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CASE REPORT

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### PALMOPLANTAR KERATODERMA- AN AYURVEDA APPROACH

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#### ABSTRACT:

Skin diseases are a major health problem affecting a high proportion of the population in India. Palmoplantar keratoderma is one of the common disorders of keratinization, it is characterized by a diffuse or focal thickening of the stratum corneum of the palms and soles. All the skin diseases in Ayurveda are broadly classified under the umbrella of *Kushta*. *Vipadika* is one among the *Kshudra kushta*, characterized by *Sphutana* (Cracking) and *Teevra Vedana* (severe pain) in *Pani-pada* (either in palms or soles or in both). In the present case-report a patient c/o cracked and dry lesions over both the palms and feet associated with severe itching since 10 months, was treated with *Avipattikara choorna*, *guggulu tiktaka gritha*, Atrisor cream, *Kaishora guggulu* and *Gandhaka rasayana* respectively. After treatment for 3 months there was complete remission in the symptoms and there is no recurrence till date. From the current case report, it can be inferred that Palmoplantar keratoderma can be successfully treated with the appropriate Ayurveda medications.

**Keywords-** Vipadika, Palmoplantar keratoderma, Kshudra kushta

## INTRODUCTION

Skin is the largest sense organ and it is made up of several different types of cells and its main purpose is to protect the inside of the body from the environment. The skin also plays a role in Immunologic surveillance, sensory perception, control of insensible fluid loss, and homeostasis in general. Diseases of the skin not only affects the patient physically but also disturbs mental and social health of the patient <sup>[1]</sup>.

Palmoplantar Keratodermas are a diverse group of Dermatological conditions characterised by the thickening of palms and soles because of excessive keratinization<sup>[2]</sup>. They have been classified as either hereditary or acquired and are distinguished from each other on the basis of mode of inheritance, presence of transgrediens (defined as contiguous extension of hyperkeratosis beyond the palmar and/or plantar skin), co-morbidities with other symptoms and extent of epidermal involvement, namely diffuse, focal and punctat <sup>[3]</sup>.

In Ayurveda almost all the skin disorders are explained under *kushta* and classified as *Mahakushta* and *Kshudra kushta*, *vipadika* is one among them. Different *acharyas* have given different presentations of signs & symptoms of *vipadika*. Acc to *Ashtanga hridaya*, *Panipadasphutana* (cracks over palms and soles), *teevra vedana* (Intense pain), *manda kandu* (mild itching) and *saraga pidaka* (red coloured macules) are the symptoms of *vipadika* <sup>[4]</sup>.

*Acharya charaka* mentions cracks and severe pain are the symptoms of *vipadika*<sup>[5]</sup>.

Itching, burning sensation and pain is present especially on *pada* are the symptoms of *vipadika* according to *Acharya Sushruta* <sup>[6]</sup>.

Commonly elicited *nidanas* for the development of *kushta* are consumption of *virudha ahara*, *drava snigdh*, *guru bhojana*, intake of food in *ajeerna avastha*, *diwaswapna* and *mithyopachara* of *panchakarmas* etc. All the 3 doshas gets vitiated in a person who indulges in these kind of practices and the vitiated *doshas* further causes vitiation of *twak* (skin), *raktha*, *mamsa* and *lasika* and ends up in manifestation of *kushta*.

In this attempt, a patient presenting with symptoms of Acquired Palmoplantar Keratoderma was managed with Ayurvedic principles.

## CASE REPORT:

### Chief complaint:

A 63 year old female attended general OPD, Alva's Ayurveda medical college and hospital, Vidyagiri, Moodubidire with the complaints of cracked and dry lesions over both the palms and feet, pain in the foot since 10 months. Associated with severe itching in both the soles and palms since 2 months also c/o constipation since 2 months.

### History of present illness:

A female patient aged 63 years, was a agricultural worker, she was apparently normal 10 months back. As she was a farmhand, she noticed craking in both the heels and palms due

to the h/o contact with the herbs and crops in the field.

Gradually after few days she noticed dry lesions in both the palms and feet and developed itching, for which she didn't go for medical assistance. She used to apply coconut oil and saline soaks for the same and the symptoms subsided, she continued her work. but thereafter further worsening of symptoms on exposure to fields.

Then she consulted folklore practitioner, Folklore medications were not known. Even after a month of medications there was no relief found and the dry lesions was present all the time in both the palms and on the dorsal region of foot, gradually she started noticing increased thickness of the skin over both the soles and developed severe itching and pain . Then she approached an Allopathy hospital , there they prescribed topical ointments and oral medications , but the condition doesn't subside. Later she developed constipation, itching and pain got increased in the affected region since 2 months. From the last one week condition got aggravated, so she consulted our hospital for further management.

#### **Integumentary system examination :**

#### ***Tvak Pareeksha* – assessment of skin:**

##### **On Inspection**

*Varna*/colour- *Shyava* / blackish

Size - 2-5mm

Shape- Round uniform thickening of palms and soles.

#### **Location, distribution and arrangement of lesions**

Location- Palmar and plantar region of both the palms and feet.

Distribution- symmetrical and generalized

Arrangement – grouped

Surface- is rough and dry

Margin- irregular

#### **Configuration of skin lesion-**

Diffuse extensive hyperkeratosis of palmar and plantar surface

#### **Type of skin lesion-**

##### **Primary lesions**

*Vaivarnya*- macule/patch Present

*Sookshma pidaka*- papule Present

*Udvrtta pidaka*-hyperkeratotic plaques Present

*Granthi*/nodule- Absent

*Varathi dashta samsthana shotha*/ wheal- Absent

*Sphota*/ vesicle- Absent

*Visphota*/bullae- Absent

*Putimamsa pidaka*/ pustule- Absent

##### **Secondary lesions**

*Grushta vrana*/ erosion- Absent

*Vrana*/ulcer - Absent

*Daari* / fissure - Present

*Sthira cipitika*/crust - Absent

*Shakala*/ scale - Absent

*Charmakhya*/ lichenification - Absent

*Kshaya*/atrophy - Absent

*Rajyo ati kandu* /excoriation – Present

*Vruna vasthu*/scar - Absent

*Neelika, mashaka* / nevus - Absent

*Pidaka/ comedo* - Absent

*Bahya krimi pidaka/ burrow of scabies*- Absent

*Sirajala/telangiectasia* - Absent

#### On palpation-

*Sparsha/texture- Rooksha , khara*

Temperature- Normal

Sensory symptoms- *Toda* / pain in both the soles

Deformity- NAD

Odour/ *srava/ krimi* etc - NAD

#### **Nakha pareeksha**

Colour - pink

Shape - Flat and concave

Lesions - Absent

Nail bed tenderness - Absent

Swelling- Absent

Redness - Absent

#### **Assessment criteria-**

Improvement was assessed on the basis of percentage relief observed in the presenting complaints. Grading criteria being followed in the institute was adopted to assess the effectiveness of the therapy.

#### **Grading criteria-**

**Table no.2: Grading criteria for *Sphutana* (Cracks)**

<b>Lakshana</b>	<b>Grading</b>
No cracks	0
Cracks present in <i>pada</i> (foot) alone	1
Cracks present in <i>pani</i> (hands) alone	2
Mild cracks present in both <i>pani</i> and <i>pada</i>	3

Moderate cracks present in both <i>pani</i> and <i>pada</i>	4
Severe cracks present in both <i>pani</i> and <i>pada</i>	5

**Table no.3- Grading criteria for *Vedana* ( Pain)**

<b>Lakshana</b>	<b>Grading</b>
No Pain	0
Pain while walking	1
Pain during rest	2
Pain after touching	3
Severe pain without touching	4

**Table no.4: *Kandu* (Itching)**

<b>Lakshana</b>	<b>Grading</b>
No itching	0
Mild itching	1
Moderate frequent itching	2
Severe itching which cause irritation to the skin	3

#### **INTERVENTION**

The following (Table no. 5) treatment given for 3 months-

**Table no.5: Treatment plan – Patient was treated on a OPD basis-**

<b>Drug</b>	<b>Dose</b>
<i>Avipathikara choorna</i>	10 gm along with warm water as <i>anupana</i> was prescribed at bedtime

<i>Guggulu tiktaka gritha</i>	2tsp – morning empty stomach OD
<i>Atrisor cream</i>	E/A for twice a day
<i>Kaishora guggulu</i> <sup>9</sup>	1 tid A/F
<i>Gandaka rasayana-</i>	1 tid A/F

**Table no.6- changes in clinical symptoms before and after treatment**

Ass. criteria	BT	AT
<i>Sphutana</i> (Cracks)	5	0
<i>Vedana</i> (Pain)	4	0
<i>Kandu</i> ( Itching )	3	0



**Image 1: Before Treatment**



**Image 2: After Treatment**

## DISCUSSION

All skin disorders are *piita pradhana tridoshaja vikara* with *rakta* being important *dushya* involved . So the line of treatment should be targeted to remove *dushitha pitta* from the body and *shuddhi* of *rakta dhatu*. *Dosha dooshya* assessment is key in planning the treatment protocol of any type of *kushta*. Patient had fissures on her palms and soles and itching due to vitiation of *vata* and *kapha* respectively. The treatment was given in accordance with predominant vitiation of these *doshas*.

Primarily as *shamana chikitsa* including *Guggulutiktaka gritha*, *Kaishora guggulu* & *Gandhaka rasayana* and *Atrisor cream* was given for external application.

*Guggulu tiktaka gritha* contains *tikta rasa pradhana dravyas*. *Tikta rasa* is *agnidipaka*

and it alleviates *ama*, the *agni* helps in maintaining the normal stage of *dhatwagni*, so that the *dhathus* will be in equilibrium state <sup>[7]</sup>.

As *Gugguluthiktaka gritha* is *tiktha pradhana*, *kaphahara*, *kushtaghna* and *rakthaprasadaka*. *Tiktha rasa* itself is ideal for *pitta* and *raktha vikaras*. As a *shamana sneha* , *Guggulutikthaka gritha* is a good option for *vata kapha pradhana kushta* especially *vipadika kushta*.

*Kaishora guggulu* is specifically indicated in *Vataraktha*, *vrana* and *kushta* and also it has antiallergic, antibacterial and blood purifying properties.<sup>[8]</sup>

*Kushta* by nature is chronic lingering disease so to counteract chronic diseases variety of *Rasayana yogas* explained in Ayurveda literature. *Gandhaka rasayana* is one such

*yoga* having a wide range of therapeutic properties as well as prophylactic activity and it also acts as a *Rasayana* <sup>[9]</sup>. It is extensively used in different diseases like *Kushta*, *kasa*, *shwasa*, *kshaya* etc. Variety of researches have proved antifungal and antimicrobial activity of the *yoga*. In the present case this *yoga* helped in alleviating itching and helped in preventing reoccurrence.

*Avipattikara choorna* prepared from *trikatu*, *trijaatam*, *musta*, *vidangam*, *triphala*, *trivrut*, *vida lavana* & *sharkara* is useful in tackling *ama* at the level of *koshta nad dhatwagni*. <sup>[10]</sup>

Atrisor is a patent Ayurveda formulation manufactured by Atrimed pharma. Atrimed atrisor topical –dry skin is a unique topical product which contains *jivanti*, *manjishta*, *haridra*, *shwetha kutaja*, *kera taila*, *tuvaraka taila*, offering quick relief from inflammation, itching and irritation associated with dry itchy lesions <sup>[11]</sup>. It acts as- Anti-bacterial, anti-inflammatory and blood purifier.

#### **Declaration of patient consent**

The authors confirm that they have acquired a patient consent form, in which the patient has granted permission for the publication of the case, including accompanying images and other clinical details, in the journal. The patient acknowledges that their name and initials will not be disclosed, and sincere attempts will be undertaken to safeguard their identity. However, complete anonymity cannot be assured.

#### **CONCLUSION**

In the present case, *kushta nidanas* like *viruddhahara sevana*, *adhyashana*, *ati mamsa sevana* are the *viprakuṣṭha hetus* exposed by the patient. In this case study the patient's symptoms were assessed before and after the treatment, significant improvement was noticed in the form of reduction of thickness and dry lesions, itching and complete remission of the symptoms was found after 3 months course of Ayurvedic treatment. Therefore it can be concluded that while treating any kind of *kushta*, due consideration is given to *dosha*, *dushya* which can yield the positive result.

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