



COMPREHENSIVE REVIEW OF JALAUKA AVCHARAN AND VIDANGADI LEPA IN THE MANAGEMENT OF DADRU (DERMATOPHYTOSIS).

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ABSTRACT

Dadru, commonly known as fungal skin infections, presents a significant challenge in dermatological practice due to its recurrent nature and varying response to conventional therapies. This review discusses the holistic perspective of Ayurveda in understanding Dadru, emphasizing the importance of dosha imbalance, immune modulation, and lifestyle modifications in its management and provides an in-depth analysis of two traditional Ayurveda treatment modalities, Raktamokshan and Vidangadi Lepa in the management of Dadru. Vidangadi Lepa, a topical formulation comprising herbs like Vidanga (Embelia ribes) and Haridra (Curcuma longa), has been traditionally employed for its antifungal and anti-inflammatory properties. The review examines the pharmacological actions of the individual components and their synergistic effects in combating fungal infections. Additionally, the review delves into the therapeutic approach of Raktamokshana by Jalauka-avcharana, a bloodletting procedure in Ayurveda, for the management of Dadru. Raktamokshana aims to eliminate vitiated blood and toxins from the body, thereby alleviating the underlying imbalance responsible for fungal skin infections. This review aims to fill this gap by providing a thorough description of Raktamokshana and Vidangadi Lepa in the context of Dadru.

Keywords: Dadru, Dermatophytosis, Fungal infection.

INTRODUCTION

Skin is the largest organ of the human body and constitutes about sixteen percent of human body weight and covers an area of about two square meters. The primary function of skin is to act as a barrier. Skin has other functions of protection, regulation and sensation. It provides protection from mechanical impacts, pressures, microorganisms, radiation and chemicals. Skin also regulates several aspects of body such as temperature via sweat and hair, changes in peripheral circulation and fluid balance.

Nowadays, skin diseases are very common; therefore, to keep our skin healthy has become a critical concern. Sometimes due to poor hygienic conditions, humid temperature, pollution and poor sanitization, skin infections may occur; leading to psychological disturbances like anger, stress, depression, and confidence often falls.

Skin infections are caused by fungi, staphylococcus aureus, streptococcus species. Among these, fungal infections are very common and can be superficial (dermatophytes, yeasts) or less commonly deep (chromomycosis, sporotrichosis).

DERMATOPHYTOSIS:

Dermatophytosis, also known as **tinea** and **ringworm**, is a fungal infection that may affect skin, hair and nails. Dermatophytes are fungi that infect skin, hair, and nails and includes members of the genera *Microsporum*, *Trichophyton*, *Epidermophyton*. It is designated as Tinea followed by the name of affected part, such as, when present with skin (*tinea corporis*), scalp (*tinea capitis*), groin (*tinea cruris*), foot (*tinea pedis*), or nail (*tinea unguium*)¹. Superficial Dermatophytosis affects 20-25% of the world population. The recent prevalence of Dermatophytosis in India ranges from 6.09 – 61.5%. This occurs worldwide and infections with these organisms are extremely common. These are transmitted from person-to-person through contact and fomites. Individuals with decreased immune response, children and older individuals are at an increased risk of developing a dermatophyte infection. Other trigger factors include Diabetes mellitus, poor circulation, corticosteroid use, poor hygiene, etc.

CLINICAL FEATURES:

Signs and symptoms of dermatophyte infections vary depending on the infectious microorganism, affected area, and the severity of the infection. Most infections tend to be superficial and localized to a specific part of the body, such as the feet, scalp, or nails. However, the simultaneous presence of more than one type of tinea is common, and can occur from direct spreading from one area to another.

Typically, the lesions are erythematous, annular, itchy, peripherally spreading, flat or sometimes raised, whitish or brownish, scaly with well-defined edge and central clearing. Lesions are usually asymmetrical and may be single or multiple¹. Heat, humidity, sweating, tight clothing, friction, topical corticosteroid are known to modify the appearance of lesions.

DIAGNOSIS:

A dermatophyte infection is often suspected with clinical presentation of corresponding lesions or inflammation. In most cases, diagnosis can be confirmed by additional diagnostic tests, including direct microscopy, fungal cultures, or Wood's light examination.

Direct microscopy is typically performed with a potassium hydroxide (KOH) preparation that allows the branching filaments of the fungi (hyphae) to be seen under the microscope.

Wood's light examination uses ultraviolet light to detect areas of green fluorescence that may be caused by certain types of dermatophytes².

Finally, a **skin biopsy** may be performed if the diagnosis is still uncertain or in the case of persisting lesions that have not resolved with prior treatments.

TREATMENT:

Treatment of dermatophytosis is divided into:

Topical therapy: Antifungal ointments are used for external application such as- 1% Clotrimazole, 1% Miconazole, 2% Oxiconazole, 1% Terbinafene etc.

Oral therapy- Some oral antifungal drugs are used to treat dermatophytosis such as- Itraconazole, Fluconazole, Terbinafene, Griseofulvin.

LINKING DERMATOPHYTOSIS WITH DADRU:

In ancient Ayurvedic texts, there is a disease, named Dadru mentioned with complete etiopathogenesis, clinical features and various treatment modalities. On comparison, Dadru is having similar clinical features like utsanna mandala (edematous, circular patches of varying size and margins), having raga (redness) and kandu (intense itching). Ayurveda advocates *asatmya* and *viruddh aahara* is responsible for causing dadru while dermatophytosis is also caused due to poor and unhygienic food habits. Dadru and Dermatophytosis both are aggravated by more perspiration in the body and in humid climate conditions and are contagious in nature.

DADRU:

All the skin diseases in Ayurveda have been classified under the broad heading of Kustha. Kustha is any disease that damages the normal skin texture of the body³. Kustha is further categorized into Mahakustha and Kshudrakustha. Dadru is one among the Kshudrakustha according to Acharya Charaka⁴. However, Acharya Susruta⁵ and Acharya Vagbhatta mentioned Dadru in Mahakustha⁶.

Dadru is a Raktapradoshaj Vikar⁷ and a chirkalaja⁸ (chronic) vyadhi with predominant vitiation of Pitta and Kapha doshas⁹. According to Acharya Charak, Dadru occur in the fourth layer of skin¹⁰. While, Acharya Sushruta mentioned Tamra and Vedini layer, as a seat of the disease¹¹. As per classical textbooks, all types of Kustha have been considered as Tridoshajavikara which involve Twak, Rakt, Mamsa and Lasika. Both dosha and dushya form a compound called Saptako Dravya sangraha¹². Acharya Sushruta mentioned Kustha in Aupsargik Roga¹³.

NIDANA¹⁴ (ETIOLOGY):**Aharaj Nidana (Dietary factors):**

Virudha anna pana (Intake of wrong food combinations such as milk with fish, milk and fruits together such as shakes etc.), amla lavana rasa atisewana (excessive intake of sour and salty substances), drava, snigdha, guru padarth sewan (excessive intake of fluid or oily or food which is heavy to digest.) ajirna, adhyashana (intake of excess food or simultaneous meals before the previous meal is digested.), nava-anna, dadhi, matasya, til, mash, moolak, pishta-anna, ksheer, guda atisewana (excessive intake of freshly harvested grains, curd, black gram, sesame seeds, radish, milk and jaggery) are some of the dietary factors responsible for Dadru kustha.

Viharaja Nidana (Life style related factors):

Chardi vegadharana (suppression of urge of vomiting and other natural urges.), vyayama-atisantapa bhuktwa sevina (doing exercises in excessive heat just after heavy meals, gharma-shrama-kshya-artanam drutam sheet-ambu sevinam (use of cold water or bath after strenuous work or exercise or just after exposure from sun heat), panchakarma apchara (improper administration of panchakarma therapies.), vyavaya cha-api-ajirne (Indulged in sexual activities without proper digestion of food), divaswapna (sleeping during day hours.) are some of the factors which cause Dadru.

Anyanidan (Others):

Vipran guru gharshana (Disrespecting the elders and gurus) and Papa karma (other sinful acts) are other factors of causing dadru according to ancient literatures.

PURVAROOPA¹⁵ (PREMONITORY SYMPTOMS):

Sparsh-agyatam (loss of touch sensation), Ati-svedo na va (excessive or absence of sweating), vaivarnaya unnati (discoloration and development of skin lesions), kotha (skin eruptions), lomaharsha (hair eruption), kandu-toda-shrama-klama (itching, pain, physical exhaustion, mental fatigue), vranam adhik shoolum, shighra utpatti chira sthiti (instantaneous appearance and continued persistence of these lesions), daha (burning sensation), supta-angta (numbness in skin) are some premonitory symptoms mentioned in samhitas.

ROOPA¹⁶ (CLINICAL SYMPTOMS):

Kandu (itching), raga (redness), pidika (skin eruptions), utsann mandalam (circular patches with elevated edges), dirgha-pratana durvavat (spread like durva plant), atsi-pushp varna, tamra varna¹⁷ (color resembling atsi pushp or red in color), visarpini (which can spread), anushangi¹⁸ (the disease which remain throughout lifetime or difficult to treat; chronic) are the clinical symptoms mentioned in samhitas.

SAMPRAPTI (AETIOPATHOGENESIS):

Causative factors vitiates Vata-Pita-Kapha doshas that deranges the agni, forming ama in the body. This ama causes shrotorodha and finally twaka, rakta, mamsa, lasika dhatu dushti in the body, ultimately causing Dadru Kustha¹⁹.

SAMPRAPTI – GHATAKA:

Dosha	: Kapha and Pitta
Dushya	: Twaka, rakta, mamsa, lasika
Srotas	: Rasavaha, Raktavaha, Mamsavaha
Agni	: Manda or Vishama agni
Shrotodushi	:Sanga and Vimarga gamana
Udbhava sthan:	Amashaya
Adhithana	: Twaka
Rogmarga	: Bahya ²⁰
Swabhava	: Chirkari

SADHYA-ASADHYATA:

Acharya Charak mentioned Dadru as Krichhsadhyavyadhi as it has pitta-kapha predominance²¹. Since all the kushtha having Pitta-kapha and Vata-pitta predominance are all krichhasadhyata.

CHIKITSA (TREATMENT):

Chikitsa is basically divided into two i.e., Shamanachikitsa and Shodhanachikitsa. Giving importance to Shodhana karma, Acharya Charaka highlighted the role of Panchakarma therapy by stating that, the disease treated by Shodhana will never reoccur, whereas the treatment with Shamana therapy may reoccur in due course of time²².

SHODHANA CHIKITSA:

Acharya Charaka has mentioned the shodhanachikitsa in bahudosha condition. Vaman drugs such as Indrayava, madanphala, madhuka, Patola, Nimba leaves, are indicated in Kushtha²³. Whereas for Virechana karma, Nishotha, Trivruta, Triphala and Danti are indicated. Acharya Charaka has also mentioned Raktamokshana in Kushtha having Pitta dominance²⁴.

SHAMANA CHIKITSA:

Various Kwatha, Churna, Asava, Arishta, application of Lepa, Kshara, Agada are mentioned in samhitas for Kushtha roga. (Table-1)

Table no.-1 showing various shamana aushadh in Dadru Kushtha.

S.No.	Shaman Aushadh	Reference
CHURNA		
1.	Mustadi Churna	Charak Chikitsa
2.	Triphaladi Churna	Charak Chikitsa
3.	Panchnimba Churna	Bhaisajya ratnavali
VATI		
4.	Panchtikta ghrith guggulu	Chakradutta
5.	Amrita guggulu	Bhaisajya-ratnavali
6.	Arogyavardhini vati	Rasa ratna samuchya
KWATH		
7.	Patoladi Kwath	Charak Chikitsa
8.	Manjisthadi kwath	Bhawaprakash
9.	Aaragwadadi kwath	Bhaisajya ratnavali
10.	Triphaladi nava kashaya	Chakradutta
LEHA		
11.	Amrit bhallataka	Agatsaya samhita
ASAVA-ARISHTA		
12.	Khadirarishta	Yoga-ratnakar
13.	Triphalasava	Charak Chikitsa
GHRITA		

14.	Panchatikta ghrita	Chakradutta
15.	Tiktaka ghrita	Chakradutta
16.	Mahatiktaka ghrita	Charak Chikitsa
TAILA		
17.	Shadbindu taila	
18.	Marichadi taila	Chakradutta
RASA-BHASMA		
19.	Rasamanikya	Rasendra-chintamani
20.	Rasarajeshawar rasa	Rasa sara sangraha
21.	Talkeshwar rasa	Rasendra kalpadrum
LEPA		
22.	Edgajadi lepa	Charak Chikitsa
23.	Vidangadi lepa	Chakradutta
24.	Siddharthak snana	Charak Chikitsa
25.	Doorvadi lepa	Chakradutta
26.	Aragawadh patra lepa	Chakradutta
27.	Moolak beejadi lepa	Chakradutta

JALAUKA-AVCHARANA:

Jalauka-avcharan is claimed to be the supreme therapy because of its safety and high efficacy in the disorders involving vitiation of raktadhatu. Jalauka is of two types- Savish and Nirvish²⁵. In present study, Hirudo Medicinalis (nirvishjalauka) will be used in the clinical study in the management of Dadru.

Procedure of Leech Application-

1.Poorva karma-

Selected leeches will be smeared with paste of mustard and turmeric, then kept in pot for few minutes. Active leech will be selected and picked out to keep in separate water pot.

2. Pradhan karma-

The patient will be made to lie or sit down, affected area will be washed with antiseptic solution and roughened with smooth cow dung powder. Then selected leech will be kept over the affected area to bite and suck the blood. If leech does not bite, a drop of milk or blood will be put at its mouth or small incision will be made over the affected area. A soft, white, moist cotton cloth will be kept over it. With the appearance of kandu and toda at the site of bite, it means leech is sucking pure blood. It will be removed by sprinkling salt over its mouth.

3.Pashchat karma-

At the site of bite, turmeric will be applied to arrest the bleeding. Leech will be made to vomit the sucked blood out. It will be sprinkled over with rice flour, so its held firmly, with left hand at its tail end and with right thumb and index finger, its body is kneaded slowly in downward direction to vomit the sucked blood. After vomiting is complete, put the leech in fresh water.

COMPOSITION OF VIDANGADI LEPA²⁶:**Table no 2 showing composition of Vidangadi lepa**

Name	Botanical name	Rasa	Guna	Virya/vipaka	Karma	Proportions
Vidanga	Embelia ribes	Katu	Laghu, Ruksha	Ushna/Katu	Kapha-vata shaman/ Krimighna	1
Edgaja	Cassia tora	Katu	Laghu, Ruksha	Ushna/Katu	Kapha-vata shaman	1
Kushtha	Saussurea lappa	Tikta, Katu, Madhur	Laghu, Ruksha, Tikshana	Ushna/Katu	Kapha-vata shaman	1
Nisha	Curcuma longa	Tikta, Katu	Laghu, Ruksha	Ushna/Katu	Kapha-vata shaman	1
Sarshap (beeja)	Brassica juncea	Katu, Tikta	Snigdha	Ushna/Katu	Kapha-vata shaman	1
Sindhu	Rock salt	Lavana	Laghu, Snigdha	Samsheet-ushna	Tridosha shaman	1

DISCUSSION:**Probable Mode of Action of Jalauka-Avcharana:**

Raktamokshanais described as Ardha-chikitsa (half treatment) in Shalyatantra by Acharya Sushruta²⁷. Rakta is one of the important dosha in the body along with Vata, Pitta, Kapha as mentioned by Acharya Sushruta²⁸. Raktamokshana can be done by Prachhana, Siravedha, Shringa, Jalauka, Alabu. Leeches have been used for medicinal purposes since a long time. It is one of the methods for shodhana chikitsa used by our Acharyas for Raktadushti. Leeches contain a substance called Hirudin in its saliva, which has anti-coagulant property and thus improves micro and macro-circulation. While sucking blood, leeches also inject powerful anaesthetic and anti-inflammatory enzymes. These properties of leech can help in curing the disease Dadru by reducing inflammation and by improving the circulation as well. Raktamokshana aims to eliminate vitiated blood and toxins from the body, thereby alleviating the underlying imbalance responsible for fungal skin infections.

Probable Mode of action of Vidangadi lepa:

Shamana chikitsa is as important as Shodhana chikitsa. Acharyas mentioned various treatment for Dadru. One of the treatment is Bahiparimarjanchikitsa. Lepa is one of them. Acharya Chakrapani mentioned Vidangadi lepa and many others in the management of Dadrukustha, which is still a subject for research. Vidangadi lepa contain six drugs, all of which are having Ushna virya, Katu vipaka and laghu, rukshaguna and have kapha-vatashamaak properties²⁹. These are having the properties to break the sthanik samprapti of the disease and thus can cure the disease.

CONCLUSION:

Dadru, a dermatological condition characterized by fungal skin infections, poses a significant health concern globally. While modern medicine offers various treatment options, including topical and systemic antifungal agents, the recurrence and resistance associated with these infections continue to challenge clinicians. In this context, traditional systems of medicine, such as Ayurveda, offer alternative therapeutic approaches that emphasize a holistic understanding of disease etiology and personalized treatment strategies.

Among the various traditional therapies, Raktamokshana, a bloodletting procedure and a topical formulation derived from medicinal herbs (Vidangadi Lepa) represent two distinct yet complementary approaches in Ayurvedic dermatology. Despite their longstanding use in traditional practice, there exists a paucity of

comprehensive reviews integrating the theoretical principles, pharmacological actions, and clinical evidence supporting their efficacy in Dadru management.

Through this comprehensive review, we hope to enhance understanding and stimulate further research in the realm of Ayurvedic dermatology, ultimately improving outcomes and quality of life for individuals afflicted with Dadru.

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