

Dadru with special reference of Dermatophytosis / Ringworm

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Abstract

Skin is the largest protective barrier which prevents the invasion of foreign substances into the body. Kushta is a Bahudoshaja Vyadhi involving Saptakodravaya Sangraha. 18 types of Kushta are described in Ayurvedic classics under the headings of Mahakushta and Kshudrakushta¹. Mahakushta is subdivided into seven and Kshudrakushta into eleven types. Dadrukushta is one of the Kshudra Kushta mentioned in our classical text. Itching and red patches over the particular area of the skin are the clinical manifestations. Diagnosis has been done by Darsana, Sparsana and Prasna Pareeksa. KOH and Skin Culture are the tools to diagnose the dermatophytosis fungal infection. Sodana, Samana and lifestyle modifications will be helpful in the treatment of Dadru. It is symptomatically correlated with one of the commonly seen fungal infection called Dermatophytosis - Ringworm

Key words

Dadru, Tinea, Dermatophytosis, Fungal infection, KOH

Introduction

Kushta is a, Bahudoshajavyadhi involving Saptakodravayasangraha², the three vitiated dosas in turn vitiate the Twak, Rakta, Mamsa and Ambu.; 18 types of Kushtas are described in Ayurvedic classics, 7-Mahakushta and 11- Kshudrakushta according to Acharya Charaka. Acharya Charaka mentioned Dadru kusta in Kshudra kusta and Susruta Samhita Dadru is mentioned as Mahakusta. Dadru is a Raktapradoshajavyadhi which is having Pitta and Kaphaja Twak Vikara³.

The Skin or integument is the external organ that protects against mechanical trauma, UV light and infections. Superficial fungal infections of the skin are localised to stratum corneum. Those include some of the common Dermatophytes such as Trichophyton rubrum and Pityrosporum⁴.

The prevalence of superficial fungal infection was 27.6% (82/297), dermatophytosis was 75.6% (62/82), and non-dermatophytosis was 24.4% (20/82). Highest incidence was seen in the age group of 21 -30 years (36.8%) followed by 11- 20yrs and 31-40yrs age group (18.4%). Males (52.8) are affected more than females (47.2%). Male to female ratio is 1.1:1⁵.

About Disease

Dadru is characterized by itching sensation, redness, pimples

and circular patches with elevated edges. The following features appear with involvement of respective Dhātu: Rasa – Kharatwa (Roughness), Raga (discoloration of the skin); Rakta dhātu – Kandu (itching), Pidaka; and by Mamsa dhātu – Mandala (thick elevated patches on the skin), Rukshata (Roughness).

- Dadru in Susrutha Samhitha⁶ is mentioned as Mahakushta caused by Kapha. Atasipuspavarnani tamrani (linseed flower or coppery)
- Astanga Hridaya mentioned dadru as Atasipuspavat pidika⁷ (flax flowers)
- Amarakosha Dwiteeya Manushya Varga⁸ explained Dadruna which means the person affected with herpes.

Ayurveda has recommended Trivida Pariksha to rule out the disease and indicated Antahparimarjana and Bahirparimarjan Chikitsa for Kushta.

Dermatophytosis

Dermatophytes are fungi that infect skin, hair, and nails and include members of the genera Trichophyton, Microsporum, and Epidermophyton.

- I. Trichophyton: Skin, hair, nails
- II. Microsporum affects: skin hairs (nails are not involved)
- III. Epidermophyton's affects: skin. Nails

Tinea corporis or infection of the relatively hairless skin of the body. Typical infections consists of erythematous, scaly plaques with annular appearance that accounts for the common name 'ringworm'¹⁰

Clinically these fungal infections are labelled according to the region involved¹¹. These are:

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- **Tinea capitis** occurring on the scalp
- **Tinea barbae** affecting the region of beard in adult males
- **Tinea pedis** or athlete foot is located in between the toes
- **Onychomycosis** disintegration of the nail
- **Tinea corporis**¹² involving the body surface of all ages. Tinea corporis relatively appears on hairless skin of the body, may have variable appearance depending on the extent of the associated inflammatory reaction

Typically appears as:

- ✓ demarcated circle or oval shaped
- ✓ spread centrifugally
- ✓ erythematous
- ✓ pruritic
- ✓ single or multiple annular lesions with an advancing scaly border
- ✓ the margin is slightly raised, reddened

As per Sir Monier William's Sanskrit English Dictionary, Dadru - a tortoise (Kushtai.e.skin disease)¹³ characterized by skin lesions, which resemble tortoise. The signs and symptoms of 'Dadru' and Dermatophytosis (Tinea/Ringworm) show tremendous similarities with each other as explained in literature of both Ayurveda and Modern sciences. The external appearance of all Tinea infections other than Tinea corporis does not match exactly with the Ayurvedic description. Nonetheless they all should be considered under the same heading 'Dadru' because only their morphology changes due to the change of site of infections. The causative factors & the symptoms of all, remains the same.

Material and Methods

The information on pathology, etiology, and management has been compiled from Ayurvedic textbooks and concert commentary. All current texts, journals, and classical Ayurvedic literature regarding the disease, medication, and treatment will be examined and recorded. Dadru is characterized by itching sensation, redness, pimples and circular patches with elevated edges. The following features appear with involvement of respective dhatu: rasa – Kharatwa (roughness), Raga (discoloration of the skin); Rakta dhatu – Kandu (itching), Pidaka; and by Mamsa dhatu – Mandala (thick elevated patches on the skin), Rukshata (roughness).

Nidana^{14, 15} :

Virodhinyannapana (incompatible diet and drinks), suppression of the urge for vomiting and other natural urges, sleep during day time, excessive intake of freshly harvested grains, curd, fish, salt and sour substances.

People and animals become infected by dermatophytes after contact with spores (conidia). Dermatophytosis have become adapted to people or animals, and are now maintained in these reservoirs. Zoophilic dermatophytes are adapted to various animal species, while anthropophilic dermatophytes occur in humans.

Promoting factors for fungal skin infection:

- Poor nutrition – leading to less immunity
- Poor hygiene
- Excessive sweating and Hot climate
- Diabetes Mellitus
- Secondary causes acc to modern science: Weak immunity, tinea infections, poor nutrition, contact with fungal infected person or animal, obesity, stress

Purvarupa

Sparsajnatva (loss of sensation), Vaivarnyam (discoloration), Toda (Pricking pain), Daha (burning sensation) Kandu, Pidaka¹⁶

Rupa - Clinical Manifestations

Dadru is characterized by itching sensation, redness, pimples and circular patches with elevated edges.

Table No. 1

Ayurveda Rupa	Modern Science Signs and Symptoms
• Pidakas	• Pustules
• kandu	• Itching
• mandala	• Annular skin patches
• raga	• Erythema
• atasipuspavarna	• Copper colour
• Prashantania cha punarutpadyanti	• Subsides & Relapses

Fig: 1



Fig : 2

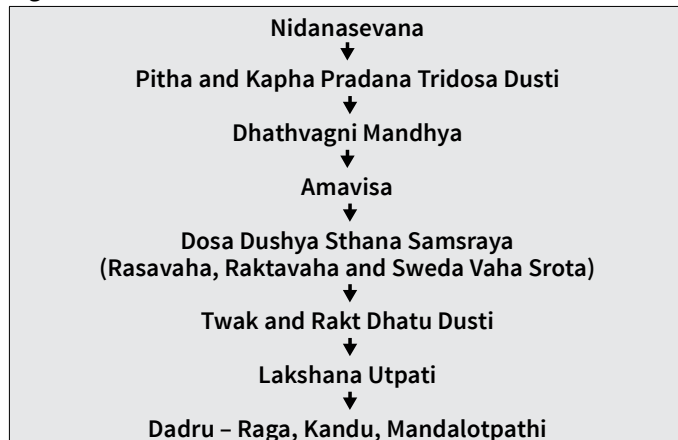


Upasaya

Application of Ointments externally on the lesion.

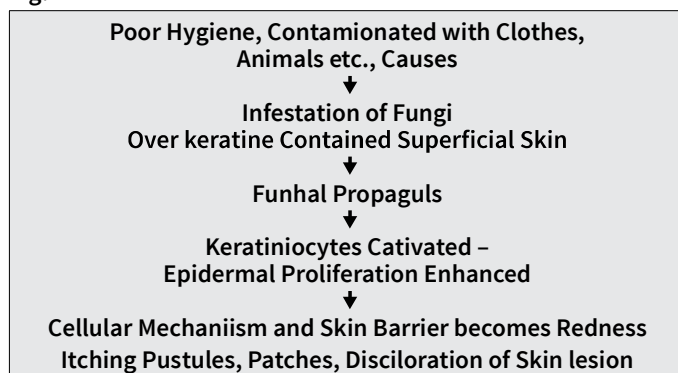
Samprapti

Fig: 3



Pathology According to Modern Science

Fig: 4



Diagnosis

According to Ayurveda Trividha Pareeksha, i.e. Darsanapareeksha (Inspection), Sparshanapareeksha (Palpation), Prashnapareeksha (interrogation).

Many dermatophyte infections are diagnosed by their clinical appearance. If the diagnosis is in doubt, scraping should be taken from the edge of the lesion with scalpel blade, the removed scale is collected on a glass microscope slide and then treated with solution of 10-20% KOH solution. KOH dissolves keratin and allows easier visualization of fungal elements. If it disappears as a whole then no fungal infection is there because it destroys healthy cells leaving behind only fungal cells.¹⁷ This technique can be used to identify hyphae in dermatophyte infections.

Ayurvedic Management

During Purvarupa Avastha of kusta, urdhva and adha samshodana should be administered in the case of Vata predominant kusta, sarpipana, in Kapha predominant kusta Vamana, in Pitta predominant kusta Virechana followed by Raktamokshana are recommended.

In Dadrukushta Virechana and Raktmokshan should be given to remove out vitiated Pitta and Rakta. Sodana - Snehana

should be done with Panchtiktaghirt daily by increasing manner. After the completion of the snehapaana before the Virechanakarma is done. Then patients should be observed for samyakavirechana and sansarjanakarma should be maintained as per schedule.

Shamanachikitsa - Pitta-Kaphaghana and Kushthagna

Bakuchi-*Psoralea corylifolia* –

Jati-*Jasminum officinarum* – main ingredient of many skin medicines like Jatyadi oil.

Nimba-*Azadirachta indica*

Patola- pointed gourd – *Cucurbita dioica*

Dhattura-*Belladonna*-*Datura metel*

Karaveera-*Nerium indicum*

Daruharidra-*Berberis aristata*

Haridra-*Turmeric*-*Curcuma longa*

Karanja-*Pongamia pinnata*

Aragwadha-*Cassia fustula* Mriddharashringa-*Litharge*

Formulations

Gandhaka rasayana

Kusta kutara ras

Kaisora guggulu

Arogyavardhini vati

Pancha tikta grita guggulu

Panchanimba churna

Sarivadya asava

Khadirarishta, kankabinduarishta, vidangarishta

Mahatikta ghritha amritha bhallataka lehya,

Dhatryavlehakaranjadi lepa,

Kaveeradi lepa,

Manahshiladi lepa

Manjishthadi churna,

Aragwadhadhi kashaya

Dhurdhurapatradi thailam

Jasadamritamalahara

Tuvaraka rasayana

Haritaki rasayana

In Modern medical science, topical therapy is generally effective for uncomplicated tinea corporis. Griseofulvin, Terbinafine, Itraconazole, Clotrimazole, Econazole,

Miconazole, Terbinafine, Fluconazole, Ketoconazole Amphotericin, Lulycanazole. Azoles are the group of anti fungals which act on the cell membrane of fungus, thus inhibiting growth of the fungi. Some azoles directly increase permeability of fungal cell membrane.

Pathya

Laghu , Tikta Rasa Pradha shaka, Anna and Gritha prepared with Bhallataka Nimba, Patola, Purana dhanya, Jangala mamsa, Mudga,

Apathya

Guru, Amla(sour), Paya(milk), Dadhi(curd), Anupa mamsa, Matsya, Guda and Tila

Precautions

- Avoid sharing clothing, sports equipment, towels, or sheets.
- Avoid touching pets with bald spots
- Wearing loose clothing in affected areas
- Treating all infected areas to avoid spreading to other parts of body.

Discussion

Ayurvedic remedies have different properties that will lead to its non-resistance modality. So, to prevent the resistance rate have to take step ahead so that this type of disease could be cured without any side effects. Because of the physiological effects of heat on the skin, Bahiparimarjana's Ayurvedic formulations in the form of Lepas (local application) function more quickly and

Shamanaushadhis that have the ability to perform Raktashuddhi should be consumed in order to treat diseases at their source. The treatment in Ayurveda would typically involve a holistic approach including dietary recommendations, herbal remedies, lifestyle changes and specific treatment plans like Panchakarma, external applications, lepas etc. to avoid the reoccurrence.

Conclusion

Formulations from Ayurveda have the ability to fully cure DadruKushta. Additionally, prevention is better than cure, thus maintaining a healthy lifestyle in addition to Ayurvedic Dadru treatment is crucial to preventing recurrence. Dermatophytosis is a fungal infection. Tinea corporis can be correlated with Dadru one of the Kusta rogas. Samhitas have formulations for the successful management of Dadru kusta, and minimizing recurrence by following the Kusta roga Chikitsa protocol. Further studies must be conducted using Krimi roga chikitsa, Pathyapathya in Kusta Roga Chikitsa, and Nidanaparivarjanam as the foundational principles to be applied.

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