



ETIOPATHOLOGY, PREVALENCE, CLINICAL FEATURES, RISK FACTORS AND COMPLICATIONS OF CERVICAL CELL PATHOLOGY IN AYURVEDIC PARLANCE: A CROSS SECTIONAL SURVEY STUDY

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ABSTRACT

Introduction: Cervical erosion is a common finding in routine gynaecological practices and recurrent and non-healing erosion is considered as a warning sign of development of cervical cancer. There is lack of sufficient data to interpret the condition in Ayurvedic parlance and formulate a standard treatment protocol which can successfully prevent the cervical cancer. This survey is a humble effort for understanding the prevalence of the cervical erosion, its etiopathology and clinical features in Ayurvedic parlance including their risk factors and complications. **Materials and Methods:** A cross sectional survey study with a sample size of 100, among married women under the age group of 21-65 years attending the OPD of PTSR department of I.P.G.T. & R.A. Jamnagar. **Observations and results:** Prevalence of Cervical erosion (88.00%), CIN-1 (04.00%) and CIN-2 (01.00%) were found in the survey. Excessive use food items with *Amla(sour)* and *Lavana(salty) Rasa(taste)*, faulty dietary habits and *Mandagni* (poor digestive capacity) were found as general etiological factors. *Yoni Srava*(discharge per vagina), *Yoni Kandū*(itching in vagina), *Yoni Dāha*(burning sensation in vagina), *Yoni Daugandhya*(foul smell in vagina), *Mutra Dāha*(burning micturition), *Kati Shoola*(low back ache), *Udara Shoola*(lower abdominal pain), *Daurbalya*(fatigue), *Maithunashishmūta* (dyspareunia) and *Maithuna Paschat Rakta Srava*(post coital bleeding) were found to be the major associated symptoms. Reproductive age, poor socio-economic status, early age of marriage, multiple sexual partners, multiparity, recurrent abortions and surgical interventions, and lack of hygiene were found to be the risk factors. **Discussion and Conclusion:** The etiopathology and clinical features of cervical pathology are similar to the concept of Vrana more than that of a Yoni Vyapad. So, the condition should be treated with the approach of Vrana Chikitsa for its early healing and preventing the recurrence and further complications.

KEYWORDS : cervical pathology, cross sectional survey, cervical cancer

INTRODUCTION

Cervical cancer is the fourth most common cancer among women. However, 85% of cervical cancer diagnoses and related deaths occur in women living in low and middle-income countries. According to the World Health Organization estimates, approximately 122,844 new cases and 67,544 deaths were due to cervical cancer in India, accounting for nearly 1/3rd of the global cervical cancer deaths in 2014. Globocan 2018, recognized cervical cancer as the second most common cancer among Indian women. But an interesting fact is that cervical cancer is a highly preventable disease with excellent primary and secondary prevention strategies. But for developing countries like India, it is critical that we achieve relatively high screening coverage rates as well as ensure that screen-positive women receive appropriate diagnostic and treatment services.

Even though there are no direct reference of cervical pathologies in the classical text books of Ayurveda, now a days, the role of an Ayurvedic gynaecologist is crucial to detect the cervical pathologies at the earliest stage. Ayurveda can offer remarkable relief in signs and symptoms of cervical pathologies through various treatment modalities such as parasurgical procedures like Agni Karma(thermal cauterization), Kshara Karma(alkaline cauterization), internal medications and local procedures like Prakshalana(douche), Avachurnana(application of medicated powder), Kalkadharana (retention of medicated paste) etc. which can lead to greater achievements in the field of prevention of cervical cancer, especially in India.

Cross sectional Survey studies are really helpful in the systematic collection of information. It may help to define the prevalence of a disease, identify the etiological factors and investigate quality of life, exposure to risk factors etc. The proper understanding of the prevalence of the cervical pathologies among the patients attending a regular OPD of Ayurvedic gynecology, and the etiopathology and clinical features of cervical pathology in Ayurvedic parlance, their risk factors and complications will help an Ayurvedic gynaecologist to formulate standard treatment protocols for preventing and managing the conditions at the earliest stage. Thus, it can serve as a remarkable contribution from Ayurveda for prevention of cervical cancer.

MATERIALS AND METHODS

100 married women under the age group of 21-65 years attending the OPD of PTSR department of I.P.G.T. & R.A. Jamnagar with the complaints of white discharge or abnormal vaginal discharge, and post coital bleeding were screened to elicit the etiopathology, prevalence,

clinical features, risk factors and complications of cervical cell pathologies. A Cross-sectional Survey was done during the time period of June-November 2018, with the help of a specially designed proforma (which was already subjected to validation by the subject experts in previous PG-PhD research works). The survey proforma included the findings of assessment based on self-reported symptoms such as excessive and abnormal vaginal discharge, post coital bleeding etc. suggestive of cervical cell pathology, detailed history of presenting complaints, general examination, per speculum and per vaginal examinations, and conventional PAP smear test. Survey procedure was performed by direct interview method by a single person in local language. Informed written consent was taken from all the participants participated in the survey. Conventional PAP Smear was used as the screening test for cervical pathologies.

OBSERVATIONS AND RESULTS

In demographic data, 84% belonged to the age group of 21-40 years which is the reproductive age group. 83% of patients were belonging to Hindu religion. 97% were leading an active married life and among them 32% women were having a married life of more than 15 years. 40% of patients were uneducated and 90% were house wives. 70% were having low socio-economic status. 54% of patients were residing in rural area and 64% were belonging to nuclear family.

Prakruti Pariksha of survey patients revealed that 55.00% of patients were having Vata-Pitta Prakruti. While considering the etiopathology, 54.00% of patients were found to be having Mandagni (diminished state of digestive fire). The major faulty dietary habits called Samashana (consumption by mixing the wholesome and unwholesome food articles) and Vishamashana (untimely intake of excess or less quantity of food) were found in 60.00% and 62.00% of patients respectively. Mainly Amla(sour) and Lavana(salty) Rasa dominance was observed in the diets of 57.00% and 49.00% of the patients respectively. Excessive use of food articles prepared from Maida(finely milled, refined and bleached wheat flour) was found in 94.00% participants and that of Besan(gram flour) was found in 59.00%, Vidahi (food which create abdominal discomfort with burning sensation) type of food in 86.00%, fermented food in 52.00% and lack of exercise were found as general etiological factors. Only 02.00% of patients were reported as using OC pills, only 05.00% were found to be addicted to tobacco products.

Prevalence of Cervical erosion was found as 88.00%. Hypertrophied cervix was found in 67.00% of patients, cervicitis in 41.00%, and

nabothian cysts were found in 16.00% of patients. The PAP smear reports of the survey patients showed that majority of patients (78.00%) were having acute and chronic cervicitis, 09.00% were having acute cervicitis, 07.00% were having chronic cervicitis. Prevalence of CIN-1 was found as 04.00% and prevalence of CIN-2 was found as 01.00% in the survey. (fig : 1,2)

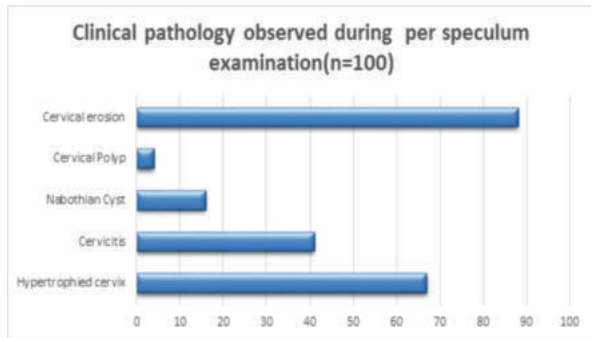


Figure 1: Clinical pathology observed during per speculum examination(n=100)

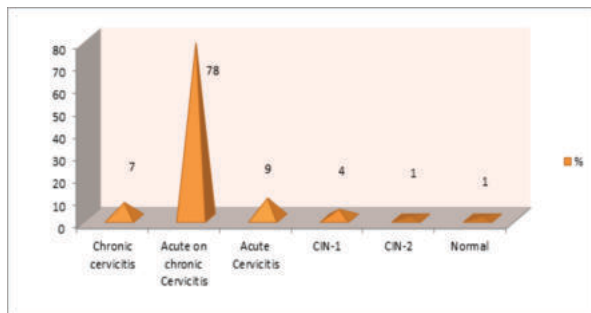


Figure 2: PAP Smear Report(n=100)

The clinical features found in 100 patients are given in the table 1

Table 1: Clinical symptoms found in 100 patients enrolled in the survey study

Sl No:	Clinical feature (Symptom)	Number of Patients
1.	Discharge per vagina	100
2.	Itching in vagina	77
3.	Burning sensation in vagina	28
4.	Foul smell of vagina	27
5.	Low back pain	84
6.	Fatigue	55
7.	Burning micturition	50
8.	Dyspareunia	47
9.	Lower abdominal pain	37
10.	Post coital bleeding	03

On per speculum examination, cervical discharge was found in 100% of patients. The nature of discharge per vagina, was watery in 8 patients, mucoid in 31 patients, curdy in 31 patients muco-purulent in 30 patients.

Apart from these, signs of inflammation like swelling and redness were observed in vulva in 06.00% of patients. Vaginitis was present in 35.00% of patients.

Cervical erosion was found in 88.00% of patients, hypertrophied cervix in 67.00% of patients, cervicitis in 41.00% of patients, and Nabothian cyst in 16.00% of patients. Cervical polyp was found in 04.00% of patients. While observing the type of erosion, 52.27% patients were found to be having simple flat type of cervical erosion, while 45.45% patients had follicular type. Papillary erosion was found in 02.27% of patients.

In the present survey, early age of marriage, marital dissolution and remarriage (possibility of multiple sexual partners), multiparity and vaginal delivery, recurrent abortion and related surgical interventions, lack of hygiene during menstrual and puerperal period in terms of materials used, abstinence etc. and lack of sexual hygiene in general were found to be as risk factors of cervical pathologies.

In screening of Cervical cancer by conventional PAP Smear method, four patients reported as the cases of CIN 1 and one patient as CIN 2 stage. No any cases of malignancies were reported. But if early detection and timely treatment was not provided, there may be chances of development of cervical cancer in future because many of the patients were already exposed to various risk factors. While eliciting the other possible complications of cervical pathologies, 06.00% of patients were found to be having primary infertility and 01.00% of patients were suffering from secondary infertility which may be due to cervical factor but the survey failed to strictly evaluate and eliminate the other causes of infertility.

DISCUSSION:

In this survey, the most prevalent cervical pathology was found to be the cervical erosion with a prevalence of 88% in the sample population who presented with the symptoms like abnormal white discharge per vagina, post coital bleeding etc. In previous studies conducted long time before, the prevalence reported for erosion ranged from 17 to 50%.As its course is usually time-limited, the prevalence estimates in a population will detect only the women with ectopy at that particular time. In such populations, some women will already have had this condition and others may develop it. It is likely that most women, if not all, will have cervical erosion at some point during their lifetimes. While analyzing the previous survey studies, majority of the studies found a positive association between Chlamydia infection and ectopy. In present study also, the association of various infections were evident even though the study did not analyze it in term of the causative organisms specifically. Previous studies have shown that there is an association between ectopy and both HPV and CIN, and that ectopy favors the occurrence of these two conditions. So. ectopy can be taken as a risk factor for cervical cancer. Even though no any malignant cases are reported in present survey, cases of CIN 1 and CIN 2 were observed with the signs and symptoms and association of erosion in present study. The presence of ectopy has long been assumed to constitute a biological vulnerability to HPV infection, and its further progression into premalignant and malignant conditions. But screening for HPV was not provided in the present study due to inadequate financial support and limited resources. In previous survey studies in the field of prevention of cervical cancer, in depth information on various socio demographic factors, sexual behaviour, obstetric, menstrual and hygienic practices were elicited. The studies on risk factors of cervical cancer were available since early seventies. But most of the studies recruited invasive cancers reporting to cancer clinics. No information was available for early cancerous or pre cancerous lesions (CIN I-III). The Institute of Cytology and Preventive Oncology (ICMR) New Delhi launched the first study, involving pre- cancerous and early cancerous lesions in 1976. The study examined the biological behaviour of precancerous lesions and the effect of certain socio-demographic and biological factors on progression of dysplasia to higher grades The presence of above said risk factors were evident in the present survey also, but the study failed in the critical analysis of those factors among the sample population due to various reasons.

The present survey had been conducted in a very small sample size, in limited set up and more importance was given to elicit the etiopathogenesis and other details in Ayurvedic parlance. The Nidana(etio-pathology) observed here are comparable with the Samanya Nidana (general causative factors) of Vrana as well as Yoni Vyapad and some additional Agantuja Nidana(external causative factors) which are supposed to play some role in the Samprapti (pathogenesis) were also found and these may be considered as risk factors also. The clinical features like abnormal discharge, post coital bleeding and appearance in per speculum examination are suggestive of incorporating cervical pathologies under the broad umbrella of concept of “Vrana” as per the Yukti of the physician.

Even though cervical erosion and other pathologies are not at all an ulcer, there is a replacement of cells and change or discontinuity in the normal epithelium of the structure which finely suites the definition of a Vrana as “destruction or discontinuity of normal tissue”. Moreover, the appearance and associated infections make it satisfy the Lakshana(cardinal features) of a Vrana like Varna(colour change), Srava(discharge), Vedana (associated symptoms) etc. In cervical pathologies, different kinds of Nidana(causative factors) acting on either systemic or local levels, lead to vitiation of all three Dosha (Vata, Pitta and Kapha) in the body which in turn leads to the vitiation of tissue elements like Rasa, Rakta and Mamsa Dhatu. In those who are at risk of Kha-Vaigunya (structural or functional deformity) in

Artavavaha Srotas(female genital tract), the formation of Vrana occurs which is evident at Garbhashaya Mukha (cervix).

CONCLUSION:

Cervical erosion was found to be the most prevalent cervical pathology which has no direct role in pathogenesis of cervical cancer. But the superimposed infections like *Chlamydia trachomatis* and *Neisseria gonorrhoeae* leading to STDs and other viruses like HIV and HPV can lead to life threatening complications. The Ayurvedic treatment principle should combine both the local and systemic approach of *Vrana Chikitsa* in cases of cervical pathologies for their early healing, preventing their recurrence and development into premalignant and malignant lesions.

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