

Ayurveda Management of *Mandala Kushtha* w.s.r. to Fungal Infection: A case study

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ABSTRACT

Skin is the largest organ of the body. Skin interfaces with the environment and it play an important role in protecting the body against pathogens and other environmental conditions. All the skin diseases in Ayurveda have been classified under the broad heading of *kushtha* which are further categorized in to *Mahakushtha* & *Kshudrakushtha*. Acharya Charaka mentioned *Mandala Kushtha* has revealed in *Mahakushtha*. As per modern perspective *Mandala Kushtha* comes under superficial fungal infection of the skin which is one of the most common dermatological manifestations. The most common dermatological manifestation affecting up to 15% of world's population in all age group. There are several medicines mentioned in Ayurveda for the treatment of *Kushtha Roga*. In Ayurveda *Shodhana* and *Shamana Chikitsa* is recommended along with drugs having *Kushtaghna*, *Krumighna* and *Kandughna* properties along with external application in the form of *Lepa* and oil. This study aims to provide a successful treatment for a patient of *Mandala Kushtha*. A patient presented to the OPD of Meegoda Ayurveda hospital with a complain of elevated irregular patches with severe itching, redness and burning sensation at both arm pits and lower area of the breast for 5 months. Patient was treated with *Datri Kwata*, *Chandraprabhavati*, *Arogyavardhinivati*, *Avipattikara Choorna* and *Sudarshana Choorna* for internally; *Veesarpahara* with *Seetodaka* oil and *Attoradi Lepa* for external application on OPD level for 30 days. The responses to the treatments were recorded using a specially prepared grading scale. Therapeutic effect was assessed through symptomatic relief of the patient before, after 14 days and after entire treatments. 100% relief on itching plus burning sensation and 75% relief on discolouration of patches was observed after 30 days of entire treatment. However larger sample sizes and further research is needed to validate these findings.

Keywords: *Mandala Kushtha*, fungal infection, *Datri Kwata*, *Attoradi Lepa*

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Introduction

Kustha is a *Tridoshaja Vyadhi*. According to Acharya Charaka and Vagbhata, *Mandala Kustha* is included under *Kapha* predominance skin disease (Sharma, 2015). But clinical features imitate both *Kaphaja* as well as *Pittaja* like *Raga* (redness), *Daha* (burning sensation), and *Kandu* (itching) respectively. Sometimes the patient may appear with *Pitta* predominance symptoms along with *Kandu* and sometimes patient may present with *Kaphaja* predominance symptoms along with *Daha* while sometimes patient presents with both. Like *Ekadasha Kushtha* patients of *Mandala Kustha* also have vitiating of *Saptadhatu* (Murthy, 2018) It may be diagnosed with symptoms such as severe itching (*Kandu*), erythema (*Raga*), and discoid lesions (*Pidika*) with elevated borders (Murthy, 2017). In conventional dermatology, *Mandala Kushtha* can be indicated as fungal infection. The fungal infection resembles with *Mandala Kushtha* in Ayurveda. It may be diagnosed with symptoms such as severe itching, erythema, exanthema, and discoid lesions (*Pidaka*) with elevated borders. *Mandala Kushtha* which is likely similar to fungal infection of the skin in which the fungal spore has been transferred from diseased person to healthy person. Especially Tinea infection amongst all the skin disorders is the difficult to cure as it always has recurrence and also very determined. There are also several medicines mentioned in Ayurveda for the treatment of *Kushtha Roga*. Some of them are used to treat the situation in the present case analysis.

Case Report

A 57yrs old housewife from Dadigamuwa presented to OPD of Meegoda Ayurveda hospital with itching and discoloration in both arm pits and lower area of the breast for 5 months. After that she had severe itching at night. Itching prominent after sweating and burning increased after itching. The patient already had taken oral and local antifungal allopathic medicines. She was get relief from itching for time being but after quitting that medicine, the patches reappeared with discoloration of the affected area. She was a known patient of Diabetes Mellitus for 5 years and she had been both physically and mentally distressed by this situation. Asymmetrical lesion were presented with *Atasipushpa Varna* (reddish brown), well demarcated borders and irregular shapes in both arm pits and lower area of the breast.

Severity of the clinical features were recorded before treatment, after 14 days and after entire treatments using specially prepared grading scale as below.

Grading Scale

1. *Kandu* (itching)

No itching	0
Mild itching	1
Moderate or frequent itching	2
Severe itching	3

2. *Raaga* (colour of *Mandala*)

Normal skin colour	0
Mild red colour	1
Light brown with red	2
Dark brown with red	3

3. *Daha* (burning)

Absent	0
Occasionally	1
Whole day	2
Continuous disrupts sleep	3

Table 1 –Preparation of *Datri Kwata* (Govinda 2017)



Sanskrit name	Botanical name	Part used	Quantity
<i>Amalaki</i>	<u><i>Emblica officinalis</i></u>	Fruit	60g
<i>Khadira</i>	<u><i>Acacia catechu</i></u>	Bark	60g

Ingredients of the *Datri Kwata* along with their quantity given in table 1. *Datri Kwata* prepared by according to the method of *Kashaya Paribhasha*. Ingredients of *Datri Kwata* along with their quantities are given in table 1. These ingredients were mixed with 960ml of water and boiled down to 120ml.

Table 2- Ingredients of *Attoradi Lepa* (Govinda 2017)

Sinhala & Sanskrit name	Botanical name	Part used	<i>Rasapanchaka</i> (Ayurveda Pharmacopeia)
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Attora <i>Dadrughna/</i> <i>Chakramard</i> <i>a</i>	 <i>Cassia alata</i>	leaves	<i>Rasa-Madhura; Guna-Laghu,Ruksha; Veerya-Sheea; Vipaka-Madhura; Kapha Shamaka</i> <i>Doshakarma-Kushtaghna</i>
Kohomba/ <i>Nimba</i>	 <i>Azadirachta indica</i>	leaves	<i>Rasa-Tikta, Kashaya; Guna-Laghu,; Veerya-Sheeta; Vipaka-Katu; Kapha-Pitta Samaka</i> <i>Doshakarma- Kushtaghna, Daha Prasamana, Rakta Shodaka</i>
Vatamara	 <i>Gliricidia sepium</i>	leaves	<i>Rasa-Madhura; Guna-Laghu,Ruksha; Veerya-Sheeta; Vipaka-Madhura;</i> <i>Doshakarma- Kushtaghna</i>
Kaha/ <i>Haridra</i>	 <i>Curcuma longa</i>	rhizom e	<i>Rasa-Tikta, Katu; Guna-Laghu,Ruksha; Veerya-Ushna; Vipaka-Katu; Kapha-Vata Shamaka</i> <i>Doshakarma-Kushtaghna, Varnya, Vrunashodana, Vrunaropana, Raktavardaka, Raktasthambhana,Vishagna</i>

Gendagam/ <i>Gandhaka</i>		powder	<i>Rasa- Katu,Tikta; Guna- Laghu,Snigdha; Veerya- Ushna; Vipaka-Katu; Kaphavata Shamaka</i> <i>Doshakarma-Kushtaghna, Vishagna,Raktashodaka, Krumighna</i>
Dehi/ <i>Nimbu</i>	 <i>Citrus xlimon</i>	Fruit juice	<i>Rasa-Madhura; Guna- Laghu,Ruksha; Veerya- Sheeta; Vipaka-Madhura;</i> <i>Doshakarma-Kushtaghna</i>

Method of preparation of *Attoradi Lepa* (Govinda 2017)

Equal quantity of leaves of *Cassia alata*, *Gliricidia sepium*, *Azadirachta indica* and rhizome of *curcuma longa* were ground into a fine paste. Then 50gm of this paste was mixed with 250mg of *Gandaka* powder and grind well with considerable quantity of lime juice.

Procedure of treatments: Patient was treated on OPD level for 30 days.

Table 3: Treatment protocol

Medicine	Dose	Interval	Time	Rout of administration	Anupana
<i>Datri Kwata</i>	30ml	bd	bm	Oral	-
<i>Chandraprbhava ti</i> <i>Arogyavardhini Vati</i>	250mg 250mg	1 st 2week s- bd 2 nd 2week s- bd	am am	Oral	Boil water of <i>Guduchi</i> & <i>Daruharidra</i>

<i>Avipattikara Choorna</i> <i>Sudarshana Choorna</i>	5g 5g	1 st 2 weeks- bd 2 nd 2 weeks- bd	am	Oral	Luke warm water
<i>Veesarpahara+ Seetodaka oil</i>	-		Day time	Local application	-
<i>Attoradi Lepa</i>	-		Nighttime	Local application	-

(bd – morning & evening) (bm- before meals) (am- after meals)

Recommended to the patient to take following *Pathya Apathya*; patient was advised to avoid oily, fried, spicy, junk, heavy food including curd, milk, and non-vegetarian diet, maintenance of local hygiene by washing the parts twice a day, keeping it dry and wearing cotton and loose-fitting clothes, to sleep without undergarments to avoid rubbing of the surface in groin and day time sleep was advised to be avoided, cow *ghee* was advised twice a day in the diet to reduce the dryness of the body.

Observations were recorded before treatment, intermittent treatment, & after treatment based on the grading scale as given.

Table 4: Percentage of reduction of symptoms

Clinical Features	Before treatment	After 14 days treatment		End of the treatment	
	Grade	Grade	% of relief	Grade	% of relief
<i>Kandu</i> (itching)	3	2	50%	0	100%
<i>Raaga</i> (colour of Mandala)	3	2	50%	1	75%
<i>Daha</i> (burning)	1	0	100%	0	100%

Figure 1: showes progress of the treatment in patches under the breast



Figure 2: showes progress of the treatment in patches under the L/arm pit

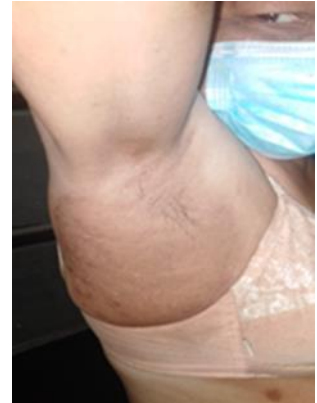


Figure 3: shows progress of the treatment in patches under the R/arm pit

Before treatment

After 14 days treatment

End of the Treatment



Progress of the treatment in patches

Results and Discussion

After 14 days treatment, *Kandu* and *Raaga* were reduced by 50% and *Daha* was reduced by 100%. After completion of 30 days treatment *Kandu* and *Daha* were reduced by 100% and *Raaga* was reduced by 75% (table 4). In the follow up period of 3 months, the patient showed significant improvement with no recurrences.

Patient had irregular dietary habits of excessive curd, tuna and hearty non vegetarian foods. She also had *Divaswapna* after her lunch and bad hygiene (Sharma 2015). These might have been the causative factors for developing *Kushtha*. Patient was depending on the *Nidana* and *Lakshana* the treatment was planned with internal treatment followed by external treatments with *Nidana Parivarjana*.

According to most of Ayurveda texts, all types of *Kushtha* have been considered as disease of vitiated *Rakta Dhatu* and *Mandala Kushtha* is one of the *Kapha* pre dominant skin disease (Sharma 2015). Ingredients of *Datrikwata* has *Rakta Shodana* and *Kushtaghna* properties (Govinda 2017). *Arogyavardhini Vati* is a herbo-mineral formulation primarily indicated in *Kushtaroga*. *Katuki*, *Tamra* in *Arogyavardhini* acts as *Pitta Virechana* and thus causes *Raktashodana* as *Pitta* and *Rakta* have *Asharay Ashrayi Sambhandha*. *Avipattikara Choorna* has *Mala*

Anulomana properties. *Sudarshana Choorna* plays *Raktashodaka* properties especially by ingredient of *Bunimba*.

Veesarpa oil and *Seetodaka oil* used as *Krimighna*, *Kandughna* as well as *Kushthaghna* properties. *Attoradi Lepa* for application given to the patient after the wash with Luke warm water plays important role in subsiding the fungal infection locally. It has properties of *Kushthaghna*, *Kandughna* and *Krimighna* could help treating the patient of *Mandala Kushtha* (Govinda 2017).

Conclusion

This combination treatment protocol is effective in treatment of *Mandala Kushtha*. *Mandala Kushtha* is one among the *Kshudra Kushtha* which is relapsing in nature. Hence according to the classics repeated administration of *Raktashodaka* drugs alone with *Nidana Parivarjana* can help in managing this condition. It is suggested to study the effect of these treatments using in large samples.

Consent of patient

Written consent has been taken for treatment as well as publication.

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