A scientific review on Dadrukushta with special reference to Dermatophytosis and its management through Ayurveda

Shreeshailaswamy S. Kanvimath¹, I.S Mathapati², Girish Dharmannavar³

¹Post Graduate Scholar, Department of P.G. Studies in Kayachikitsa, Shri Shivayogeeshwara Rural Ayurvedic Medical College, Hospital & Post Graduate Research Centre, Inchal, Dist. - Belgaum, Karnataka, India.
²Professor, Department of P.G. Studies in Kayachikitsa, Shri Shivayogeeshwara Rural Ayurvedic Medical College, Hospital & Post Graduate Research Centre, Inchal, Dist. - Belgaum, Karnataka, India.
³Asst. Professor, Department of P.G. Studies in Kayachikitsa, Shri Shivayogeeshwara Rural Ayurvedic Medical College, Hospital & Post Graduate Research Centre, Inchal, Dist. - Belgaum, Karnataka, India.

ABSTRACT

Skin is the largest organ of the body and skin diseases has a high prevalence throughout the world and fungal infection of skin is one of them. In the high populated countries like India and China the incidence of skin diseases is considerably increased in recent years due to predisposing factors like warm, humid climate, crowded living conditions, hygiene and poor nutrition. In Ayurveda all the skin related diseases are explained under main heading of Kushta and skin fungal infections termed as Dadrukushta (Dermatophytosis). Ayurveda has a versatile approach towards skin disorders depending on the requirement of the patient. The present article is aimed at understanding the disease Dadrukushta with special reference to Dermatophytosis and its management through Ayurveda.

Key words: Kushta, Dadrukushta, Dermatophytosis, Ayurveda, Skin, Fungal

INTRODUCTION

Acharya Sushruta explained Dadrukushta as Sankramika or Aupasargika Roga. Dadru spreads person to person by Krimi through Sweda Mala. It can be diagnosed by the symptoms like Raga, Pidaka, Mandala in the Adhishtana that is Twak. Dadrukushta is mentioned under Kshudra Kushta by Acharya Charaka and Acharya Sushruta under Mahakushta. Dadrukushta is Pitta-Khapaja Vyadhi as per Acharya Charaka and Acharya Vaghbhata. On the other hand Khaphaja Vyadhi as per Acharya Sushruta.

Causative factors for all skin disorders according to Ayurveda are as follows

▪ Mithyahara Vihara (Improper and irregular diet habits)
▪ Doshya Vaishamya (Vitiation of the Biological forces)
▪ Srotavarodha (Obstruction of the channels)
▪ Vegadharana (Suppression of natural urges)
▪ Viruddhahara (Incompatible diet)
▪ Krimi (Infections)
▪ Manovikaras (Emotional stress factor)

Modern view

In modern science there are three genera of superficial dermatophytosis as Trichophyton Microsporum and
Epidermophyton. They are grouped according to their natural habitat as geophilic (soil), zoophilic (animals), and anthropophilic (humans). \[^7\] Transmission may be indirect or direct bodily contact. Clinically, these fungal infections are labeled according to the region involved. These are as follows:\[^13\]

1. **Tinea capitis** occurring on the scalp, especially in children.
2. **Tinea barbae** affecting the region of beard in adult males.
3. **Tinea corporis** involving the body surface at all ages.
4. **Tinea cruris** occurs most frequently in the region of groin in obese men, especially in hot weather.
5. **Tinea pedis** or ‘athlete foot’ is located in the web places between the toes.
6. **Onychomycosis** shows disintegration of the nail substance.
7. **Tinea vesicolor** caused by Malassezia furfur generally affects the upper trunk.

**Predisposing factors**

Warm, humid climate, poor nutrition and hygiene, obesity, diabetes mellitus and debilitating illness.\[^7\]

**Symptoms**

Common symptom is pruritus in all types of dermatophytosis.\[^7\] Other clinical features are intense itching, annular erythematous scaly lesions, the active border consists of papulovesicular lesions, and in advancing stage the lesions spread peripherally with central clearing and pigmentation.\[^8\]

Clinical features of **Dadrukushta** and Dermatophytosis (Mycoses / Tinea / Ringworm) are similar with each other so the co-relation between **Dadrukushta** and Dermatophytosis is done on the basis of similarities of clinical features in both **Ayurveda** and Modern medicine.

**Prevalence rate**

The prevalence rate of this infection is 2% among young adults and increases to 20% among individuals of 40-60 years age.\[^11\] 39% of the world population is suffering from Tinea infections. In India also, 5 out of 1000 people are suffering from Tinea infections.\[^12\]

**Nidana for Dadrukushta**

There is no separate **Nidana for Dadrukushta**. **Dadrukushta** spreads from person to person by **Malaja Krimi** through **Sweda** (contact with the infected person and contact with the wearables of the infected person etc.)\[^14\] Due to the sharing of towels, bed sheets, soap, hand kerchief etc. of infected person causes the spreading of micro - organism from one person to another person.\[^15\]

**Dadrukushta** is likely similar to fungal infection of the skin in which the fungal spores has been transferred from a diseased person to a healthy person by above explained modes.

**Samprapti of Dadrukushta**

Sharing the wearables of infected person (contagious/Sankramika)

\[
\text{Sankramika of Krimi from Purusha to Purusha (Malaja - Bahya Krimi)} \downarrow \\
\text{Krimi enters into Twak through Sweda and vitiates Tridosha, Twak, Rakta and Lasika} \downarrow \\
\text{Dadrukushta (Kandu, Pidika, Raaga, Mandala, Visarpini)}
\]

**Table 1: Secondary causes for Dadrukushta (Dermatophytosis) as per Ayurveda.**

<table>
<thead>
<tr>
<th>Mithyahara</th>
<th>Ch.S</th>
<th>Su.S</th>
<th>B.S</th>
<th>H.S</th>
<th>M.N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhyashana</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Vishamashana</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Atyashana</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Intake of food during indigestion</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>
Continuous and excessive use of Madhu, Fanita, Matsya, Lakucha, Mulaka, Kakamachi, and intake of above substances while having Ajirna

Excessive Snehana

Vidhi Ahara without emesis of undigested food

**Rasataha**

Excessive intake of Amla and Lavana Rasa

**Dravyataha**

Excessive intake of Gramya, Anupa, Audaka, Mansa

Navanna, Dadhi, Masa, Matsya, Mulaka, Tila, Pishtanna, Kshira, Guda

Dushivisha

Dushita Jala

Excessive Dravya, Snigdha Ahara

Guru Ahara

**Abbreviations:** Ch.S - Charak Samhita, Su.S - Sushrut Samhita, A.H - Ashtanga Hridaya, A.S - Ashtanga Sanggraha, M.N - Madhava Nidana

**Table 2: Dosha Dushya Sankalpana.**

<table>
<thead>
<tr>
<th>S N</th>
<th>Signs &amp; Symptoms</th>
<th>Char aka</th>
<th>Sushr uta</th>
<th>A. H</th>
<th>A .S</th>
<th>M. N</th>
<th>Y. R</th>
<th>Modern</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kandu (itching/pruritus)</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>Raga (redness/erythema)</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3</td>
<td>Atasi Pushpavat Pidika (macular rashes similar to flax flower)</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>Tamra Varana Pidika (copper coloured macular rashes)</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>5</td>
<td>Visarpani Pidika (diffused macular rashes)</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>Dirgha Pratana (tendril like macular rashes)</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 3: Sign & symptoms of Dadrukushta according to various Acharayas and Modern Science.**
7. Unnata Mandala (raised border ring)  -  -  +  +  +  -  -
8. Scaling  -  -  -  -  -  -  +
9. Vesiculation  -  -  -  -  -  -  +

Abbreviations: A.H - Ashtanga Hridaya, A.S - Ashtanga Sangraha, M.N - Madhava Nidana, Y.R - Yogaratnakara

Table 4: Differential diagnosis of Dadrukushta (Dermatophytosis).

<table>
<thead>
<tr>
<th>S N</th>
<th>Disease</th>
<th>Symptoms</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vicharchika</td>
<td>Bahusraav a Yukta Pidika originate in Vicharchika</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Pama Kushtha</td>
<td>Scattered Pidika with different Varna (white, red, black)</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Dadrukushta</td>
<td>Atasi Pushpa like Pidika, Varna with Mandala (round patches)</td>
<td></td>
</tr>
</tbody>
</table>

Clinical examination as per modern medical science

Typical infections have an annular appearance that patients refer to as “ringworm” and following table showing sign and symptoms of Tinea.

<table>
<thead>
<tr>
<th>SN</th>
<th>Type of Tinea</th>
<th>Clinical manifestations</th>
<th>Prevention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tinea pedis</td>
<td>Most common infection of foot, Variable erythema,</td>
<td>Prevention strategies include allowing</td>
</tr>
</tbody>
</table>
common, Proximal subungual onychomycosis may be marker for HIV infection
fitting garments made of natural fabrics can also help avoid infection. Washing undergarments in very hot water and adjusting feminine items will also help avoid fungal growth too.

Pathological Examinations
a) Potassium Hydroxide (KOH) Microscopy
Potassium hydroxide (KOH) may be used to diagnose tinea from skin scrapings, nails scrapings, or hair direct microscopic examination.

b) Fungal culture
Skin scrapings should be sent for culture whenever infection of the dermatophytes is suspected. It takes at least two weeks before the fungus grows enough to identify itself. Nail clippings and hair samples should be examined in the same way as skin scrapings.

Modern management of Dermatophytosis

Tinea Pedis
Athlete's foot is often treated with topical antifungal ointments which can be purchased online or over-the-counter. Severe infections can also require supplementary oral medication. The feet will also need to be treated and kept dry in order to help kill the fungus.

Tinea Capitis
Although oral Griseofulvin has been the standard treatment for tinea capitis, newer oral antifungal agents such as terbinafine, itraconazole, and fluconazole are effective, safe, and have shorter treatment courses.

Tinea Cruris
Tinea cruris is commonly known as Jock itch. Jock itch care typically requires the use of topical antifungal ointments and proper grooming. Over-the-counter medications improve many cases of jock itch, though
some require prescription medications. This may also help destroy the infection by washing the infected area and keeping this dry.

Onychomycosis

Treatment of infections with leasts depends on their severity. Standard treatments include creams, tablets, or suppositories available through prescription, or over-the-counter, or online. Complicated infections can take complex therapies.

Ayurvedic management of Dadrukushta (Dermatophytosis)

The basic principle of treatment as per Ayurveda is Nidana Parivarjana. Hence avoid the causative factors and take special care to protect the skin. Following measures should be taken to reduce the risk of infection with the fungal skin and to prevent of spread.

- Dry the skin thoroughly after a bath.
- To remove any fungi, wash socks, clothes and bed linen frequently by soaking them in warm water
- Wear clean flip-flops or plastic shoes in damp areas, as well as common areas such as showers, saunas and pools.
- Wear loose fitting clothes made of cotton or material to keep the skin away from moisture.
- Do not share towels, hair brushes and combs that might carry a fungus.
- Make sure about the cleanliness of the equipment’s at haircut shops & saloons.

As per Ayurveda treatment of Dadru are

1) Shodhana Chikitsa
2) Shamana Chikitsa
3) Lepana Karma (Local Applications)

1) Shodhana Chikitsa

The excretion of vitiated Doshas from the diseased individual is very important role of Shodhana Chikitsa. To remove vitiated Pitta and Rakta in Dadrukushta Virechana Karma and Raktmokshana should be carried out.

Virechana Karma

Purvakarma

Snehana Karma - Snehana should be done with Mahatiktaka Ghrita daily by increasing manner starting from 50 ml, 150 ml, and 250 ml up to emergence of manifestation of Samyak Snehana in the early morning after the completions of physiological urges.

Swedana Karma - After the completion of the Snehana and before the Virechana Karma, Sarvanga Sweda should be given after Sarvanga Abhyanga.

Pradhankarma

Virechana Karma - Following Samyak Snehana and Shodhana and patient examination, the planned induce of purgation should be given to patients by giving Trivrit Kwatha early in the morning. Patients should be observed for Samyak Virechana Lakshanas and Samsarjana Karma should be followed as scheduled.

Rakta - Mokshana Karma - Rakta Mokshana should be done by using No.18 bore needle early in the morning and near about 60 ml blood should be withdrawn per sitting.

2) Shamana Chikitsa

Some commonly used classical Ayurvedic formulations in Dadrukushta are as follows:

Table 6: Ayurvedic formulations in Dadrukushta

<table>
<thead>
<tr>
<th>SN</th>
<th>Drug</th>
<th>Dose</th>
<th>Anupana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Arogyavardhini Rasa</td>
<td>500mg twice a day</td>
<td>Luke warm Water</td>
</tr>
<tr>
<td>2.</td>
<td>Gandhaka Rasayana</td>
<td>500mg twice a day</td>
<td>Luke warm Water</td>
</tr>
<tr>
<td>3.</td>
<td>Panchatiktaka Guggulu</td>
<td>250mg twice a day</td>
<td>Luke warm Water</td>
</tr>
<tr>
<td>4.</td>
<td>Kaishor Guggulu</td>
<td>500 mg, twice a day, after food</td>
<td>Luke warm Water</td>
</tr>
</tbody>
</table>
5. **Panchtikita Ghrita Guggulu** 500 mg, twice a day, after food Luke warm Water
6. **Aaragvadhadi Kashaya** 15 - 20ml twice a day, before food Sambhag Ghrita
7. **Nimbadi Kashaya** 15 - 20ml twice a day, before food Water
8. **Aragwadha Kashaya** 15 - 20ml twice a day, before food Water
9. **Guduchyadi Kashaya** 15 - 20ml twice a day, before food Water
10. **Patolakaturohinyadi Kashaya** 15 - 20ml twice a day, before food Water
11. **Manjisthadi Kashaya** 15 - 20ml twice a day, before food Madhu
12. **Aragvadhasava** 15 - 20ml Water
13. **Khadirarishta** 15 - 20ml Water
14. **Chakramarda (Cassia tora Linn)** Swarasa- 10-20 gm Churna-1-6gm Water
15. **Panchnimbadi Churna** 5gm(3-5 masha) Madhu, Ushna Jala
16. **Haridra Khanda Churna** 3-5gm Dugdha
17. **Gomutra Siddha Haritaki** 5gm at night Lukewarm water
18. **Hinguliya Manikyarasa** 8mg/ml Water

3) **Lepana Karma (Local Applications)**

Lepa should be applied as per area of skin lesion. Mostly applied in the morning and bedtime.
- *Dashanga Lepa*
- *Karanja Taila*

- *Durvadi Lepa*
- *Aragvadhadi Lepa*
- *Edagajadi Lepa*
- *Maha Marichyadi Tail*
- *Nimba Taila*
- *Chakramarda Taila*

**Pathya - Apathya to be followed in Dadrukushta**

- Maintain daily dietary timings, vegetarian food will be better.
- Hold very hygienic.
- Regular exercise based on physical capacity, for at least 1 hour.
- Get breakfast sprouts, nuts, and vegetable juices or fruit juices.
- Stop excess salty, spicy, and fatty, candy, drug misuse and fast food.
- *Ksheera* and *Ghritha* are used every day as Rasayana.
- Body massage (*Abhyanga*)
- Minimum 7 - 8 hour sleep is compulsory
- Avoid late at night awakening (*Ratri Jagarana*)
- Follow Yogasanas to alleviate mental stress and release toxins
- Adopt holistic approach
- Practice positive thoughts

**DISCUSSION**

*Dadrukushta* is the prevalent disease in developing countries such as India, with the majority of the population living in unhygienic conditions. *Dadru* has mentioned nearly all the Acharayas along with their management. Thus, *Ayurveda* is able to cure the disease of the skin like *Dadrukushta*. As this is one among the relapsing type of skin disease so patient was advised to follow *Pathyapthya* like *Ahara, Vihara, Achara, Vichara*. Repeated *Shodhana* as per classics in accordance with *Dosha, Kala, Agni* and *Desha* etc., should be administered to control the frequency of
recovery and further spread chances of recurrences are more in fungal lesions. Utmost care should be taken for skin protection.

**CONCLUSION**

*Dadrukushta* is a specific skin condition that is clinically replicated by dermatophytosis or tinea. It can be concluded that the use of Chikitsa Upakramas mentioned in Ayurveda such as Shodhana, Shamaana (formulations such as Arogyavardhini Vati, Gandhaka Rasayana etc.) and Bahirparimirjana (Lepa of local application Karanji Taila, Nimba Tail etc.) are effective in the management of Dadrukushta. Clinical features of Dadrukushta and Dermatophytosis (Mycoses / Tinea / Ringworm) are similar with each other so the correlation between Dadrukushta and Dermatophytosis is done on the basis of similarities of clinical features in both Ayurveda and Modern medicine.

**REFERENCES**

1. Madhava Nidhana – by Madhavakara, Madhukosha Sanskrit commentary by shri Vijayaraksha, Shrikanthadatta and Vidyotini Hindi commentary by Y.N Upadhyaya Chaukamba Sanskrit Sansthan, Varanasi Kushtanidhan 49 page no.625, shlok no.20/10-16, part 2
4. Agnivesha, Charaka Samhita with Ayurveda Dipika Commentary edited by Vaidya Yadavji Trikamji Acharya; Chaukambha Orientalia, Varanasi-2004; Chikitsasthana, Chapter no.7, Shlok no.30, page no.204
6. Ambika Dutt Shastri, Sushruta Samhita; Reprint, Chaukambha Sanskrit Sansthan, Varanasi, 2014; Nidhanasthana, Chaper no.5, Shlok no.8, page no.248
7. Golwalla’s MEDICINE for students, by Dr.Aspi F. Golwalla, Dr.Sharukh A. Golwalla., Edited by Dr.Milind Y. Nadkar., 25th Edition-2017., Jaypee Brothers Medical Publications; Chapter 15; page no.923
9. Harrison’s principle of internal medicine, vol-1, edition 18, chapter 52, page no.401
10. Ronald Marks, Roxburgh’s common skin diseases, edition 16, chapter 4, page no.33

**How to cite this article:** Shreeshailaswamy S. Kanvimath, I.S Mathapati, Girish Dharmannavar. A scientific review on Dadrukushta and its management through Ayurveda. J Ayurveda Integr Med Sci 2023;05:41-48. http://dx.doi.org/10.21760/jaims.8.5.7

**Source of Support:** Nil, Conflict of Interest: None declared.