WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 12, Issue 17, 1121-1129. Review Article ISSN 2277– 7105

MANAGEMENT OF CHARMKEEL BY AGNIKARMA- A CONCEPTUAL REVIEW WITH ITS MODERN ASPECT

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Article Received on
18 August 2023,

Revised on 08 Sept. 2023,
Accepted on 28 Sept. 2023

DOI: 10.20959/wjpr202317-29833

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ABSTRACT

All the clinical features of *Charmakeela* can be compared to warts. *Charma keela* occur at any age, but are unusual in infancy and early childhood. The incidence increases during the school years. Wart is cutaneous and sometime mucosal lesion caused by Human papilloma virus. Ayurveda is the most ancient science of human civilization. *Sushrut Samhita* is the most important literature of *Ayurvedic* surgery. In *Sushrut Samhita* various Para surgical procedures is mentioned in different disease condition. *Vata* and *kaph* are dominant doshas in this disease.[1] *Agnikarma* are complete cure of disease to avoid recurrence.[2] By *Agni* it *Usna, Sneha guna* pacifies *vata* and *kaph* and mechanically burn unwanted tissue if done directly by *Panchadhatu Shalaka.*[3] In present study a humble attempt has been made to evaluate the conceptual review of Charmkeel with its management by Agni karma with the use of *Panchdhatu Shalaka* as per ayurvedic classics, and its importance in modern day of *Ayurvedic* surgical practice. This study concludes that *Agnikarma* is very effective, easy and simple procedure that can employ as outpatient procedure.

KEYWORD: *Agni karma, Panchdhatu Shalaka, Charmakeela, Khuudra-roga.*

INTRODUCTION

The very first reference about *Charmakeela* is found in *Sushrut Samhita. Acharya Sushrut* has described in detail about *Samprapti, lakshana* and chikitsa of *charma keela*.[4] Reference of *Charmakeela* is not available in either Vedic or Pre-Vedic literature. Among *Bruhatries*, *Charmakeela* references are available in *Sushrut Samhita* and *Ashtanga Hridaya*. Among *Laghutries Charmakeela* references are available in Madhavanidana and *Sharangadhara Samhita*. In *Yoga Ratnakara* and *Gadanigraha* there is mentioning regarding the *samprapti* and *chikitsa* of *charmakeela*. Even though there are many other references regarding *Charmakeela* the *nidana* and *chikitsa* is similar to explanations of *Sushrut. Sushrut Samhita* is the main pillar of *ayurvedic* surgery in which many surgical and Para surgical procedure are mentioned. *Sushrut* while defining *Shalya tantra* says "*Yantra Sastra Khara Agni Pranidhanam*". *Agni karma* is true cauterisation**.** Cautery can be done by *kshar* also, but *Agni karma* is better than *kshar* due to complete eradication of disease. *Sushrut* advises four types of *Agnikarma* and classified burn injury into four grades. *Vagbhata* also described concepts of *Agnikarma. Acharya charka* indicated *Agnikarma* in *Charmkeel. Charmakeela* is one of the common clinical entities encountered in general practise. Over all general incidence of *charma keela* varies from patient to patient. *Charmakeela* is a condition which is prevalent from ancient times which needs treatment more in correspondence as a cosmetical reasons. Specific treatment has been elicited in Ayurveda for this clinical entity without its recurrence. *Charma keela* is one of the *Kshudra raga* mentioned by *Acharya Sushrutha*.[5] Of all the futile disorders of the skin, it's would be hard, to find any that are regarded with the greater contempt by the lay public and yet capable of resisting a greater variety of treatment than the group of papillary lesions commonly known as Warts.

***Charmkeel* in *ayurvedic* classics**

Shabdhotpatti (Derivation): *Charmakeela* is derived from the words '*charma'* and '*keela'*. The word *charma* is derived from '*Char + sarvadhathubyo manin'*. Here '*char* 'means*dhatu*, '*ma'* is *pratyaya*. The word *keela* means "*keelyatha rudyathe sou anentra vaa*" That which pricks like nail.

Nirukti: '*Charmani guhyasya charmapi keela ivethi vaa'*. Binding or *keela* (nail) formed on the *charma* or in the *charma* of *Guhya Pradesh* like 'Anus' (*guda*) is known as *charmakeela 'Charma keelatheethi'* That which takes the form of *keela* (nail) or binding on *charma* (skin) is called *charmakeela*.

Samprapti of charmakeela

Sushruta opines that, the *prakupita Vyana Vayu* getting aggravated and associating with *kaph* gives rise to peg or nail shaped, immovable sprouts in the exterior of the skin, these are called as *charmakeela* or *charmaarsha*. These sprouts (*charmakeela*) give pricking pain because of *vat*, the growth has Knotty shape and the colour of lesion is similar to the surrounding area of the skin is due to *kaph*. These *charmakeela* which is dry, black in colour or sometimes white, smooth to touch and profound hardness is produced by *pitta* and *Rakta*. *Charmakeela* is considered as one sort of *Ksudraroga*. The *prakupita Vyana Vayu* along with *kaph* gives *Toda* and *parusha*. *Pitta* will cause *sheetata* and *Rakta vrana*. *Kaph* will cause *snigdhatha savarnatha* and *grathitwa*.

Chikitsa of charma keela

Treatments of *Charmakeela* mentioned inclassics are

(1) Agni karma

(2) Kshara karma

(3) Chedana Karma

Acharya Sushrut has defined the above treatments in different chapters, i.e.the elaboration of Agni, *Kshara* and *Chedana* is demonstrated in the respective context. Surgical excision should be performed for *Charmakeela* later treated with Kshara and *Agni*. *Charmakeela* (*Jathumani, Tilakalaka* and *Mashaka*) should be treated by *Chedana* with a *Shastra* and later with a *Kshara* or *Agni*. "*Charmakeela Jathumani Mashaka teelakalak and utkrutya shastrana dhayat Ksharagnibhya asheshathaha" its Bhava Prakash. Bhava Prakasha* opines that *charma keela* should be either excised with a *Shastra* then it should be treated with *Kshara* or *Agni*. Along with *Bhavaprakasha* other authors like *Ashtanga Sangrahakar*, Gadanigraha, and Yogaratnakara followed the same line of treatment adopted by Sushrut.

Procedure of *agnikarma* in *charmakeela*

Materials: - *Panchadhatu Shalaka*, Ghritkumari pulp (Aloevera gel), gas stove, gauze piece.

Procedure of *agnikarma* - Written consent of patient was taken. Affected part cleaned with *Panchvalkal kwath*. With the help of surgical blade, *Charmakeela* was removed from its base. The *Panchdhatu Shalaka* is heated up to optimum temperature and applied on *Charmakeela until Samyakdagdha lakshanas* appearance.[6] Sushruta has described Samyakdagdha lakshanas as anaawagadh, suvyavasthit *vrana*, talphalvarnata, twaksankoch.[7] Mild and tolerable burning sensation was observed during procedure which was controlled by

applying *Ghritkumari pulp* (Aloevera gel). After completion of *Agnikarma* wound was kept open.[8] And Patient observe 7, 14, 21, and 28 days.

Modern expect of charmakeela

Aetio pathogenesis

Papilloma virus: Human papilloma virus (HPV) are very wide spread to ubiquitous in humans, causing subclinical infection or a wide variety of benign clinical lesions on skin and mucous membranes. They also have a role in the oncogenesis of cutaneous and mucosal premalignancies and malignancies. Morethan 150 types of HPV have been identified and are associated with various clinical lesion and disease. They infect squamous epithelia of skin and mucous membranes. Clinical lesions induced by HPV and its natural history are largely determined by HPV type. The production of virus particles and virion antigens depends on the state of epithelial differentiation, the fact that the benign papilloma's progress towards dysplasia. The role of immunity and genetic susceptibility to papilloma virus infection are incompletely understood. The decrease in frequency of warts with age implies that resistance to infection develops over time, and much of this resistance may be immunologic. Although the humoral immunity may contribute for resistance to infection, most evidence suggests that cellular immune reactivity plays a significant role in wart regression. Individuals with defective cell mediated immunity are particularly susceptible to papilloma virus infection, and their infections are notoriously resistant to treatment. HPV infection occurs through inoculation of virus into the viable epidermis through defects in the epithelium. HPV's infect keratinocytes and initiate infection through microscopic lacerations in the epithelium which provides access to basal cells. HPV transmits through skin-to-skin contact. Minor trauma with breaks in stratum corneum fascilitate epidermal infection. Contagion occurs in groups of small (home) or large (school gymnasium), and in immune suppressed condition. HPV are disseminated by direct contact and genital HPVs are usually transmitted sexually.

Histopathology: Common warts show marked hyperkeratosis and acanthosis. There are outgrowths of epidermis presenting as slender spires in filiform warts or blunter digitate processes in other variant columns of parakeratosis which overlies the papillomatous projection. They may be hemorrhage into these columns. Hyper granulosis is present where the cells contain coarse clumps of keratohyalin granules. Koilocytes (large vacuolated cells with small pyknotic nuclei) are present in upper Malpighian layer and the granular layer.

There is often some inward turning of elongated rete ridges at the edges of lesion. Trichilemmal differentiation and squamous eddies may be seen in old warts. Dilated vessels are often found in the core of the papillomatous projections. A variable lymphocytic infiltrate is sometimes seen and this may be lichenoid in presumptive regressing lesions.

Presentation and Characteristics: Warts appear as hyperkeratotic papilloma's with black dots which have thrombosed capillaries within the wart. These lesions can manifest on any site of the body, but specific HPV subtypes may have a tendency to affect a certain anatomic location. HPV- 1 infection may cause Palmar and plantar warts. HPV-2 causes common warts. HPV-3 and HPV-10 typically cause flat warts. HPV-6 and HPV-11 are the main causes of anogenital warts, or Condyloma acuminatum. Cervical warts or Condyloma Plana may be difficult to visualize by examination without application of acetic acid which cause subclinical lesions to become white.

Location & Clinical features: They are typically found on the plantar and palmar surfaces, thickened endophytic papules are extremely painful. They are often grouped at the pressure points on the ball of the foot. These lesions like common warts disrupt the dermatoglyphics. They may be small, single lesions or coalesce to form large thick plaques 1 to 2 cm or more in size.

Cutaneous lesion

Common worst (Verruca vulgaris): Verruca vulgaris is a benign squamous papillomatous lesion caused by Human papilloma virus.

Endophytic worts: - These are small, well defined punctate depressions 1 to 2 mm in size; occur singly or in clusters, often seen on palms and soles.

Plantar and Palmar warts (Verruca Plantaris and Palmaris): - Verruca plantaris is a benign human papilloma virus induced epithelial proliferation occurring on sole of the foot. It is characterized by the formation of thick hyperkeratotic lesion.

Flat warts (Verruca Plana /Juvenilewarts)

Definition: - Verruca plana are benign HPV induced slightly elevated, flat- topped, smooth papules.

Mucocutaneous lesions

Genital warts (Condyloma acuminatum): Genital warts are the most common sexually

transmitted disease and are frequently referred to as venereal Worts. About a million new cases of genital Worts infection are seen in USA each year. A large portion of genital HPV infection is subclinical or latent and may be recognized only by sophisticated techniques for viral identification. Genital warts are small pointed papules that are usually 2 to 5 mm in diameter. They are typically gray,skin colored pink or brown, seen both in men and women on anogenital areas. Warts may be present with lesions of many sizes, shapes, colors and configuration on various parts of body and diagnosis is based on clinical manifestations.

Treatment of warts: As most people have been affected with at least one wart at some point during their lives, and there is little urgency for immediate clearing, it is no surprise that there is an entire industry catering to the public demand for warts treatment. Americans spend more than 40 million annually. Treatment is divided into two aspects home therapy (patient initiated) and office based (physician initiated) there Apies. The routine treatment of warts is unnecessary and undesirable. Before specific treatment is given, it is helpful to explain to the patient that warts can be expected to resolve spontaneously without trace, and that common, more radical measures, such as cryotherapy or cautery have their dis advantages. Patient must be encouraged to preserve with term daily use of simpler preparations. Whatever method is used there will be failures and recurrence. The best clinical guide is the restoration of normal epidermal texture including the epidermal ridge pattern where appropriate. The proper approach to the management of warts depends on the age of the patient, the extent and duration of lesions, the patient's immunologic status, and the patient's desire for therapy.

Home therapies: Salicylic acid is a broad formulation available for treatment of warts. Salicylic acid is combined with lactic acid. Caustic agents like Monchloroacetic acid (MCAA), dichloroacetic acid (DCAA), trichloroacetic acid (TCAA), silver nitrate is also used by physicians.

Method: -Mechanical debridement of excess keratotic material is done by a sand paper or an emery board, pumice stone or nail file, done to destroy deeper layers of wart by medicine. Then the desired Keratolytic agents is applied and left for a stipulated time advised. Keratolytic agents disrupts intracellular cohesiveness, causingdesquamation of HVP infected epidermal cells. Clinical studies report that 60%-75% cure rate is seen with treatment for six weeks. Imiquimod is a topical immune response modifier, a chemical extract used as tropical cream. A layer applied three times in a in a week and left for 6-8 hours.

Cytotoxic: Podophyllin's are crude extractof cytotoxic chemicals obtained from the common plant podophyllum peltatum, a lipid soluble compound that causes tissue necrosis. It is known to arrest cell division and cause cell death.[13] Podophyllin is applied in the form of gel, 30%-60% success is claimed by clinical studies.

Heat therapy: -Heat therapy acts by injuring the tissue occupied by wart. A clinical study shows 40-45% cure for warts.

Office based therapies

Cryosurgery: Cryotherapy is the standard therapy for viral warts and that are resistant to over-the-counter topical agents. Cryotherapy produces minimal scarring using liquid nitrogen. Liquid nitrogen does not kill HPV, it disrupts the skin cell. The most sensitive to cryoinjury is melanocytes, hypo and hyper pigmentation changes are common after liquid nitrogen therapy.

Bleomycin: Bleomycin is a fermentation product from soil fungus streptomyces verticellus used as an anti-tumor and anti-microbial. A water-soluble polypeptide mixture with antineoplastic, antibiotic and antiviral properties Injections of Bleomycin to warts claims 80% success.

Carbon di-oxide laser surgery: - Laser is an acronym for light amplification by stimulated emission of radiation which generates intense beam causing selective photo thermolysis. The emission wave- length of CO_2 laser is 10, 600nm in the far infrared part of electromagnetic spectrum. Laser beam targets intracellular water and causes a release of heat that irreversibly vaporizes tissue proteins, with little dissipation in adjacent skin. A thermal damage occurs to exposed site.

Electrosurgery: - Electro surgery is usually not indicated for warts as it causes scaring. Clinical studies show 35% cure.

Surgery: Surgical excision is usually avoided since scarring is inevitable and recurrences of wart in the scar are frequent. Interferon, cantharidin, immunetherapy, cidofovir are also used in treat of Worts.

DISCUSSION

Warts are the diseases in the human community since ancient times; several therapeutic

procedures were performed to get rid of them. Warts are benign proliferations of skin with dome shaped papilliferous surface, which consists of an acanthotic epidermis with hyperkeratosis. In Ayurvedic literature *Charma keel* is described as growth on the skin, present anywhere in the body which gives pain or irritates similar to that like a peg (nail), immovable in nature. The clinical features of warts are very similar to the clinical symptoms of *Charma keel*. The management of *charm keel* is differentiated in both ayurveda and modern science. *Acharya Sushruta* has stated that disease treated with *Agnikarma* does not recure. *Charmakeela* is caused by aggravated Vyana Vata and *Shelshma*. Sushruta described Vatakaphaj Vyadhi as Agnikarma Adhikara. Due to Usna Guna it controls vatakaphaj Samprapti in charmkeela. Time needed for removal of charmkeela by Agni karma with Pancha dhatu shalaka was very short. As Agnikarma itself is Vedna shamak, no post operative pain was observed. Agnidagdha vrana healed within 7 days without getting infected. Patient was observed for 3 months but no recurrence observed.

CONCLUSION

Warts are a clinical entity which has problematic since ancient times in peoples.Warts cause Disfigurement by occurring on the areas, which cause loss of beauty like on face, on hand, etc. Disablement can be caused by a wart on hand, impairing the skill of an artist, musician, surgeon etc. Discomfort can occur by its location. Hostile therapies, which are often quite painful and may be followed by scarring, are usually to be avoided because the natural history of cutaneous HPV infections is for voluntary resolution in months or a few years. Plantar warts that are painful because of their location thus require more aggressive therapies. In the present medical science, the treating protocol for wart is topical application or surgical excisions. Acharya Sushrutha put forward the same principals for the management of *charmakeela* by *Agnikarma* techniques. Agnikarma with Panchadhatu shalaka is a safe and quick procedure. It is economical and can be performed at OPD level. Agnikarma is better than excision as it causes less trauma, no bleeding. There is no need of anesthesia. There are less chances of recurrence after treatment with Agni karma.

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