

PHYSIOLOGICAL STUDY OF BHRAJAKA PITTA AND ROLE OF BAKUCHI TILA YOG IN THE MANAGEMENT OF DADRU W.S.R TO RING WORM

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ABSTRACT

Ring worm (tinea corporis) also known as Dermato Phytosis a highly contagious fungal infection of the skin of scalp, feet, beard or other areas. The name ringworm is misnomer, since the infection is caused by a fungus not a worm. Acharya Charaka has explained Dadru under Kshudra Kustha but Acharya Sushruta explained under Maha kustha. Vagbhata mentions that it spreads following one lesion by another (Anushangini) Durvavat Deergha Pratana may indicate towards the spore forming nature of the fungus on getting favourable environment may restart spreading; that it needs long term treatment to serve this purpose well. Dadru is Kapha pitta dominant disease, besides its Rasagata manifestations; Acharya Chakradatta has described Bakuchi Krishan Tila yog in the management of Dadru. The drugs chosen for the research are Varnya, Vishaghna, Vrana Ropana, Krimighna, Kusthaghna and Kandughna in nature. So, by their virtue, they're helping to manage Dadru. These medications are widely available, cheaper and have no side-effects or adverse effects. Kandu symptom was reduced to 53.24%, raga was reduced to 50%, number of Mandal was reduced to 54.29%, size of Mandal was reduced to 63.04% and the improvement in Inflammation on average is found to be 51.07%. Treatment responses of all parameters were highly significant which show that role of Bakuchi Tila Yog in the management of Dadru (Ring worm).

Keywords: Dadru, Kustha, Ring worm, Tinea corporis

INTRODUCTION

Ayurveda is a science of life in which describe the 'hita and ahita' to Ayu. It is also called as eternal science; deals with spiritual, psychological and physical well being of an individual. The primary goal of Ayurveda is to maintain good health, prevent illness, promote longevity and treat diseases when necessary. Ayurveda advises that it is essential to maintain the body's natural state of internal balance for optimal health which depend upon the fundamental concept of Ayurveda like Panchmahabhuta, Dosha, Dushya, Agni, Aama, Prakriti etc.

Skin is the largest organ of human body. Its size and external location makes it susceptible to a wide variety of disorders. In recent years, there has been a considerable increase in the incidence of skin problem in the tropical and developing countries like India due to various reasons like poverty, poor sanitation, unhygienic conditions, pollution etc

In Ayurveda, Skin fungal infection is termed as Dadru (Tinea/Ringworm). It is one of the most common Twak Vikar affecting all the age groups. Acharya Charaka has explained Dadru under Kshudra Kustha but Acharya Sushruta explained under Maha kustha. The Maha Kustha are classified as -

- ❖ Aruna
- ❖ Audumbara
- ❖ Rishya-Jihva
- ❖ Kapala
- ❖ Kakanaka
- ❖ Pundarika
- ❖ Dadru

BHRAJAKA PITTA

- The pitta which is responsible for the production of 'bha'(complexion) of skin is called as bhrajak. It is mentioned that the production of normal and abnormal temperature of the body as well as normal and abnormal color of the skin are the functions of pitta and are attributed to bhrajaka pitta.

Location and functions of Bhrajaka Pitta

- According to Sushruta, the pitta which is located in the twak is spoken of as bhrajaka pitta. In as much as it enables, the digestion of substances used for Abhyanga, Parisheka, Avagahan, Lepana etc. It irradiates the glow of once natural complexion.
- Dalhana commenting on Su.su 21/10 has said that Bharajaka pitta is located in Bahya Twak (external skin).

Functions of Bhrajaka Pitta

- Responsible for the complexion of skin
- Responsible for body heat
- Causes of digestion and utilization of substances which are applied as abhyanga, parisheka, alepa etc. over the skin.
- Enhances the glow of ones on natural complexion.

DADRU

- According to Acharya Sushruta, the skin disease which is having spreading nature, papules with bluish tint or copper colour is known as Dadru kushta.

Nidana

- In Ayurvedic classics, specific etiology for Dadru has been described, except the general etiology of Kushta. Since Dadru has been included under Kushta, their etiology can be constructed on the basis of general etiology. Ayurvedic texts have described general causative factors i.e. Samanya Nidana for all types of Kushta instead of specific Nidanans for particular type of Kushta.

Rupa of Dadra

- Acharya Sushruta describes the colour of the lesions in Dadru more specifically like that of copper or the flower of Atasi and mentions that its Pidaka are in the forms of Parimandala having spreading nature (visarpanshila) but slow in progress or chronic in nature (chirrottham) with Kandu.
- Acharya Charaka has depicted Dadru as a Kshudra Kushta. As per his definition, the reddish coloured Pidaka in the form of Mandala with elevated borders and itching is known as Dadru.
- Vagbhata mentions that it is Durvavat Deergha Pratana, having colour like that flower of Atasi and itching and spreads following one lesion by another (Anushangini) It may indicate towards the spore forming nature of the fungus on getting favourable environment may restart spreading.

Samprapti Ghataka

- Doshha - Tridosha (Kapha Pitta pradhana)
- Dushya - Twak, Rakta, Mamsa, Lasika. (mainly Rasa & Rakta).
- Srotas - Rasavaha & Raktavaha Srotas
- Srotodushti - Sanga & Vimargagamana.
- Adhithana - Twak
- Vyadhimarga - Bahya
- Svabhava - Chirakari

RING WORM

Ring worm: (tinea corporis) also known as Dermato Phytosis a highly contagious fungal infection of the skin of scalp, feet, beard or other areas. The name ringworm is misnomer, since the infection is caused by a fungus not a worm.

Symptoms

- Ringworm typically begins as a flat scaly area on the skin which may red an itchy.
- Patches that develops blisters or begin to ooze.
- Patches that may be redder on the outside edges or resembles a ring.
- Patches with edges that are defined and raised.

BAKUCHI

- ❖ Latin Name: *Psoralea corylifolia*
- ❖ Family: fabaceae

Ayurvedic Properties:

- Rasa - Katu, Tikta
- Guna - Laghu, Ruksha
- Virya - Ushna
- Vipaka - Katu
- Prabhava - Shivtra, Kushta Nashaka

Chemical Composition- The seed and root contain chalcones, flavones, isoflavones, furanocoumarins and coumesterol group of compounds. These includes psoralen, isopsoralen, bavachinin.

Pharmacological activities- It has an anti-inflammatory, anti-fungal, anti-bacterial, vasodilator, skin photosensitizing properties.

Dose- 3-6 grams

TILA

- ❖ Latin Name: *Sesamum indicum*
- ❖ Family: Pedaliaceae

Ayurvedic Properties:

- Rasa - Madhura, Katu, Tikta, Kashaya
- Guna - Guru, Snigdha
- Virya - Ushna
- Vipaka - Madhur
- Karma - Vednasthapna, Vranashodhan, Vranaropan, Grahi, Rasayana

Pharmacological activities- Anti-oxidant, nematicidal, anti tumour, hepato protective

Dose- Seed powder: 3-6 grams, oil: 10-20 ml

Probable mode of action- The mode of action depends upon the nature of drug.

Bakuchi - By its katu tikta rasa and laghu rooksha guna, it acts as a srotoshodak and kapha shamak. Bakuchi through its properties of Prabhava has direct action as Kushtahar, krimighana, kandughana i.e. it is responsible for relieving the lesions of skin.

Tila - Tila having Madhur, Katu and Tikta rasa again having the property of alleviating Pitta and Kapha dosha respectively which combinedly acts as Srotoshodak and Kapha Pitta Shamaka. Krishan Tila is yogavahi and has suksham guna which helps in cleaning Srotas, thereby improving function of srotas which in-turn helps in nourishment

AIMS AND OBJECTIVES

- To study in detail the etiopathogenesis and prevalence of 'Dadru' Kushta.
- To assess the efficacy of Bakuchi Krishan Tila yog in the management of Dadru w.s.r to Ring worm

PLAN OF STUDY:

For the clinical study 30 patients were selected from the OPD and IPD of JIAR. Patients fulfilling the criteria for selection were integrated into the study irrespective of caste, religion etc. A detailed history was filled up in specially prepared proforma on Ayurvedic guidelines. Patients were given Krishan Til powder and Bakuchi powder in the dosage of 6gm (Krishan Til powder 2gm and Bakuchi powder 4gm) for duration of three months

SELECTION CRITERIA**Inclusion criteria:**

- Patients in age group 16 to 50 years were taken for the study.
- Both male and female patients were included for the study.

Exclusion criteria:

- Patients below the age of 16years and above 50 years were excluded from the study.
- Pregnant women and immune-compromised patients were excluded from the study.
- Patients suffering from chronic diseases like chronic liver disease, chronic renal failure, were excluded from the study.

Assessment Criteria

The improvement provided by the therapy was assessed on the basis of classical sign and symptoms.

| 1. KANDU | SCORE |
|--------------------|-------|
| No itching | 0 |
| Mild Itching | 1 |
| Moderate Itching | 2 |
| Severe Itching | 3 |
| Continuous Itching | 4 |
| 2. RAGA | SCORE |
| Normal Skin Color | 0 |

| | |
|--|--------------|
| Faint or near to normal | 1 |
| Blanching + Red Color | 2 |
| No Blanching + Red Color | 3 |
| Red Color | 4 |
| 3. Number of Mandal | SCORE |
| No Mandal | 0 |
| 1-3 mandal | 1 |
| 4-6 mandal | 2 |
| 7-9 mandal | 3 |
| More than 9 mandal | 4 |
| 4. Size of Mandal | SCORE |
| No Mandal | 0 |
| 1-2 cms | 1 |
| 3-4 cms | 2 |
| 5-6 cms | 3 |
| More than 7 cms | 4 |
| 5. Inflammation | SCORE |
| No Inflammation | 0 |
| Mild inflammation | 1 |
| Moderate inflammation | 2 |
| Severe inflammation | 3 |
| Severe inflammation with prominent Erythematous Base | 4 |

Results Before and After Treatment



Observations

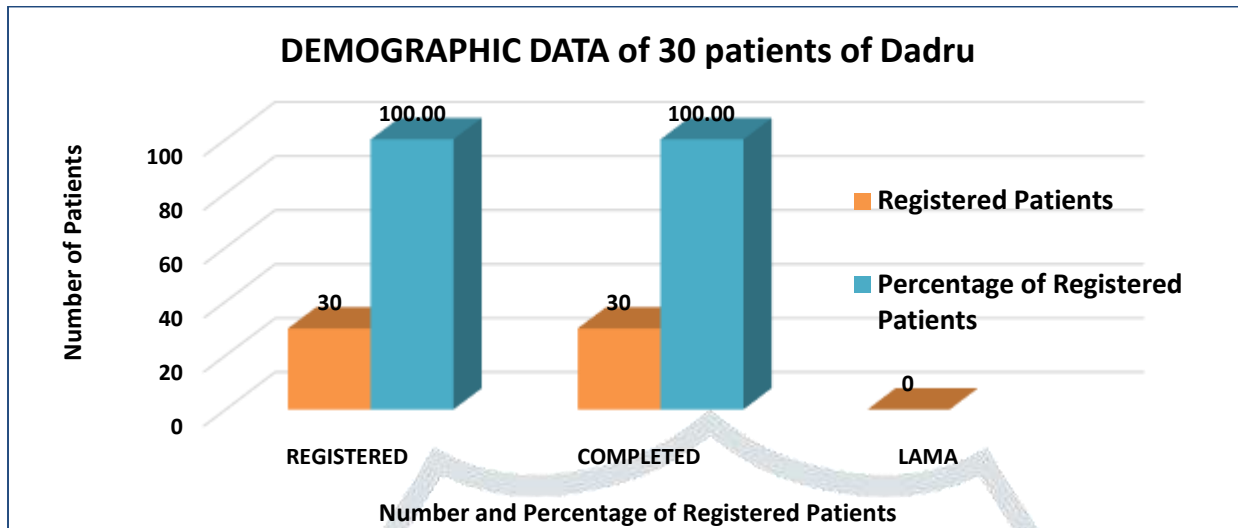
- ❖ A total of 30 Patients were screened for the study.
- ❖ All patients were registered and examined before and after the treatment and data recorded according to the case sheet format.
- ❖ Changes in both the subjective and objective parameters were recorded.

The data recorded are presented here under the following headings.

- Demographic data.
- Data related to the diseases.
- Data related to the response

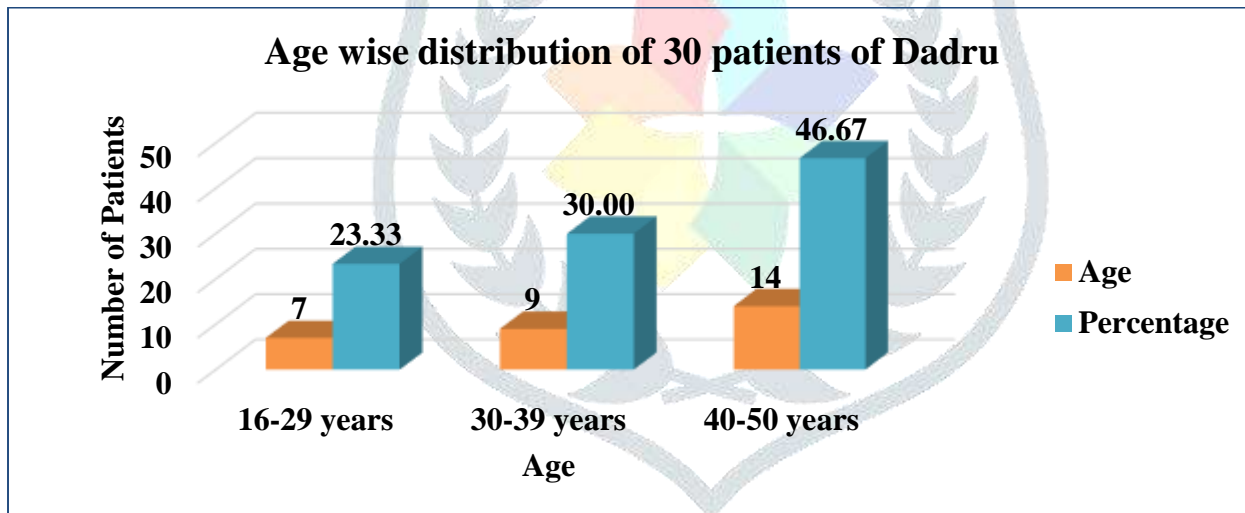
Distribution of patients based by Registration

| REGISTERED | No. of Patients | Percentage |
|------------|-----------------|------------|
| COMPLETED | 30 | 100.00% |
| LAMA | 0 | 0% |



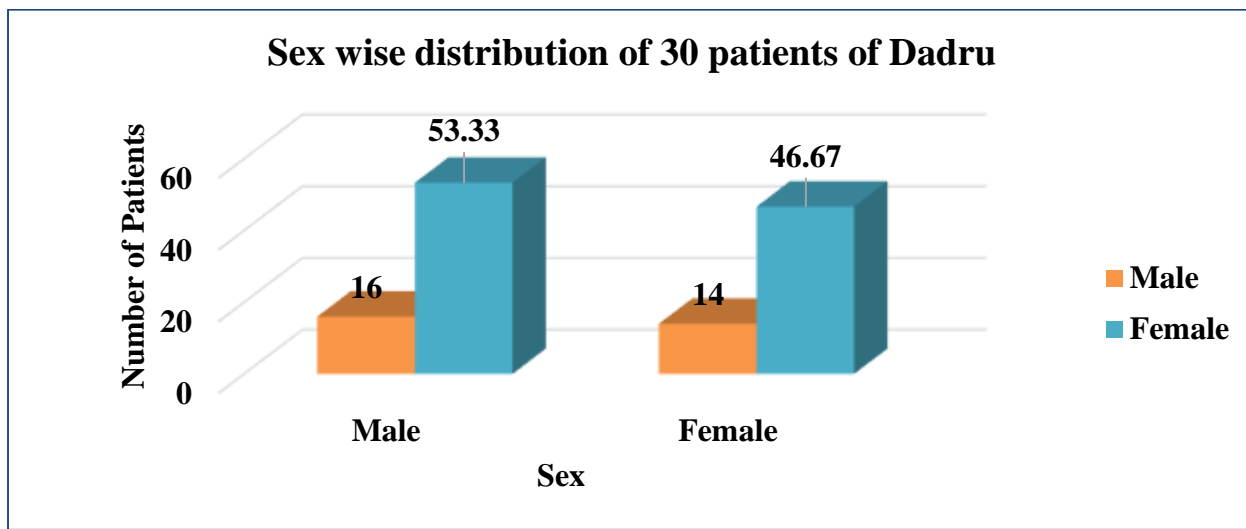
Age wise distribution of 30 patients of Dadru

| | | |
|-------------|----|--------|
| 16-29 years | 7 | 23.33% |
| 30-39 years | 9 | 30.00% |
| 40-50 years | 14 | 46.67% |



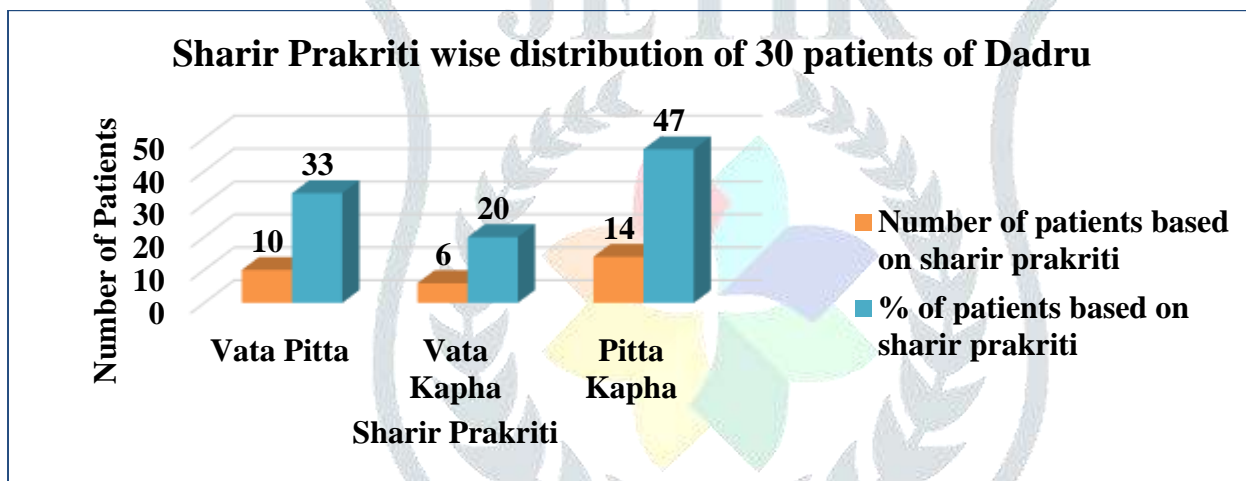
Sex wise distribution of 30 patients of Dadru

| | | |
|--------|----|--------|
| Male | 16 | 53.33% |
| Female | 14 | 46.67% |

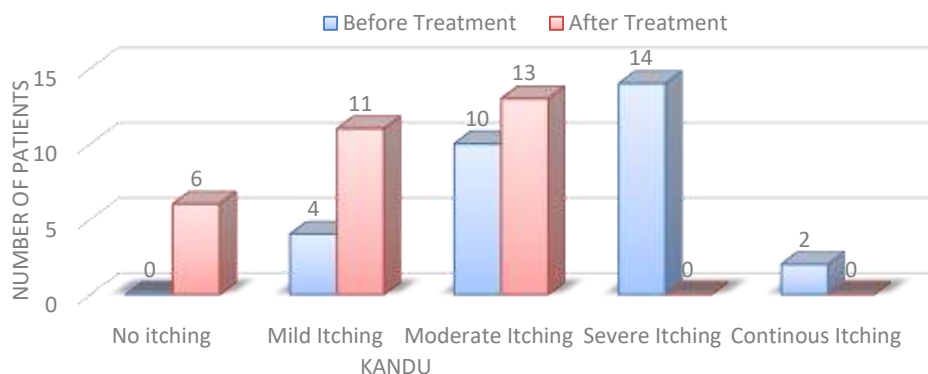


Sharir Prakriti wise distribution of 30 patients of Dadru

| | | |
|-------------|----|--------|
| Vata Pitta | 10 | 33% |
| Vata Kapha | 6 | 20.00% |
| Pitta Kapha | 14 | 47% |



EFFECT OF BAKUCHI KRISHAN TILA YOG ON KANDU

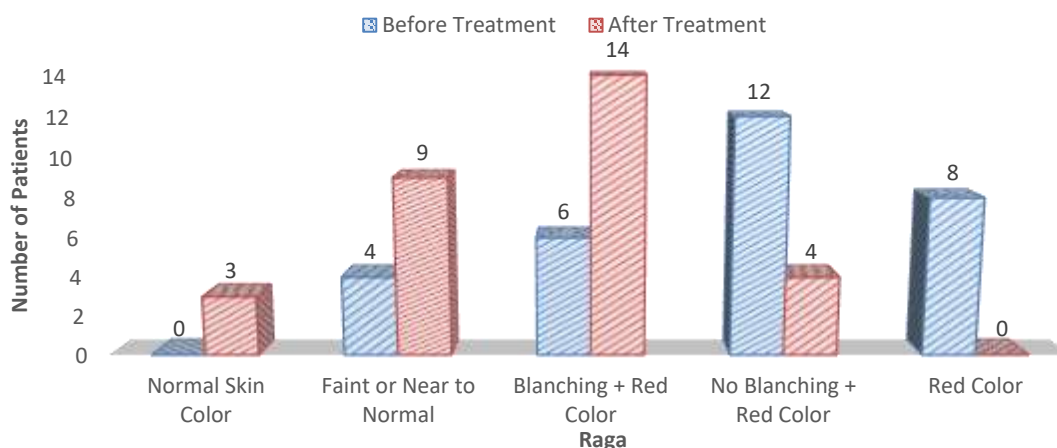


Among 30 Patients, 2 Patients have continuous itching, 14 patients have severe itching, 10 patients have moderate itching and 4 patients have mild itching before starting the trial. After trial, we found that there are zero cases of continuous and severe itching, 13 patients of moderate itching, 11 patients of mild itching and 6 patients have no itching

| Mean | | M.D | N | Mean % | S.D ± | S.E ± | t- value | p-value | Sig. |
|-------|-------|--------|----|--------|--------|--------|----------|---------|------|
| BT | AT | | | | | | | | |
| 2.467 | 1.233 | 1.2333 | 30 | 53.24 | 0.6789 | 0.1240 | 9.950 | 0.004 | S |

The mean score of Kandu was 2.467 which came down to 1.233 after the treatment. The improvement on average is found to be 53.24 percent. After applying t-test, we found that the $p < 0.05$ which indicate that during trial the drug is significant on Kandu.

EFFECT OF BAKUCHI KRISHAN TILA YOG ON RAGA

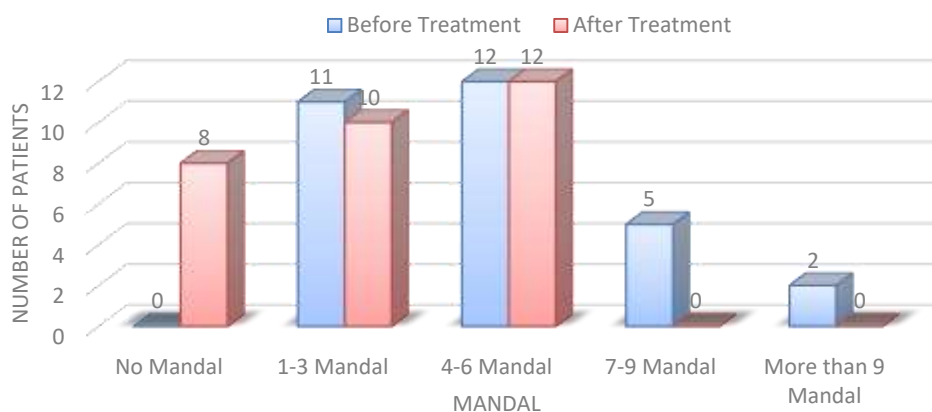


Among 30 Patients, no patient has normal skin color, 4 patients have faint or near to normal skin color, 6 patients have blanching plus red color, 12 patients have no blanching plus red color and 8 patients have a red color before starting the trial. After trial, we found that there are 3 patients with normal skin color, 9 patients have faint or near to normal skin color, 14 patients have blanching plus red color, 4 patients have no blanching plus red color and there are zero cases with red color.

| Mean | | M.D | N | Mean % | S.D ± | S.E ± | t- value | p-value | Sig. |
|-------|-------|--------|----|--------|--------|--------|----------|---------|------|
| BT | AT | | | | | | | | |
| 2.800 | 1.633 | 1.1667 | 30 | 50.03 | 0.4611 | 0.0842 | 13.857 | 0.247 | S |

The mean score of Raga was 2.800 which came down to 1.633 after the treatment. The improvement on average is found to be 50.03 percent. After applying t-test, we found that the $p < 0.05$ which indicate that during trial the drug is significant on Raga.

EFFECT OF BAKUCHI KRISHAN TILA YOG ON NUMBER OF MANDALS

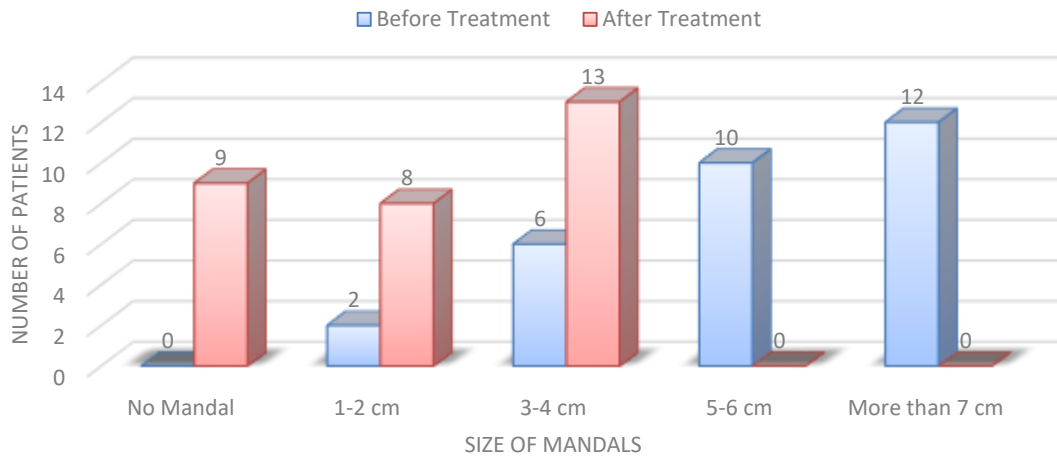


Among 30 Patients, 0 patient had no mandal, 11 patients have mandal in the range of 1-3, 12 patients have mandal in the range of 4-6, 5 patients have mandal in the range of 7-9 and 2 patients have mandal above 9 before starting the trial. After trial, we found that 8 patients have no mandal, 10 patients have mandal in the range of 1-3, 12 patients have mandal in the range of 4-6, 0 patients have mandal in the range of 7-9 and 0 patients have mandal above 9

| Mean | | M.D | N | Mean % | S.D ± | S.E ± | t- value | p-value | Sig. |
|-------|-------|--------|----|--------|--------|--------|----------|---------|------|
| BT | AT | | | | | | | | |
| 1.933 | 1.133 | 0.8000 | 30 | 54.29 | 0.5509 | 0.1006 | 7.954 | 0.049 | S |

The mean score of Number of Mandal was 1.933 which came down to 1.133 after the treatment. The improvement on average is found to be 54.29 percent. After applying t-test, we found that the $p < 0.05$ which indicate that during trial the drug is significant on Number of Mandal.

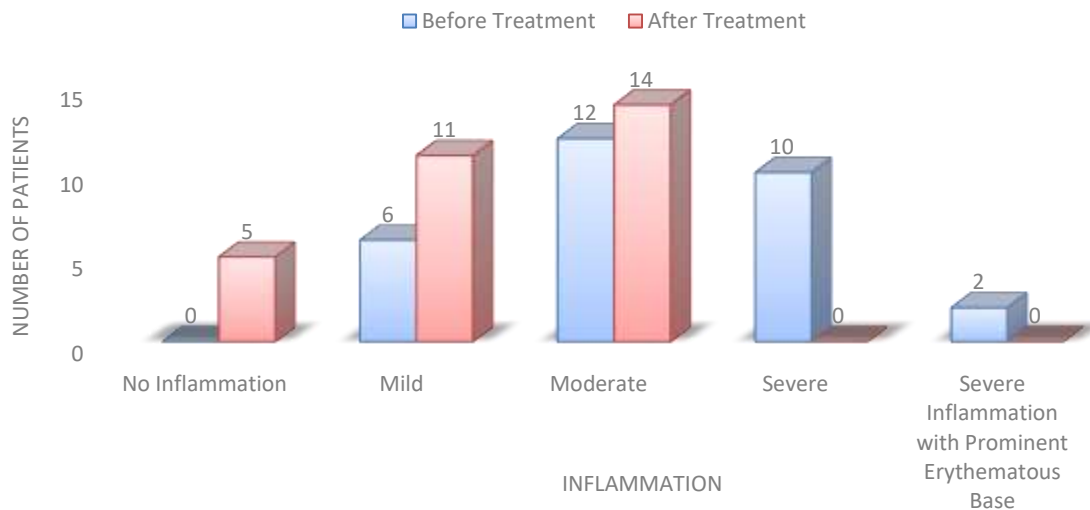
EFFECT OF BAKUCHI KRISHAN TILA YOG ON SIZE OF MANDALS



Among 30 Patients, 0 patient had no mandal, 2 patients have mandal in the size range of 1-2 cms, 6 patients have mandal in the size range of 3-4 cms, 10 patients have mandal in the size range of 5-6 cms and 12 patients have mandal in the size more than 7 cms before starting the trial. After trial, we found that 9 patients have no mandal, 8 patients have mandal in the size range of 1-2 cms, 13 patients have mandal in the size range of 3-4 cms, 0 patients have mandal in the size range of 5-6 cms and 0 patients have mandal in the size more than 7 cms.

| Mean | | M.D | N | Mean % | S.D ± | S.E ± | t- value | p-value | Sig. |
|-------|-------|--------|----|--------|--------|--------|----------|---------|------|
| BT | AT | | | | | | | | |
| 3.067 | 1.133 | 1.9333 | 30 | 63.04 | 0.6397 | 0.1168 | 16.554 | 0.002 | S |

EFFECT OF BAKUCHI KRISHAN TILA YOG ON INFLAMMATION



Among 30 Patients, 0 patient had no inflammation, 6 patients have mild inflammation, 12 patients have moderate inflammation, 10 patients have severe inflammation and 2 patients have Severe Inflammation with Prominent Erythematous Base before starting the trial. After trial, we found that 5 patients have no inflammation, 11 patients have mild inflammation, 14 patients have moderate inflammation, 0 patients have inflammation and 0 patients have Severe Inflammation with Prominent Erythematous Base severe

| Mean | | M.D | N | Mean % | S.D ± | S.E ± | t- value | p-value | Sig. |
|-------|-------|--------|----|--------|--------|-------|----------|---------|------|
| BT | AT | | | | | | | | |
| 2.267 | 1.300 | 0.9667 | 30 | 51.07 | 0.4138 | .0756 | 12.794 | 0.031 | S |

The mean score of Inflammation was 2.267 which came down to 1.300 after the treatment. The improvement on average is found to be 51.07 percent. After applying t-test, we found that the p<0.05 which indicate that during trial the drug is significant on Inflammation.

DISCUSSION

Dadru is Kapha pitta dominant disease, besides its Rasagata manifestations. Hence considering Acharya Chakradatta has described their treatment as Bakuchi Krishan Tila yog in the management of Dadru. The data recorded from the observations is shown as- Age - found maximum in the age group of 40-50 years (46.67%), Sex- found maximum in males (53%), Onset - in maximum patients Onset was gradual (46.67%), Dietary Habits- data shows 57% were taking mixed diet, Rasa - 40% patients were preferring Madhur Rasa, Addiction - 60% patients were taking Tea, Prakriti- most of the patients had Pitta Kapha prakriti (i.e 47%).

According to the data collected in the study, it was observed that Kandu symptom was reduced to 53.24%, raga was reduced to 50%, number of Mandal was reduced to 54.29%, size of Mandal was reduced to 63.04% and the improvement in Inflammation on average is found to be 51.07%. Therefore, the results are found to be statistically significant.

CONCLUSION

Ring worm (tinea corporis) also known as Dermato Phytosis a highly contagious fungal infection of the skin of scalp, feet, beard or other areas. The name ringworm is misnomer, since the infection is caused by a fungus not a worm. Acharya Charaka has explained Dadru under Kshudra Kustha but Acharya Sushruta explained under Maha kustha. Vagbhata mentions that it spreads following one lesion by another (Anushangini) Durvavat Deergha Pratana may indicate towards the spore forming nature of the fungus on getting favourable environment may restart spreading; that it needs long term treatment to serve this purpose well. The drugs chosen for the research are Varnya, Vishaghna, Vrana Ropana, Krimighna, Kusthaghna and Kandughna in nature. So, by their virtue, they're helping to manage Dadru. These medications are widely available, cheaper and have no side-effects or adverse effects. Treatment responses of all parameters were highly significant which show that role of Bakuchi Tila Yog in the management of Dadru (Ring worm).

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