adult life.

(b) Acquired
Histomorphological classification of erosion
(1) Simple flat
During early stages of established cervicitis desquamation shedding of epithelium around os. Due to loss of epithelium by inflammation and Constant bathing of epithelium by irritating discharge. In healing procedure simply singular covering of columnar cells presents as red glistening area which is simple flat erosion. It is having smooth surface and very few glands open on its surface. Microscopically it reveals the tissues beneath raw area that are infiltrated with round and plasma cells.

(2) Papillary erosion
In this erosion similar islands of both columnar and squamous epithelium are seen. It is produced by column of cervical stroma going into the erosion from above, so that surface of erosion becomes rigid and furrowed. In this way false glands are formed which penetrate into the cervical stroma. The papillary effect is mainly the result of local proliferation. It can be easily infected by vaginal organism.

(3) Follicular / cystic erosion
It is considering that improper or about healing of erosion via squamous epithelium. The healing stage of endocervicitis and chronic discharge get abated. Squamous epithelium regrows towards the external os replacing columnar epithelium which undergoes to atrophy and disappears. Alternatively basal cells of columnar epithelium proliferates, becomes metaplastic to form stratified epithelium mouth of the gland may produce retention of cyst like elevation of surface of the portio. These called as Nebothian follicles / cysts.

Cervical erosion: In microscopic section shows
(1) The eroded area around the external os on the portio vaginalis shows denudation of squamous epithelium and then covering of that by columnar epithelium with formation of new glands.
(2) In follicular type, surface is covered with stratified columnar epithelium with underlying retention cysts.
(3) The endocervix and cervical erosion shows the picture of chronic inflammation, round cells infiltration and fibrosis of inflammatory type.

5. CONCLUSION
Though several effective treatment have been stated for various gynecological disorder in Ayurveda at existing, most of them are still deficient in systemic clinical and biological studies with the best parameters making them rational. In beginning of sampraptif Garbhahshaya GrivagataVranaprominent Doshas are Tridoshas. The Doshas have role in all type of Yoniyapad. The sampraptivighatanastarts with elimination of Dosha-dusti. Ultimately proper Vrana(wound) healing occur and which may cure GarbhahshayaGrivagataVrana.
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