



## REVIEW ARTICLE

### UNDERSTANDING HPV INFECTION THROUGH AYURVEDA

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#### ABSTRACT

Human Papilloma Viruses are members of a large family of viruses known as Papovaviridae. A number of patients infected with the above virus visit Ayurveda hospitals daily. This article is an effort to interpret the HPV infection through Ayurveda.

#### INTRODUCTION

Human Papilloma Viruses are members of a large family of viruses known as Papovaviridae. They are small, non-enveloped double stranded (ds-DNA) tumor viruses with an icosahedral capsid constituted by 72 capsomeres. They can infect basal cells of a differentiating squamous epithelium and mucous membranes of human beings (Shalini Rajaram, 2012). Epidemiological and laboratory evidence reveals HPV as an essential cause of cervical cancer, which is the commonest genital tract malignancy, among females in India. Over 99.7 % of patients with Cervical Intraepithelial Neoplasia (CIN) and cervical cancer are found to be positive with HPV-DNA (J.C.E Underwood, 2007). According to modern science HPV infection is a Sexually Transmitted Disease, Eventhough it is considered as STD, many immuno compromised conditions like early sexual contact, multiple sexual partners, multiparity, low socioeconomic conditions, undernourishment, smoking, oral contraceptives etcfavours the infection. *Susrutha* the author of *SusrutaSamhita* and *Vagbhata* the author of *Ashtanga Hrudaya* had recognized a number of *rogas* (diseases) as *Oupasargikarogas* (communicable diseases). According to them they are spread by *Prasanga* (intimate and frequent physical relationship), *Gatrasamsparsha* (physical contact), *Nishwasa* (airborne), *Sahabhajana* (eating together from same utensil), *Sahashayana* (sharing same bed) etc.<sup>3</sup>*Vagbhata* has observed in addition that majority of diseases affecting skin and eyes are communicable (*Vagbhata*). Like any other illness *vyadhikshamatwa* and *vyadhibalavirodha* (natural and innate resistance.) play a major role in clearing HPV infection.

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#### Pelvic Inflammatory Diseases (PID)

PID is emerging as a common gynecological disorder in India. It is an inflammatory condition of female genital tract, involving uterus, fallopian tubes, ovaries, pelvic peritoneum and surrounding structures .A recent study shows that women having Pelvic inflammatory disease in rural area of Maharashtra is 24%, rural and urban area of Karnataka is 11%, rural area of Kerala is 5.9% and in Delhi 26.2%.<sup>5</sup> The prevalence of acute PID in South India was reported to be 5.2%, in Bombay urban slums 16.5% in urban Calcutta it was reported to be 17.2%.<sup>6</sup> Despite better understanding of the etiopathogenesis, improved diagnostic tools such as ultrasound or laparoscopy and wide range of antimicrobials, it still constitutes a health hazard both in developed and more so in developing countries. The incidence of pelvic infection is on the rise due to rise in sexually transmitted diseases. Signs and symptoms of PID include lower abdominal pain, abnormal vaginal discharge, dysuria, dyspareunia and bleeding disorders. Untreated PID can result in long-term complications including infertility, chronic pelvic pain, ectopic pregnancy and even carcinoma cervix. Modern medicine has attributed the cause of PID to various bacterial and viral Axinfections- like Chlamydia trachomatis, Neisseria gonococci, HIV, Human papilloma virus (HPV) etc. A strong association exists between PID and Carcinoma Cervix. Studies have shown PID as a risk factor for Carcinoma Cervix (J. Skapinyez/ Smid, 2003).

#### Etiology and Pathogenesis of Pariplutha

*Vagbhata* has mentioned 20 *Yonivyapath* (gynaecological diseases) in the 33<sup>rd</sup> chapter of the *Uttarasthana* of *Ashtanga*

*Hrudaya* (Vagbhata). They are *Vatiki*, *Aticharana*, *Prakcharana*, *Udavartha*, *Jataghni*, *Antharmukhi*, *Soochimukhi*, *Sushka*, *Vamini*, *Shanda*, *Mahayoni*, *Paithiki*, *Raktayoni*, *Slaishmiki*, *Lohitakshaya*, *Paripluta*, *Upapluta*, *Vipluta*, *Karninee*, *Sannipatiki* (Vagbhata). Ayurveda is a time tested science where the equilibrium of *Vata*, *Pitta*, *Kapha* (three Humors) is interpreted as the yardstick of good health and a disturbance to the above equilibrium would manifest a disease (Vagbhata, 2015). In Ayurveda almost all gynecological disorders are included under the heading *Yonivyapath*. Eventhough 20 gynecological diseases are told, we can include a broad spectrum of disorders under each heading. Among *vimshatyonivyapath*, *Pariplutha* is characterized by lower abdominal pain, pelvic pain, abnormal vaginal discharge (mucopurulent or blood stained discharge per vaginum), painful sexual intercourse, heaviness of abdomen, severe tenderness over lower abdomen, bleeding disorders, etc. which stands very close to PID. In *Pariplutha*, the main doshas involved are *Vata* and *Pitha*. Constant practice of *pithavardhakaraahara* in excess or daily intake of food with properties like *lavana* (salt), *amla* (sour), *katu* (bitter), *ushna* (spicy), e.g. curd, fish, pickles, sour fruits, etc. vitiates *pitha*. Too much exposure to hot environment, working in hot climates and places, wearing tight polyester undergarments, etc are other contributing factors. Mental factors like *krodha* (anger), *soka* (grief), *bhaya* (fear) and *vidagdhamaidhuna* (physical factors like unsatisfactory or disturbed sexual intercourse), *vegadharana* (unsatisfied common physiological urges like thirst, hunger etc) during sexual act aggravates the condition. During *Saratritu*, the heat in the atmosphere causes dissolution of accumulated *pitha* and creates *pithaprakopa* (vitiating of *pitha*). As *pitha* vitiates, correspondingly *rakta* (blood) also vitiates and results in menstrual complaints like menorrhagia and blood stained vaginal discharges. As *arthava* (ovum) is the *upadhatu* (derivative) of *rasa* and *rakta*, *arthavadushti* (vitiating of ovum) leads to complications like infertility, menstrual disorders and abnormal vaginal discharges. Simultaneous *Rasavaha*, *Raktavaha*, *Mamsavaha* and *Arthavavahasrotas* (minute channels of metabolism) gets vitiating and manifests the symptoms of PID like *soonah* (cervicitis, endometritis etc), *sparshaasah* (cervical mobility tenderness or dyspareunia), *arthi* (dysmenorrhoea), *peethasravahini* (purulent or blood stained discharge per vaginum) etc (Vagbhata, 2008). *Vatadosha* (one among the three humors) also plays a crucial role in this disease process. As *garbhasaya* (uterus) is in the *viseshavatasthana* (specific seat i.e. lesser pelvis), chance for *Apanavatavaigunya* is more in women.<sup>12</sup> Ingestion of food predominantly *katu*, *kashaya* and *tiktharasas*, *seetadravyas* like ice-creams, juices, refrigerated food items, violent exercises, excessive sexual intercourse, suppression of natural urges especially sneezing, *adhovata*, *mootra* etc. predominantly during sexual contact, fasting, under nourishment and emotional factors like *soka*, anxiety, fear, etc. aggravates *vata*. The aggravated *vata* along with vitiating *pitha* gets located in *garbhasaya* and manifests the disease *Pariplutha*.

### DoshaSammurchana (etiopathogenesis)

Every *dosha* has certain qualities which are antagonistic to the qualities of other *dosha*. Example – *rooksha* and *sheeta* qualities of *vatadosha* are antagonistic to *snigdha* and *ushnaguna* of *pitha*.<sup>13</sup> Hence when they get severely vitiating

and combined, they cause *sammurchana* between them. In *Pariplutha*, instead of nullifying each other, they interact and produce *Ama*. The nature of this *ama* is more toxic and drastic than the *ama* which is formed because of *agnimandya*. The *amathus* formed cause serious pathological changes. While discussing the complications of *yonirogas*, *acharya* tells that if *yonirogas* are not treated properly, they will transform into *Daruna vyadhis*.<sup>14</sup> Here also untreated *Paripluta* or PID can lead to cervical malignancies. If not managed properly, it will transform into *Sannipathiki* and later become a *darunavyadhi* – Carcinoma Cervix. HPV gains easy access for its entry, spread and carcinogenesis. Thus if it is not managed properly, can lead to Ca-Cervix.

### Cervical Intraepithelial Neoplasia (CIN)<sup>15</sup>

Invasive cervical cancers are usually preceded by a long phase of preinvasive disease. This is characterized microscopically as a spectrum of events progressing from cellular atypia to various grades of Dysplasia or CIN. Clinical early diagnosis has been responsible for the reduction in mortality from cervical cancer in developed countries which is achieved by cervical cancer screening. Cervical cancer screening includes tests like Pap-smear, Colposcopy and HPV-DNA testing.

### Management of HPV Infection

Currently modern medicine offers no medical treatment for curing HPV infection and related lesions other than surgical procedures. Moreover worldwide, as a preventive measure they prefer vaccine- *Cervarise* and *Gardasil*, which are expensive and not free from side effects.<sup>16</sup> More than two-hundred types of HPV has been identified yet, of these more than 30 strains are high risk oncogenic viruses. Moreover these vaccines covers only four strains of viruses – 19, 18, 31 and 33, while Ayurveda holds an ocean of possibilities in curing HPV infection.

### The treatment principles in brief are

- *Nidanaparivarjana* (avoiding the root cause)
- *Sodhana* (expelling the toxins from the body) *Snehapana* (oleation as a pre operative procedure), *Virechana* (purgation), *Uttaravasthi* (administering the drug through vagina)
- *Vata – Pithasamana* (medications pacifying *Vata* & *Pitta*) advised by a recognized Ayurvedic medical practitioner
- *Agni karma* (Cauterisation) and *Kshara karma* (applying alkali) for tissue destruction.
- Enhancing *Vyadhikshamatwa* (Immunity)

### Conclusion

Passage of centuries has led to development of new diseases. Many of these diseases were said thousands of years back by our *Acharyas*. *Pariplutha* and related HPV infection is one such condition. A meticulous study of both these conditions is essential for the proper application of Ayurvedic treatment principles to provide successful management.

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