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# A Clinical Study of Jalaukavacharana and Panchanimba Churn in the Management of Acne Rosacea- A Research Article

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***Abstract:*** ***Rosacea is a common skin disorder that predominately affects fair skin people. More then10 million cases per year are found in the India. It usually presents with erythema, telangiectasia, and papulo-pustular lesions on the cheeks chin and central forehead and usually triggered by sun exposure. It is generally affects facial skin and less commonly may involve the neck and chest, it may also happen at non-facial sites. It has characterized in its early on phases by erythema (flushing and redness) on the central face and across the cheeks, nose or forehead. Rosacea is not mentioned specifically in any Ayurveda text. According to description of sign & symptoms of rosacea in modern science, it is resemble as a type of Pitta Dusht Raktaj Vyadhi according to Ayurveda science. Based on these signs and symptoms, according to Ayurveda Acharya this disease is caused by Pitta Dushta Rakta. Ayurveda also implements broad line of management of skin disorders like medicinal and para-surgical approach. Acharya Sushruta clearly mentioned that if all conservative management fails then the disease should consider as blood vitiated disease and Raktamokshana is to consider as choice of treatment.***

***Keywords: Rosacea, Pitta Dusht Rakta, Vyadhi, Raktamokshana, para-surgical, erythema, Panchanimba Churna.***

## I. INTRODUCTION

Rosacea is a common skin disorder that predominately affects fair skin people. More then10 million cases per year are found in the India. It usually presents with erythema, telangiectasia, and papulo-pustular lesions on the cheeks chin and central forehead and usually triggered by sun exposure. That may affect patient's appearance and quality of life. It is generally affects facial skin and less commonly may involve the neck and chest, it may also happen at non-facial sites. It has characterized in its early on phases by erythema (flushing and redness) on the central face and across the cheeks, nose or forehead. A Rosacea progresses other symptoms can develop such as semi-permanent or permanent erythema, telangiectasia, red domed papules, red gritty eyes, and burning sensations. Rosacea can occur in any one. But it's very common affected middle-aged women are who have fair skin. The causes of Rosacea are not known/still unknown, but it might be due to combinations of hereditary and environmental factors. In a few advance cases, rosacea can by chronic skin lymph edema, thicken of the affected skin and a red lobulated nose (Rhinophyma). All patients have not all elements of the state: some have only the vascular elements, even as others have a mainly papular or pustular version with no much vascular hyper-reactivity. Infrequently, the state may occur at sites away from the face, when the analysis may be less clear, but the morphology of the skin lesions remnants reliable. The disorder is able to be confused and co-exist with acne vulgaris or seborrheoic eczema. Rosacea is mostly a clinical diagnosis and even as histology is helpful to help in diagnosis, and to keep out other situation, there is no standard laboratory test confirms diagnosis. Since 1922 an expert committee assembles by the National Rosacea Society (NRS) in the USA set up investigative clinical criteria for rosacea.

In the day to day, eat fast food habits and irregular living schedules are very common in our routine life style; this gives as a result of "*Viruddha Aharajanya Vyadhi*". Due to this reason a big population is suffering from various skin diseases.

Rosacea is not mentioned specifically in any *Ayurveda* text. According to description of sign & symptoms of rosacea in modern science, it is resemble as a type of *Pitta Dusht Raktaj Vyadhi* according to *Ayurveda* science.

Based on these signs and symptoms, according to *Ayurveda Acharya* this disease is caused by *Pitta Dushta Rakta*.

*Acharya Charak* was also described that naming of every disease is not possible. So, one should not feel ashamed, if he could not identify the particular disease as named in *Shastra*. In all, he should do the treatment of such disease by considering the predominance and symptoms produced by vitiation of *Dosha* and alleviate its *Samprapti*. [139]

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The causes of rosacea are such as sun exposure, spicy foods etc. It is similar to the reasons that *Pitta and Rakta Dushta*, such as *Ushna-tikshana Ahara* etc. which have been mentioned in *Ayurveda* texts.

*Ayurveda* also implements broad line of management of skin disorders like medicinal and para-surgical approach. *Acharya Sushruta* clearly mentioned that if all conservative management fails then the disease should consider as blood vitiated disease and *Raktamokshana* is to consider as choice of treatment.

Here I had evaluated the efficacy and advantage of *Jalaukavacharana* and *Panchanimba* Churna in the mangement of acne rosacea.

## II. AIMS AND OBJECTIVES

This present study has been designed with following aims and objectives.

*1)* To study the etio-pathogenesis of *Acne rosacea*.
*2)* To evaluate the clinical efficacy of *Jalaukaavacharana* in *Acne rosacea*in light of both *Ayurveda* and Modern.
*3)* To compare the clinical efficacy of *Jalaukavacharana* and *Panchanimba churn* in Acne rosacea.

## III. MATERIALS AND METHODS

A total of 30 Rosacea patients were selected at random for the study, ranging age from 18 to 60 years old, regardless of sex, religion or any other factors.

### *A. Source Of Data*

Patients were selected from the M.M.M. Govt. *Ayurved* College Campus Hospital, Ambamata and the MotiChohatta Govt. Ayurved Hospital, Hathi Pole, Udaipur's OPD and IPD.

### *B. Informed Consent*

Before beginning of the clinical trial, the participants will be given a through clarification of the study, and then their signed, written informed consent will be obtained.

### *C. Selection Criteria*

*1) Inclusion Criteria*

*a)* Patient able to take consent.
*b)* Patient who are having with the clinical sign & symptoms of Rosacea.
*c)* *Raktamokshana yogya* as per classics
*d)* Patients between age group 18-60 years of both sexes.
*e)* Site- Cheeks, chin, forehead & nose

*2) Exclusion Criteria*

*a)* Patient was not able to take consent.
*b)* Age below 18 years and above 60 years.
*c)* Patient having swollen eyelids.
*d)* Patients of uncontrolled diabetes mellitus.
*e)* Other diseases like severe anaemia, malignancy, dengue, haemophilia HIV, etc.
*f)* Tubercular.
*g)* *Raktamokshana ayogya* as per classics.

*3) Lab Investigation*

*a)* Haematological Test- Hb%, TLC, DLC, ESR, CT, BT
*b)* Biochemical Investigation: Blood sugar (RBS)
*c)* Liver Function Test (LFT), if required.
*d)* Viral Markers- HIV, HBsAg, VDRL

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*4) Study Type* – Interventional

Study Design

*a) Allocation* – Randomized

*b) Endpoint Classification* – Safety / Efficacy Period

*c) Primary Purpose* - Treatment

*d)* 30 patients were selected randomly and divided into two groups (group A, and group B) of 15 patients each.

Mode of Administration – Local application of Jalaukavacharana and Internal use of Panchanimba Churna in Rosacea Patients.

Table no. 1

| | Group-A | Group-B |
|---|---|---|
| Procedure | *Jalaukavacharana* | *Jalaukavacharana* |
| Drugs | - | *Panchanimba Churna* |
| Root of administration | Local Application | Local Application & Internal use |
| Dose | 4 sitting at the interval of 7 days | 4 sitting of Jalaukavacharana at the interval of 7 days<br>5 gm Churna twice per day with *Ghrit or Madhu* |
| Duration | 28 | 28 |

*5) Time Frame*

*a)* Time frame – 6 weeks

*b)* Trial period – 4 weeks

*c)* Follow up – 2 weeks after the completion of treatment.

*D. Assessment Criteria*

All criteria were reported on every once a week till complete trial period was achieved. All Assessment criteria were analysed for statistical significance within the group, and in between the groups for their comparative efficacy.

*1) Clinical Assessment*

*a) Redness*

Table no. 2 Showing Redness

| Score | Explanation |
|---|---|
| 0 | Normal skin colour |
| 1 | Pink discolouration of skin |
| 2 | Red discolouration of skin |
| 3 | Dark red discolouration of skin |

*b) Pimples (red bumps)*

Table no. 3 Showing Pimples

| Score | Explanation |
|---|---|
| 0 | No pimples |
| 1 | Pimples present at chicks |
| 2 | Pimples present at chicks and fore head |
| 3 | Pimples present at chicks, fore head and chin |

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*c) Burning Sensation*

Table no. 4 Showing Burning Sensation

| Score | Explanation |
|---|---|
| 0 | No Burning Sensation |
| 1 | Sometimes Burning Sensation during sun exposer |
| 2 | Frequently Burning Sensation during sun exposer |
| 3 | Continues Burning Sensation |

*d) Visible Blood Vessels*

Table no. 5 Showing Blood vessels

| Score | Explanation |
|---|---|
| 0 | No Visible |
| 1 | Visible on Chicks/ Nose/Chine |
| 2 | Visible on 2 sites among Chicks/Nose/Chine |
| 3 | Visible on Chicks, Nose & Chine |

## IV. RESULTS

The study effect was observed in 30 participants who finished the research. All of the results were calculated using Stat GraphPad 3 trial software. Intra-group findings were calculated using the nonparametric Wilcoxon matched-pairs signed rank test, while inter-group comparisons were calculated using the Mann-Whitney test.

*A. Individual Analysis (Within The Group)*

*1) Variable Wise Analysis in Group – A*

**(**Wilcoxon matched-pairs signed rank test)

Table No. 6- Effect of treatment on all variables of Group-A (Within the Group)

| Variables | Mean | | Diff. In Mean | % Relief | S.D. | S.E. | p value | Re. |
|---|---|---|---|---|---|---|---|---|
| | B.T. | A.T. | | | | | | |
| Redness | 1.8 | 0.66 | 1.13 | 62.96 | 0.35 | 0.09 | 0.0001 | E.S. |
| Red domed pimples | 1.86 | 0.73 | 1.13 | 60.71 | 0.35 | 0.09 | 0.0001 | E.S. |
| Burning sensation | 2.00 | 0.80 | 1.20 | 60 | 0.41 | 0.10 | 0.0001 | E.S. |
| Visible blood vessels | 1.60 | 0.73 | 0.86 | 54.16 | 0.35 | 0.09 | 0.0002 | E.S. |

(BT – Before Treatment, AT – After Treatment, Diff. – Difference, S.D. – Standard Deviation, S.E. – Standard Error, Re. – Remark, E.S. – Extremely Significance, N.S. – Not Significance)

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*2) Variable Wise Analysis In Group – B*
**(**Wilcoxon matched-pairs signed rank test)

Table no. 7- Effect of treatment on all variables of Group-B (Within the Group)

| Variables | Mean | | Diff. In Mean | % Relief | S.D. | S.E. | p value | Re. |
|---|---|---|---|---|---|---|---|---|
| | B.T. | A.T. | | | | | | |
| Redness | 2.20 | 0.60 | 1.60 | 72.72 | 0.50 | 0.13 | < 0.0001 | E.S. |
| Red domed pimples | 1.73 | 0.46 | 1.26 | 73.07 | 0.45 | 0.11 | < 0.0001 | E.S. |
| Burning sensation | 2.06 | 0.80 | 1.26 | 61.29 | 0.45 | 0.11 | < 0.0001 | E.S. |
| Visible blood vessels | 1.66 | 0.66 | 1.00 | 60 | 0.37 | 0.09 | <0.0001 | E.S. |

*3) Internal Comparision: (Between The Group)*
(Mann-Whitney Test)

Table no 8- Intergroup comparison of various variables of both groups
N=15

| Variables | Mean | | Diff. | U | % Relief | p value | Re. |
|---|---|---|---|---|---|---|---|
| | Group A | Group B | | | | | |
| Redness | 1.13 | 1.40 | -0.27 | 142.50 | 23.53 | 0.1104 | N.S. |
| Red domed pimples | 1.13 | 1.26 | -0.13 | 127.50 | 11.76 | 0.3856 | N.S. |
| Burning sensation | 1.20 | 1.26 | -0.06 | 120 | 5.55 | 0.6920 | N.S. |
| Visible blood vessels | 0.86 | 1.0 | -0.14 | 126.50 | 15.38 | 0.3428 | N.S. |

*4) Percentage Difference After Treatment*

Table no 9- Showing % Difference of individual variable in both groups

| S. No. | Variable | % Diff. in Group A | % Diff. in Group B |
|---|---|---|---|
| 1 | Redness | 62.96 | 70.00 |
| 2 | Red domed pimples | 60.71 | 73.07 |
| 3 | Burning sensation | 60% | 61.29 |
| 4 | Visible blood vessels | 54.16 | 60.00 |
| Average % of Relief | | 59.63 | 66.07 |

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5) *Overall Assessment Of Treatment*

Table no 10- Overall assessment of effect of the treatment on patients of Rosacea both of the groups -

| Result | Group A | | Group B | | Total | |
|---|---|---|---|---|---|---|
| | No. of patients | % | No. of patients | % | No. of patients | % |
| Cured: 100% improvement | 0 | 0 | 0 | 0 | 0 | 0 |
| Marked Improvement: >76-99% | 0 | 0 | 1 | 6.66 | 1 | 3.33 |
| Moderate Improvement: >51-75% | 14 | 93.33 | 14 | 93.33 | 28 | 93.33 |
| Mild improvement: >26-50% | 1 | 06.66 | 0 | 0 | 1 | 3.33 |
| Unchanged: < 25% | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 15 | 100 | 15 | 100 | 30 | 100 |

1) *In Group-A:* In this group 0% patient was found with complete relief (cured), 6.66% patient were found with marked improvement, 93.33% patient were found with moderate improvement and 0% patient was found with mild improvement.
2) *In Group B:* In this group 0% patient was found with complete relief (cured), 93.33% patient were found with moderate improvement and 13.33% patient was found with mild improvement.

## V. DISCUSSION

Discussion on the results obtained:

A. *Effect of Treatment*

1) *Redness:* In this study the improvement on Redness in Group-A shows 62.96% improvement on the other hand Group-B shows 72.72% improvement, the 'P' value is < 0.0001. It shows both are statistically extremely significant.
2) *Red Domed Pimples:* In this study the improvement on Redness in Group-A shows 60.71% improvement on the other hand Group-B shows 73.07% improvement, the 'P' value is < 0.0001. It shows both are statistically extremely significant.
3) *Burning Sensation:* In this study the improvement on Redness in Group-A shows 60% improvement on the other hand Group-B shows 61.29% improvement, the 'P' value is < 0.0001. It shows both are statistically extremely significant.
4) *Visible Blood Vessels:* In this study the improvement on Redness in Group-A shows 54.16% improvement on the other hand Group-B shows 60% improvement, the 'P' value is < 0.0001. It shows both are statistically extremely significant.
5) *Overall Effect of the Treatment:* The improvement in the symptoms of Rosacea are found to the maximum in Group-B (66.07%), followed by Group-A (59.63%). According to this study, the drug *Panchanimba churna* with *Jalaukavacharana* from Group-B is more effective in the treatment of Rosacea than the only *Jalaukavacharana* from Group-A.

## VI. CONCLUSION

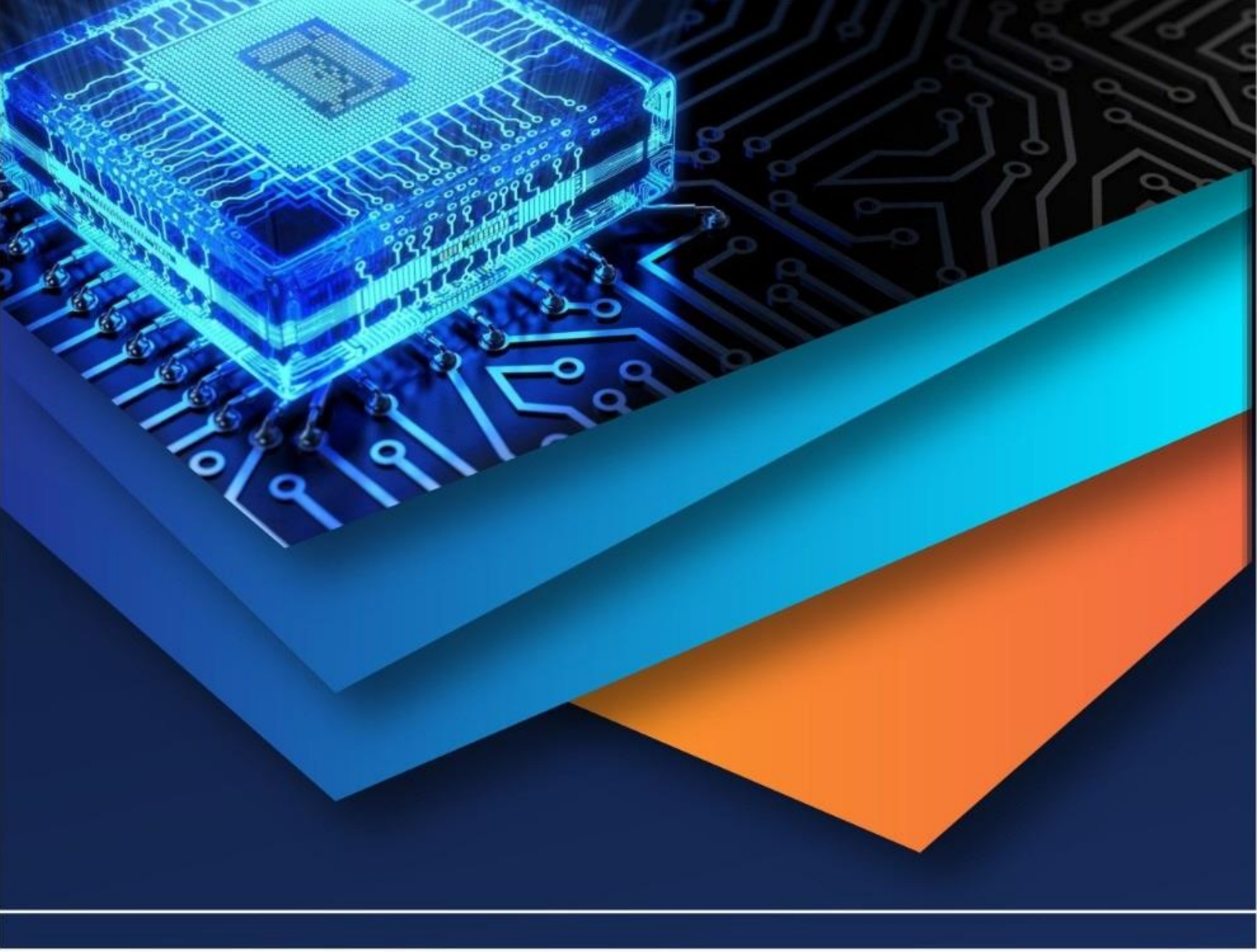
A. Rosacea is the most common skin disease of fair skin people.
B. Rosacea affects any age persons, mainly affects middle age female 30-50 years of life. According to the sign & symptoms Rosacea can be correlated to *Pitta Dustha Raktaja Vyadhi.* Exact Cause of Rosacea is unknown, but many environmental factor like Sun exposure and bed food habits like Spicy food.
C. Sun exposure, Spicy food, hot weather, other medication like steroids, and alcohol etc, trigger factors of Rosacea.
D. After a thorough analysis of 30 Rosacea Patients, who were divided into two groups based on the method of intervention, the results were easily compared between the two groups.
E. Group-A was treated with *Jalaukavacharana* and Group-B was treated *Jalaukavacharana & Panchanimba Churna.*
F. Group-B shown extremely significant results over Group-A.
G. Overall relief of 59.63% was observed in Group-A treated by *Jalaukavacharana*.
H. Overall relief of 66.07% was observed in Group-B treated by *Jalaukavacharana & Panchanimba Churna.*
I. Maximum relief in Group-B can be accredited to the synergistic effect of *Jalaukavacharana & Panchanimba Churna.*
J. Patients in both Groups not reported any types of side effects from any intervention.

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