IAMJ

Review Article International Ayurvedic Medical Journal ISSN:2320 5091

CRITICAL ANALYSIS OF CHARMA KEELA

Vijayashankar BV[1], Sunil kesthur Shivaramaiah[2], Balakrishna Setty K K[3]

[1,2]Assistant professor, [3]Professor, Dept of Shalya Tantra, JSS Ayurveda Medical College, Mysuru, Karnataka, India

ABSTRACT

The very first reference about *charma keela* is found in *sushruta samhita. Acharya sushruta* has described in detail about *samprapti, lakshana* and chikitsa of *charma keela* .Reference of *charma keela* is not available in either Vedic or pre-vedic literature. Among *Bruhatries*, *charma keela* references are available in *sushruta samhita* and *astanga hrudya* of Vagbhata. Among *Laghutries charma keela* references are available in Madhavanidana and *Sharangadhara samhita*. In *Yogarathnakara* 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 *sushruta.* 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. It is estimated that 3 to 20% of school age children have *charma keela*. Surveillance in U.K demonstrated 1000 children under 16years had 70% of common warts.

Keywords: Charma Keela, Warts, Kshudra Roga, Condyloma, Plantar wart, Papiloma.

INTRODUTION

Charma keela 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 was prevalent from ancient times which needs treatment more in correspondence as a cosmatical reasons. Specific treatment has been elucited in ayurveda for this clinical entity without its recurrence. *Charma keela* is one of the *kshudra roga* mentioned by *acharya Sushrutha*. "Of all the futile disorders of the skin, it 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". This statement was made by Lempiere in 1951. The Greeks and Romans were the first to use terms describing warts. The word Condyloma is of Greek origin which means Knuckle or Knob.'Myrmecia' is a term derived from the Greek word for ant hill. The term Verruca originally meant a steep place or height. Early Hippocratic writings also refer to pedunculated warts. In 1712, Daniel Turner suggested that warts might be congealed nutritious juices that had seeped from damaged nerve filaments in the skin. The probable viral origin of warts was suggested by the work of Ciuffo in 1907. He produced warts on his hands by inoculating himself with a wart extract that had passed through a Berkefeld filter with a pore size that excluded bacteria and fungi. In 1949 Strauss et al first visualized viral particles in warts

by using electron microscope. Melnick then classified the wart virus into the Papova virus group in 1962. Although seemingly harmless, warts cause quite a lot of morbidity. Viral warts are self-limiting and most of them will eventually disappear spontaneously, but this takes time and most people would rather face the multitude of possible harmful treatment. The wide range of cures since antiquity and present day cures is evident enough to demonstrate the social impact of warts.

***Shabdhotpatti* (Derivation)**

Charmakeela is derived from the words 'charma' and 'keela'. The word charma is derived from 'Char + sarvadhathubyo manin'. Here 'char 'means dathu, '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 pradesha* 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 *kapha* gives rise to peg or nail shaped, immovable sprouts in the exterior of the skin, these are called as *charmakeela* or *charma arsha*. These sprouts (*charmakeela*) give pricking pain because of *vata*, the growth has Knotty shape and the color of lesion is similar to the surrounding area of the skin is due to *kapha* .These *charmakeela* which is dry, black in color 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 *kapha* gives *toda* and *parusha*. *Pitta* will cause *sheetata* and *raktha varna*. *Kapha* will *cause snigdhatha savarnatha* and *grathitwa*.

***CHIKITSA OF CHARMA KEELA*:-**

Treatments of *charma keela* mentioned in classics are

(1) Agni karma
(2) Kshara karma
(3) Chedana Karma

Acharya sushrutha 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 *Charma keela* later treated with *kshara* and *agni*. *Charma keela* (*Jathumani, Tilakalaka* and *Mashaka*) should be treated by *Chedana* with a *Shastra* and later with a *kshara* or *Agni*.

"*Charma keela Jathumani masakan teelakalakan utkrutya shastrana dhayat Ksharagnibhya asheshathaha" iti Bhava prakasha.*

Bhava prakasha opines that *charma keela* should be either excised with a *Shastra* then it should be treated with a *Kshara* or *Agni.* Along with bhava prakasha other authors like Astanga sangrahakara, Gadanigraha, and Yogarathnakara followed the same line of treatment adopted by sushruta.

AETIO PATHOGENESIS

Papilloma virus: Human papillomaviruses (HPV) are very widespread-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. More than 150 types of HPV have been identified and are associated with various clini-

cal lesions and diseases. 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 papillomas 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 facilitates epidermal infection. Contagion occurs in groups – small (home) or large (school gymnasium), and in immune suppressed condition. HPV are disseminated by direct contact and genital HPV's are usually transmitted sexually.

Histopathology: Common warts show marked hyperkeratosis and acanthosis. There are outgrowths of epidermis presenting as slender spires in filliform warts or blunter digitate processes in other variant columns of parakeratosis which overlies the papillomatous projections. There may be haemorrhage into these columns. Hypergranulosis is present where the cells contain coarse clumps of keratohyaline 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. Tricholemmal 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 papillomas 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 enophytic 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 cms or more in size.

CUTANEOUS LESIONS: Common warts (Verruca vulgaris):-Verruca vul-

garis is a benign squamous papillomatous lesion caused by HPV infection.

Endophytic warts:- 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 /Juvenile warts):-

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 warts. About a million new cases of genital wart infection are seen in USA each year. A large portion of genital HPV infection is either 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, colours and configurations on various parts of body; diagnosis is usually based on clinical manifestations.

Treatment of warts: As most people have been afflicted 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 45 $ us million annually on over the counter products. Treatment is divided into two aspects home therapy (patient initiated) and office based (physician initiated) therapies

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 disadvantages. Patient must be encouraged to preserve with term daily use of simpler preparations. Whatever method is used there will be failures and recurrences. 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 are also used by physicians.

Method: -Mechanical debridement of excess keratotic material is done by a sand paper or an emery board, pumis 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, causing desquamation of HVP infected epidermal cells. Clinical studies report that 60% cure rate is seen with treatment for six weeks. Imiquimod is a topical immune response modifier, a chemical extract used as topi-

cal cream. A layer applied three times a week and left for 6-10 hrs for a maximum of 16 weeks.

Cytotoxics: Podophyllins are crude extract of 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, 25%-70% success is claimed by clinical studies.

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

Bleomicin: Bleomicin a fermentation product from soil fungus strepyomyces verticellus used as an anti tumor antimicrobial. A water soluble polypeptide mixture with antineoplastic, antibiotic and antiviral properties Injections of Bleomicin to warts claims 81% success.

Carbon di-oxide laser surgery:- Laser is an acronym for light amplification by stimulated emission of radiation which generates intense beam causing selective photothermolysis. The emission wavelength 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 the exposed site. Clinical study claims 90% cure rates.

Electrosurgery:- Electro surgery is usually not indicated for warts as it causes scarring. 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, immune therapy, cidofovir are also used in treatment warts.

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 keela* 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 keela*. The management of warts is indistinguishable both in ayurveda and current modern science.

CONCLUSION

Warts are a clinical entity which has troubled the humans since antiquity. 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 and etc. Discomfort can occur by its location. Aggressive 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 spontaneous 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 exicisions. Acharaya Sushrutha opines the same principals for the management of *charmakeela* by *kshara*, *shastra* and *agni karma* techniques. The core principles of treating warts (*charma keela*) are almost one and the same in both sciences.

REFERENCES

1. Shabdha kalpa dhruma by Raja radha kanta-deva, 3rd edition, varanasi,chowkambha sanskrit series,1976, P.506.
2. Maharshi Sushrutha, sushrutha samhita, Nidanasthana Arsha nidana, chapter 2, 18th shloka,dalhana commentry,6th edition, edited by jadavji trikamji acharya, varanasi, chaukhambha orientalia,1997, P.275
3. Maharshi Sushrutha, sushrutha samhita, Nidanasthana Arsha nidana, chapter 2, 20th shloka,dalhana commentry,6th edition, edited by jadavji trikamji acharya, varanasi, chaukhambha orientalia,1997, P.275
4. Maharshi Sushrutha, sushrutha samhita, Sutrasthana kshara paka vidhi adhyaya, chapter 11, 7th shloka, dalhana commentry,1th edition, edited by P.V. Sharma, varanasi, chaukhambha orientalia,2008, P.46.
5. Maharshi Sushrutha, sushrutha samhita, Sutrasthana kshara paka vidhi adhyaya, chapter 11, 12th shloka, dalhana commentry,1th edition, edited by P.V. Sharma, varanasi, chaukhambha orientalia,2008, P.46.
6. Acharya Agnivesha, Charaka Samhitha, chikitsa sthana 23rd chapter, 104th shloka, 5th edition, edited by Vaidya Yadavji Trikamji Acharya, Varanasi, Published by choukambha surabharati prakshana,2008, P.576
7. Acharya Vagbhata, Astanga sangraha, uttara Sthana, 31st chapter 25th shloka, 14th edition, edited by yadu nandan upadhaya,varanasi, chaukambha orentalia,1979,P. 321.
8. Acharya Vagbhata, Astanga hrudaya, sutrasthana 30th chapter, 25-26th shloka, 36th edition, edited by Dr. Anna moreshwar kunte, Varanasi, coukambha oriental krishnadas academy, 2007, P.355
9. Acharya Madhavakara, Madhava Nidana, poorva kanda, edited by yadu nandan upadhaya, varanasi, chaukambha sanskrit prathistana,2007,P.900
10. Fitzpatricks, dermatology in general medicine, viral and rickettsial diseases 233rd chapter, 6th edition, edited by Freedberg, Irwin M, Eisen, Arthur Z, Mac Graw-Hill, 2003 P.1-6.
11. World Health Organisation classification of tumour, pathology and genetics, skin tumours, internation research for cancer, edited by Philip-E, Leboit, Gunter, Burg,2006, P. 11, 34-38.
12. Warts diagnosis and management an evidence based approach, 1st edition, edited by Robert T Brodell, Sandra, Marchese Johnson, Francis group London, 2005, P. 23, 47, 53, 54, 76,77.
13. Rook's text book of dermatology, 25th chapter, 7th edition, edited by Tony Burns, Stephen, Breathmach Neil Cox, Blackwell Publishers, 2004, P. 25.
14. Rook's text book of dermatology, 22nd chapter, 7th edition, edited by Tony Burns, Stephen, Breathmach Neil Cox, Blackwell Publishers, 2004, P. 10-11.
15. The colour atlas and synopsis of clinical dermatology, common and serious diseases, viral infection of skin and

muscus, part III diseases due to microbial agents, section 25, edited by Thomas B, Fitz Patrick, published by Mc Grawhill,1997,P.90

CORRESPONDING AUTHOR
Dr. Vijayashankar BV
Assistant professor
Dept of Shalya Tantra, JSS Ayurveda Medical College, Mysuru, Karnataka, India
Email: Vijaymedico5@gmail.com

Source of support: Nil
Conflict of interest: None Declared