

A CLINICAL STUDY OF DADRU KUSTHA (TINEA INFECTION) WITH LAGHU MANJISTADI KWATHA GHANA VATI AND SWETA CHOORNA

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ABSTRACT

Introduction- *Dadru* is one of the most common irritating *twak vikara* affecting all ages of population, still stands as a challenge to different medical system. *Dadru* is a *kaphapitapradhanvyadhi*, typically manifest on the exposed area of skin, characterized by circular lesions sharply marginated with a raised edge and inflamatory signs. **Materials and Method-** A clinical study was conducted from 12 to 60 yrs of age from both sexes and 30 patients were registered from OPD and IPD of Govt. Ayurvedic college, Balangir. They were equally divided into three groups; Group A, Group B and Group C (10 patient each). They had the clinical features of itching with burning sensation, multiple

erythematus patches with sharp border and red colored patches. On the basis of clinical sign and symptoms and pathological investigations like DC, TLC, ESR and FBS, the patients were diagnosed as Tinea infection that simulates with *Dadrुकुस्था* in Ayurveda. In Group A patients were treated with *Laghu Manjistadi Kwatha Ghana Vati* (500 mg), one tablet thrice daily orally after food, In Group B patients were treated with *Sweta Choorna* (8 part *Tankana* with 1 part *karpura*) locally as application with lemon juice and Group C patients were treated with both medication for 28 days as per schedule and procedures. Every 7 days interval the clinical features were assessed by using statistical students paired t test. **Observation and Result-** After clinical trial Group A patients were found statistically significant ($p < 0.01$) result and improvement was noticed in clinical features (55.18%). In Group B improvement was less noticed (50.6%) as compare to Group B. But improvement was revealed highly significant ($p < 0.001$) (85.35%) in group C patients according to both

subjective and objective parameters. **Conclusion-** It has been observed after the clinical trial that in comparison to other two groups (Group A and Group B), the Group C showed better result in *Dadru*. Having with the *Raktasodhak*, *Kandughna* and *Kusthaghna* property of *Laghu Manjistadi Kwatha Ghana Vati* and *Sweta Choorna* as local application reduced the signs and symptoms significantly. No adverse effect was noticed.

KEYWORDS: *Dadru*, *Laghu Manjistadi Kwatha Ghana Vati*, *Sweta Choorna*.

INTRODUCTION

Dadru is one of the most common *twak vikara* affecting all ages of population still stands as a challenge to different medical system. In recent years, there has been a considerable increase in the incidence of skin problem in the tropical and developing countries like India.^[1] It is a *kapha-pitta Pradhan vyadhi* which is managed by internal medicine of *Laghu Manjistadi Kwatha Ghana Vati* and local application of *Sweta Choorna*.

According to Ayurveda maximum skin disease are included under *Kustharoga* which are further classified in to *Mahakustha* and *Khudrakustha*. *Dadru* is one among the *kustha*.^[2] *Tinea corporis* is a superficial fungal skin infection of arms, legs and groins, however, it may occur on any part of the body. Its clinical features are variable. The Lesions are annular, erythematous, scaly with well defined edge and central on the basis of symptoms 'tinea' can be correlated with '*Dadru*' according to Ayurvedic view.

Acharya Charaka include *Dadru* in *Khudrakustha*^[3] whereas *Acharya Susruta* and *Bagbhata* describe in *Mahakustha*.^[4,5] *Acharya Bagbhata* specially mentioned *Dadru* as *Anusangika*.^[6] It should be noted that 10 to 15% of the general practitioners work with skin disorders.^[7,8] Clinical features of *Dadru Kustha* are:-*Roga*(Erythma), *Kandu*(Itching), *Pidaka*(papule), *Utsana mandala*(Elevated circular lesion). In modern Medical Science *Tinea* is treated with some antifungal medicine but long time usage may produce adverse effect.^[9] In my case study I have used two medicine one for internally i.e. *Laghu Manjistadi Kwatha Ghana vati* (250 mg), 2 tabs twice daily and locally *Sweta churna* with Lemon juice twice daily, which has shown considerable effect in *Tinea* infection.

AIM AND OBJECTIVES

1. To evaluate the efficacy of *Laghu Manjistadi Kwatha Ghana vati* and *Sweta Choorna*.
2. To find out its effectiveness and as economic management of *Dadru*.

MATERIAL AND METHODS**a) Criteria for selection of the patients**

In this study total 30 patients from the age of 12 to 60 yr. of both sexes were registered from OPD and IPD of Govt. Ayurvedic College, Bolangir. They were divided into three groups i.e. Group A, Group B and Group C. Each group contain 10 patients.

b) Inclusion criteria

- I. Patients of both sexes in between 12-60 yrs of age with classical signs and symptoms like *Kandu, Raga, Pidaka, Daha, Udgatamandala* of *Dadru* will be included in study.
- II. Tinea infections like Tinea Pedis, Tinea Cruris, Tinea Capitis, Tinea Corporis will be included in this study.

c) **Exclusion Criteria:** Patients of below 16 yrs of age and above 60 years. Patients with other systemic disorders like Diabetes mellitus, Psoriasis, Allergic diseases and Malignancy diseases.

d) **Selection of drugs and treatment criteria:** Keeping in view of external application and internal use two medicines were selected one was *Laghu Manjistadi kwatha Ghana Vati*^[10] (250 mg) thrice daily with water, (*Haritaki, Bibhitaki, Amalaki, katuki, vacha, Nimbatwak, Manjista* and *Daruharidra*) and another was *Sweta Choorna* (*Tankana* and *Karpura*), local application with Lemon juice, which is an *Anubgutayoga* of Govt. Ayurvedic Pharmacy, Bolangir.

e) **Criteria of investigation:-** DC, TLC, ESR and FBS.

f) Criteria for assessment and grading of patients

- 1) A special patient examination proforma was prepared and efficacy of therapies were assessed before and after treatment on the basis of subjective sign and symptoms of *Dadru*, (*Kandu, Rago, Pidika, Daha, Size of mandala, Number of mandala*) considering from Grade 0 to Grade 5 and objective parameters like DC, TLC, ESR and FBS.

Table No.-01: Showing the grading of clinical features.

SL. NO.	Clinical Feature	Grade 0	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
1	<i>Kandu</i> (itching)	No itching	Occasionally mild itching	Mild itching	Moderate itching	Severe Itching	Severe continuous itching
2	<i>Raga</i> (Erythma)	No colour change	Pink colour	Pinkish red colour	Red colour	Blakish blue colour	Violacious Black colour
3	<i>Daha</i> (Burning sensation)	No burning sensation	Occasionally burning sensation	Mild burning sensation	Moderate burning sensation	Severe burning sensation	Continuous burning sensation
4	Nature of the Lesions	No lesions	Mild visible lesions	Moderately visible lesions	Prominent visible lesions	Prominently evident lesions	Prominently evident lesion associated with discharge
5	Size of the Lesions	Below 1 cm	1 to 2 cm	2 to 3 cm	3 to 4 cm	4 to 5 cm	Above 5 cm
6	Number of the Lesions	No lesion	Only 1 Lesion	2 Lesions	3 Lesions	4 lesions	5 or more than 5 lesions

OBSERVATION AND RESULT

The observations on the demographic (age, sex, religion, education, socio-economical status, marital status, diet, habitate, occupation, addiction and bowel), constitutional Ayurvedic incidence (*prakruti, sara, satwa, satmya, vyayama Sakti, Aharasakti*) and clinical profiles (itching, erythema, burning sensation, nature, size and number) were assessed and subjected to statistical analysis.

In **Group A** patients the clinical features of itching, nature and number improved mildly and statistically significant ($p < 0.001$), burning and size were improved mildly and statistically significant ($p < 0.01$) and erythema also improved very mildly and statistically significant ($p < 0.05$). In **Group B** erythema, size and numbers are mild significant ($p < 0.01$) and itching, burning and nature were mild improved and statistically significant ($p < 0.001$). In **Group C** itching and burning reduced significantly and showed statistically significant ($p < 0.001$). Nature and Number mildly improved and showed statistically significant ($p < 0.001$) result.

Table No. 02: Effect of *Sweta Choorna* on Clinical Features.

Sign and Symptoms	Mean score		% of Relief	S.D. (\pm)	S.E. (\pm)	't'	P
	BT	AT					
Itching	4.3	3.2	25.5%	0.3	0.09	12.2	<0.001
Erythema	4.4	4.1	7%	0.45	0.14	2.14	<0.05
Burning	2.9	2.2	24.13%	0.45	0.48	1.45	<0.10
Nature of lesion	3.6	1.2	66.66%	0.45	0.14	9.28	<0.001
Size of Lesion	3.4	2.7	20.58%	0.66	0.20	3.5	<0.01
Number of lesion	3.4	2.6	23.52%	0.4	0.12	6.6	<0.001

27.87 %

(BT=Before Treatment, AT=After Treatment, S.D.=Standard Deviation, S.E.=Standard Error, P=Probability of 't' values at 9 degrees of freedom)

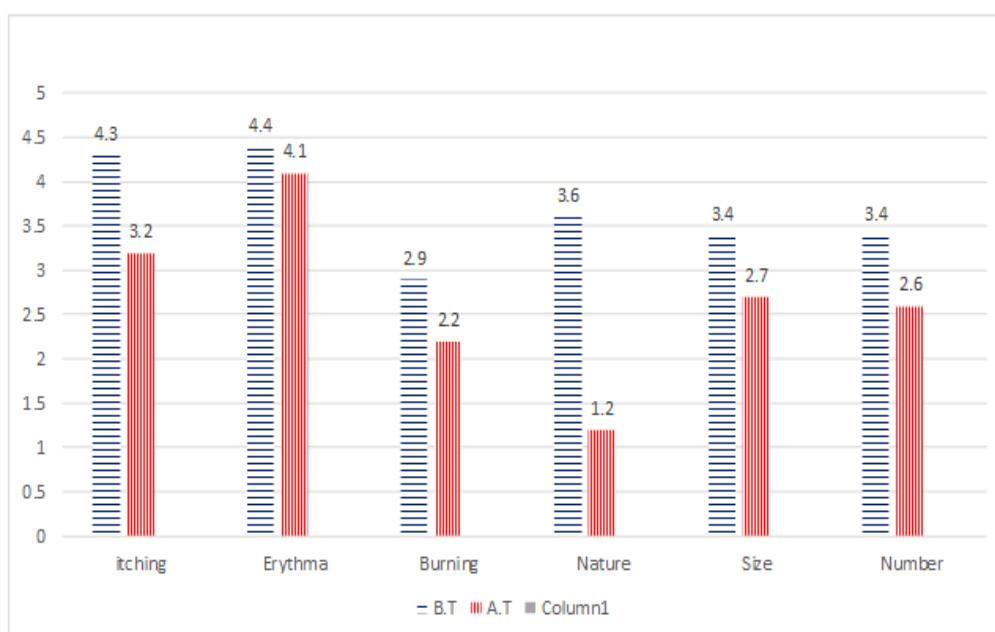


Figure No 01: Effect of Sweta Churna on Clinical features of Dadru.

Table no 03: Effect of *Laghu Manjistadi Kwatha Ghana vati* on Clinical Features.

Sign and Symptoms	Mean score		% of Relief	S.D. (\pm)	S.E. (\pm)	't'	P
	BT	AT					
Itching	4.2	1.6	61.9%	0.91	0.64	4.06	<0.001
Erythema	3.7	2.9	21.62%	0.4	0.48	1.66	<0.10
Burning	2.7	0.7	74.07%	0.44	0.14	14.2	<0.001
Nature of lesion	3.6	2.6	27.77%	0.44	0.14	7.14	<0.001
Size of Lesion	3.8	3.2	15.78%	0.48	0.15	4	<0.01
Number of lesion	3.4	2.4	29.41%	0.8	0.25	4	<0.01

38.42%

(BT=Before Treatment, AT=After Treatment, S.D.=Standard Deviation, S.E.=Standard Error, P=Probability of 't' values at 9 degrees of freedom)

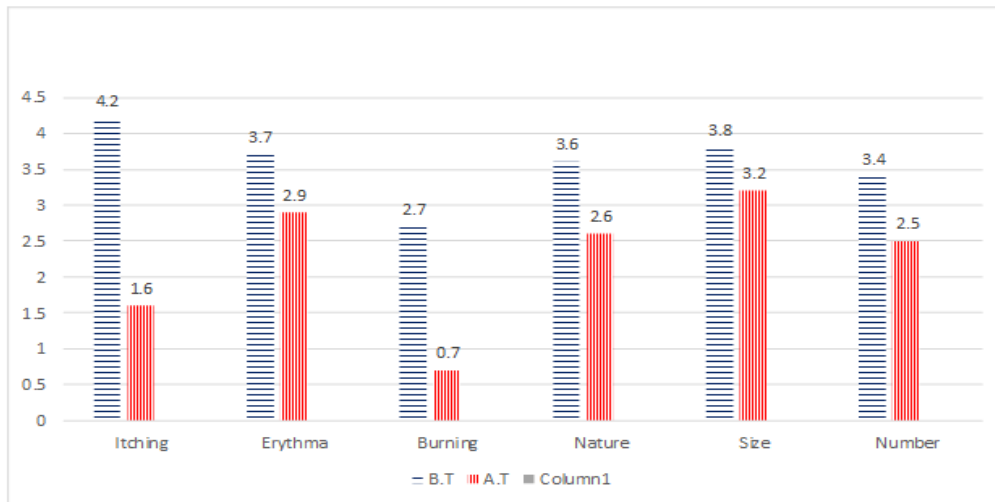


Figure No-02: Effect of Laghu Manjistadi Kwatha Ghana Vati on clinical features of Dadru.

Table No.-04: Effect of Laghu Manjisthadi Kwatha Ghana Vati and Sweta Choorna on Clinical Features.

Sign and Symptoms	Mean score		% of Relief	S.D. (±)	S.E. (±)	‘t’	P
	BT	AT					
Itching	3.4	1.1	67.6%	0.46	0.14	16.4	<0.001
Erythema	3.6	3	16.66%	0.64	0.2	2.5	<0.05
Burning	2.3	0.5	78.2%	0.4	0.12	9.16	<0.001
Nature of lesion	3.1	2	35.48%	0.4	0.12	9.16	<0.001
Size of Lesion	3.7	2.1	43.24%	0.4	0.12	14.1	<0.001
Number of lesion	3.2	3	6.25%	0.4	0.12	1.66	<0.10

41.23%

(BT=Before Treatment, AT=After Treatment, S.D.=Standard Deviation, S.E.=Standard Error, P=Probability of ‘t’ values at 9 degrees of freedom)

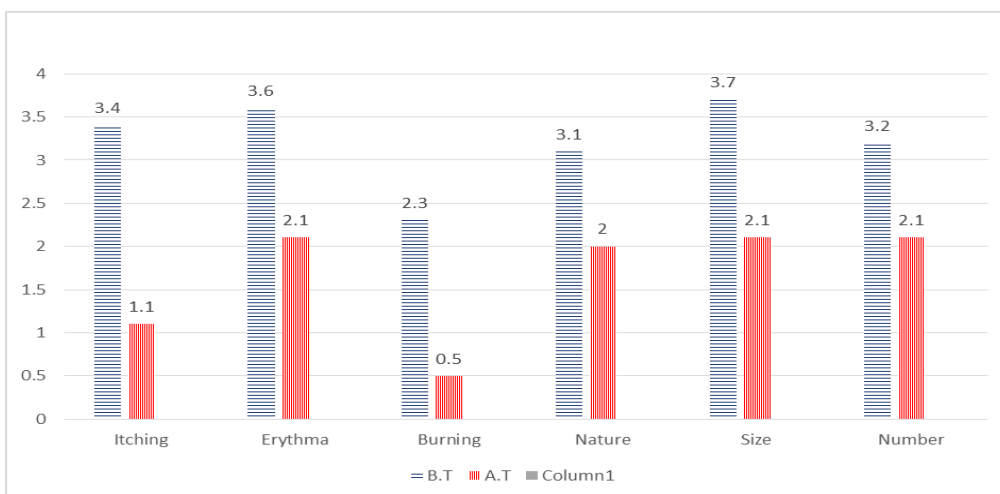


Figure No-03, Effect of Both Drugs on clinical features of Dadru

Overall improvement of the clinical features of Group A patients were mildly improved i.e. 27.87%, Group B patients were mildly improved i.e. 38.42% and Group C patients were moderately improved i.e. 41.13%.

Table No 05: Group wise effect of therapy on score of clinical features.

Groups	No. of patients	Mean score of clinical features		% of Relief	Overall improvement
		B.T.	A.T.		
A	10	3.66	2.66	27.87 %	Mild
B	10	3.56	2.23	38.42%	Mild
C	10	3.21	1.65	41.13%	Moderate

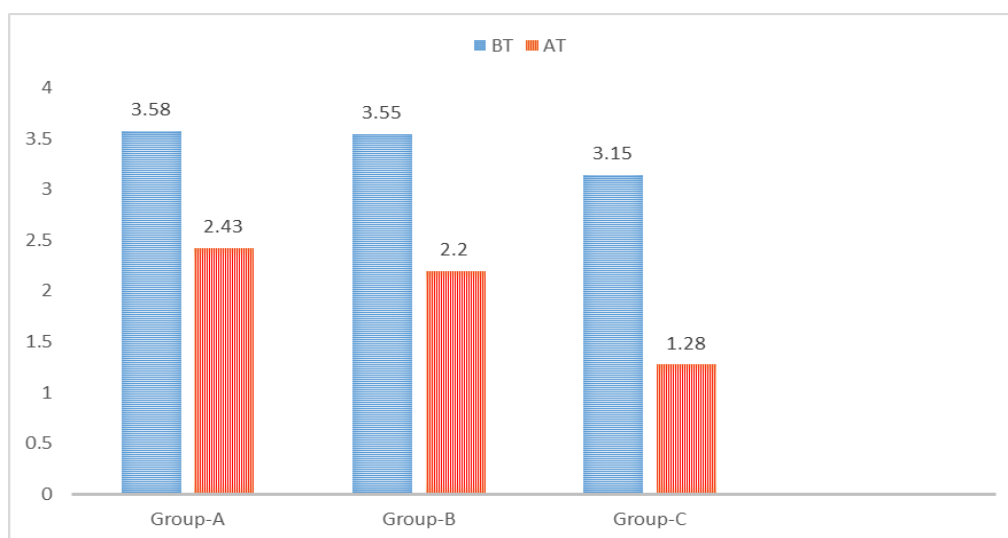


Figure No-04: Group wise mean effect.

DISCUSSION

Dadru is mainly a *vatakapha* dominant disease, besides its *Rasagata* manifestation. The disease mainly involves *Rasavaha srotas* and *Raktavaha srotas*. Further *srotas* may not be involved. This is the specificity of the pathogenesis of *Dadru*. The selected Drugs for the study were “*Sweta Churna Lepa*” and “*Laghu Manjistadi Kwatha Ghana Vati*”. Highly Significant result was observed in the symptom of itching, may be due to the *Kandughna*, *Kusthaghna*, *Kaphashamaka* and *Ushna veerya* which justify the above result with regards to the *Bahya samana ousadha* as well internally with the *Laghu Manjistadi Kwatha Ghana Vati* has shown the effect on itching with its properties of *Katu rasa*, *Ushna veerya*, *Kaphapittahara* and *Kusthaghna* properties. The symptom Erythma has no significant result by both the drugs. Burning sensation is resultant of *pitta prokapa*. The *lepa* as well as *Laghu Manjistadi Kwatha Ghana Vati* have the properties of *pitta shaman* and *rakta sodhaka*, *varnya* hence shows highly significant result.

Probable mode of action of *Laghu Manjistadi Kwatha Ghana Vati*

The ingredients of *Laghu Manjistadi kwatha Ghana vati* are *Manjista*, *Haritaki*, *Bibhitaki*, *Amalaki*, *Katuki*, *Vacha*, *Devadaru*, *Haridra* and *Nimba twak* which have the properties like *Raktasodhaka*, *Pittakapha hara*, *Kusthaghna*, *Agnideepaka*, *Katu tikata Kashaya rasa*, *Laghu rukshya guna*, *Ushna veerya* etc. In *Dadru rasa*, *rakta*, *mamsa* and *ambu* are main *dushyas*. *Rasa dhatu dusti* is produced due to *Mandagni*, hence the *karma Agnideepaka* correct the *Mandagni*. The drugs having *Rakta sodhaka* properties are *Manjista*, *Nimba twak*, *Katuki*, *Haridra* and *Devadaru*. All ingredients have the *Laghu rukshya guna* helps to correct the vitiation of *Mamsa dhatu*.

Probable mode of action of *Sweta Churna Lepa*

The reference of *Sweta Churna Lepa* is *Anubhuta* yoga of Govt. Ayurvedic Pharmacy, Bolangir, Odisha. The contents are 8 part *Tankana* and 1 part *Karpura*. The properties like *Rukshya* and *Tikshna guna*, *Lekhana* and *Varnya karma* and *Vatapittakaphaghna* are attributed to *Sweta Churna*. Upon topical application, the active principles of the *lepa* penetrate to the deeper tissues through *Siramukha* and *Swedavahi srotas* and stain it with its *tikshna* property.

CONCLUSION

Dadru one of the *Kustha*, is a very contagious rigid skin disorder which can be correlated to *Tinea*. In my present study both the *Laghu Manjistadi Kwatha Ghana Vati* and *Sweta Choorna Lepa* showed moderately significant result. But only *Laghu Manjistadi Kwatha Ghana Vati* and only *Sweta Choorna lepa* showed mildly significant result respectively. The maintenance of hygiene is very important and not to be neglected during treatment. No adverse effect was noticed during treatment period.

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