

## EFFICACY OF UNIQUE COMBINATION OF HERBS IN MUKHADUSHIKA

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### ABSTRACT

*Mukhadushika* in which face is mainly affected, is a common problem in society where all adolescents are affected and it is usually transient. Changed lifestyle, fast food, junk food, lack of exercise, sedentary work and mental stress are causative factors behind it. Topical steroids along with systemic antibiotics have their limitations. There is no authentic medicine to reverse the process of disease. In Ayurveda various drugs are described under category 'shamanopkrama' which include external *Lepa* for local application and internal administration of herbs having blood purifying properties. Aim of this study was to evaluate the efficacy of unique combination of herbs as internal administration, as external *Lepa* and combination of both treatments in *Mukhadushika*. It was an open randomized parallel group trial. Total 45 patients were treated out of which 15 patients were treated with internal administration of Unique combination of herbs (*Amalki, Kutki, Manjishtha and Khadir*) for 42 days, 15 patients were treated with External *Lepa* of unique combination of herbs (*Amalki, Lodhra, Haridra and Priyangu*) for 42 days and 15 patients were treated with combination of Internal and External treatments for 42 days. Individually all groups have given relief in cardinal signs and symptoms of *Mukhadushika*. While comparing, it was also statistically proved that combined treatment is more effective in the management of *Mukhadushika* than only internal administration of unique combination of herbs and only External *Lepa* with respect to signs and symptoms of *Mukhadushika*.

**Keywords:** *Mukhadushika*, Unique combination of herbs, Internal administration, *External Lepa*, Acne vulgaris

### INTRODUCTION

In today's busy scheduled and fast styled life people do not have enough time to pay attention to their food and habits. Especially teenagers and adolescents use to take fast food, junk food, ready food which is more oily, spicy and contaminated. Also use of cold drinks and carbonated beverages causes gastrointestinal upsets. Due to study related heavy physical and

mental work they have more physical and mental stress and also disturbances in sleep. So they suffer from variety of diseases especially skin disorders. *Mukhadushika*<sup>[1]</sup> is one of these diseases which affect all adolescents and it is usually transient. Modern science has no authentic medicine to reverse the process of disease. Prolonged and frequent use of

topical steroids or retinoid along with systemic antibiotics has their limitations. Adverse effects include peeling of skin, skin irritation, allergy, GI upset, hyper pigmentation etc. This is why Ayurvedic treatment is more preferred. I have seen many patients of *Mukhadushika* having better response to Ayurvedic treatment in our institute like *Shamanopkrama*<sup>[2]</sup> and *Lepa*<sup>[3]</sup>

*Mukhadushika* is briefly described in Ayurvedic texts by various Acharyas. It comprises two words- *Mukha* and *Dushika*<sup>[1]</sup> That means which vitiates the face. It is also called as *Yuvanpidika*<sup>[4]</sup> by *Acharya Vijay Rakshit* in *Madhav Nidan* due to affection in young age. It was described in *Sushrut Samhita* for the first time in chapter of *Kshudra roga*<sup>[5]</sup>. *Acharya Vagbhat* has mentioned it in *Ashtang Hridayam*<sup>[6]</sup>. It is also described in *Sharangdhara Samhita*<sup>[7]</sup>, *Chakradatta*<sup>[8]</sup> and *Vangsen*<sup>[9]</sup>. Various drugs and preparations used in the treatment of *Mukhadushika* are described in *Granthas* like *Yogratnakar*<sup>[10]</sup> and *Bhavprakash*<sup>[11]</sup> In this disease the *pidika* (pimple) occurs in young age looks like a thorn of 'Shalmali' tree. (*Shalmalikantaka*) and it occurs due to vitiation of Kapha, Rakta and Vata over face.

It can be correlated with *Acne vulgaris*<sup>[12]</sup> according to modern science.

The objectives behind the selection of this project were economy of treatment, easy availability of drugs devoid of side effects. So considering all the facts herbal drug combination of *Amalki, Kutki, Manjishtha and Khadir* was selected for internal administration and herbal drug combination of *Amalki, Lodhra, Haridra and Priyangu* was selected for external application (*Lepa*) The study was planned with aim and objectives to evaluate the efficacy of Unique combination of herbs as internal treatment and external treatment (*Lepa*) in *Mukhadushika*.

**Aim and Objectives:** To evaluate the efficacy of Unique combination of herbs as internal treatment and external treatment (*Lepa*) in *Mukhadushika*.

## MATERIALS AND METHODS

### Study population

Patients fulfilling the criteria for the diagnosis of the disease were registered for the present study between

the age group of 12 to 35 years irrespective of sex, religion, occupation etc. 45 patients were selected from outpatient department of *Kayachikita*, S S N Jain Rugnalaya, Solapur. They were divided into three equal groups randomly.

### Sample frame

- Study design:** Randomized clinical trial
- Sample size:** 45 patients (15 in each group)
- Period of study:** 18 months
- Selection of patients:** As per inclusion and exclusion criteria
- Study setting:** S S N Jain Rugnalaya, Solapur, Maharashtra

**Criteria for Diagnosis:** The criteria of the diagnosis were mainly based on signs and symptoms of *Mukhadushika*. Detailed case history was taken and complete physical and systemic examination was conducted before the treatment started.

### Criteria for selection of patients

**Inclusion criteria:** Patients between the age group of 12 to 35 years having cardinal signs and symptoms like *Pidika sankhya, Vaivarnya, Srava, Kandu, Ruja* and *Daha*<sup>[12]</sup> were selected for the study.

**Exclusion criteria:** Children below 12 years and old age above 35 years, patients who suffer from more than three years, patients having severe scarring and cysts formation were excluded.

**Laboratory Investigations:** CBC if necessary.

**Drug preparation:** Unique combination of herbs for internal administration was prepared in the pharmacy of S S N Jain Rugnalaya, Solapur, by mixing equal parts of fine *choorna* of ingredients - *Amalki* (*Emblica officinalis*), *Kutki* (*Picrorhiza kurroa*), *Manjishtha* (*Rubia cardifolia*), and *Khadir* (*Acacia catechu*)<sup>[13]</sup>

Unique combination of herbs for external application (*Lepa*) was prepared in the pharmacy of S S N Jain Rugnalaya, Solapur, by mixing equal parts of fine *choorna* of ingredients - *Amalki* (*Emblica officinalis*), *Lodhra* (*Symplocos racemosa*), *Haridra* (*Curcuma longa*), and half part of *Priyangu* (*Callicarpa macrophylla*)<sup>[13]</sup>

### Drug intervention

**Group A:** Patients were treated with both, unique combination of herbs for internal administration as

well as unique combination of herbs for external application (*Lepa*) for 42 days. Follow up on every 7<sup>th</sup> day was scheduled.

**Group B:** Patients were treated with unique combination of herbs for internal administration with a dose of 1gm twice a day after meals with *anupan* of *koshna jal* for 42 days with a follow up after every 7<sup>th</sup> day.

**Group C:** Patients were treated with unique combination of herbs for external application (*Lepa*) once a day for 42 days. *Lepa* was prepared by adding adequate quantity of mixture in adequate quantity plain water. It was applied over face for 20 minutes and then washed with cold fresh water. Follow up on every 7<sup>th</sup> day was scheduled.

**Criteria for Assessment:** Both pre and post assessments of the patients were done on the basis of clinical symptoms

- *Pidika Sankhya* (No. of *Mukhadushika*), *Twak Vaivarnya*, *Srava*, *Kandu*, *Ruja*, and *Daha*

**Assessment parameters Gradation with score:**

- *Pidika Sankhya*

**Grade(-)** -No any *Pidika*; **Grade(+)** -1 to 5 *Pidika*; **Grade(++)** -6 to 10 *Pidika*.; **Grade(+++)** -11 to 20 *Pidika*

- *Twak Vaivarnya*

**Grade(-)** - No *Vaivarnya*; **Grade(+)** -*Vaivarnya* at the center of *Pidika*; **Grade(++)** - *Vaivarnya* at the

periphery of *Pidika*; **Grade-(+++)** - *Vaivarnya* at all over the surface

- *Srava*

**Grade(-)** - No *Srava*; **Grade(+)** - Very less *Srava*; **Grade(++)** - *Srava* upto need of soak; **Grade(+++)** - *Srava* in large quantity

- *Kandu*

**Grade(-)** - No *Kandu*, **Grade(+)** – Occasionally, **Grade(++)** – Frequently, **Grade(+++)** - Continuous

- *Ruja*

**Grade(-)** - No pain, **Grade(+)** - Pain occasionally, **Grade(++)** - Pain on touch, **Grade(+++)** - Pain without touch

- *Daha*

**Grade(-)** - No *Daha*, **Grade(+)** – Occasionally, **Grade(++)** – Frequently, **Grade(+++)** – Continuous

### STATISTICAL ANALYSIS AND INTERPRETATION<sup>[14]</sup>

The subjective criteria were assessed before treatment and after treatment. The data obtained in clinical study is subjected to statistical test and analyzed in two parts as;

1. Unpaired ‘t’ test applied to no. of *Mukhadushika* (*Pidika Sankhya*)
2. Percentage of improvement in each parameter of each scale is calculated

### Criteria for the Assessment of the total effect of the therapy

#### Statistical Analysis

Group	X	X <sup>2</sup>	N	(X-X*) <sup>2</sup>	S.D.	S.E.	T <sub>28</sub>
A	205	3109	15	307	4	1.0656	3.755
B	145	1543	15	141			

At t<sub>28</sub> d.f. the highest obtainable value of ‘t’ at 0.1% level of significance is 3.67 as found on reference to ‘t’ table. Calculated ‘t’ value =3.755; Table ‘t’ value =3.67; Hence p<0.001

Thus we reject null hypothesis of no difference. Hence study is statistically significant.

Group	X	X <sup>2</sup>	N	(X-X*) <sup>2</sup>	S.D.	S.E.	T <sub>28</sub>
A	205	3109	15	307	3.45	0.9190	9.858
C	69	345	15	28			

At  $t_{28}$  d.f. the highest obtainable value of 't' at 0.1% level of significance is 3.67 as found on reference to 't' table.

Calculated 't' value =9.858; Table 't' value =3.67

Hence  $p < 0.001$

Thus we reject null hypothesis of no difference. Hence study is statistically significant. Hence there is no doubt that both external and internal therapy for *Mukhadushika* is more beneficial than only external application or only internal administration therapy.

**Table 1:** Showing percentage of the effect of treatments on no. of *Pidika*

Group	Effect of treatment on no. of <i>Pidika</i>
A	95.45
B	74.52
C	46.37

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analysed that % of efficacy of treatment in Group A was 95.45 while in Group B it was 74.52 and in Group C it was 46.37

which suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to no. of *Pidika*.

**Table 2:** Showing percentage of the effect of treatments on *Ruja*

Group	• Effect of treatment on <i>Ruja</i>
A	80
B	78
C	53.33

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 80 while in

Group B it was 79 and in Group C it was 53.33 which suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to *Ruja*.

**Table 3:** Showing percentage of the effect of treatments on *Kandu*

Group	Effect of treatment on <i>Kandu</i>
A	93.33
B	60
C	53.33

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 93.33 while in

Group B it was 60 and in Group C it was 53.33 which suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to *Kandu*.

**Table 4:** Showing percentage of the effect of treatments on *Twak Vaivarnya*

Group	Effect of treatment on <i>Twak Vaivarnya</i>
A	46.66
B	20
C	20

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 46.66 while in Group B it was 20 and in Group C it was 20 which

suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to *Twak Vaivarnya*.

**Table 5:** Showing percentage of the effect of treatments on *Srava*

Group	Effect of treatment on <i>Srava</i>
A	100
B	93.33
C	93.33

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 100 while in

Group B it was 93.33 and in Group C it was 93.33 which suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to *Srava*.

**Table 6:** Showing percentage of the effect of treatments on *Daha*

Group	Effect of treatment on <i>Daha</i>
A	93.33
B	92.33
C	73.33

While comparing Group A with Group B and Group C on the bases of % of efficacy of treatment after the whole course of treatment it was analyzed that % of efficacy of treatment in Group A was 93.33 while in Group B it was 92.33 and in Group C it was 73.33 which suggest that Internal treatment with External application (*Lepa*) is more effective than only Internal or Only external treatment with respect to *Daha*.

## RESULTS AND DISCUSSION

As per the assessment criteria *Pidika Sankhya*, *Ruja*, *Kandu*, *Srava* and *Daha*, Unique combination of herbs for internal administration and external application (*Lepa*) were found to be statistically and clinically effective in all parameters taken for assessment.

**Table 9:** Overall effect of therapy

GROUPS	IMPROVEMENT				
	No. of patients with complete remission	No. of Markedly improved patients (%)	No. of Moderately improved patients (%)	No. of Mildly improved patients(%)	No. of unchanged patients (%)
Group A	0	15 (100%)	00 (00%)	00 (00%)	0
Group B	0	10 (66.66%)	03 (20%)	02 (13.33%)	0
Group C	0	06 (40%)	03 (20%)	06 (40%)	0

However considering overall results, as presented in table no. 8 we can see that unique combination of herbs used for combined treatment as internal and external was found to be more effective in relieving

signs and symptoms of *Mukhadushika* as compared to internal or external treatment alone.

Herbal drugs used for internal administration are *Amalki*, *Manjishtha*, *Kutki* and *Khadir*. They act by

mainly its *Tikta* and *Kashaya Rasa*, *Ruksha* and *Laghu Guna*, *Sheeta Veerya* and *Katu Vipaka* effectively. Due to their *Deepana*, *Pachana*, *Kledaghna*, *Kaphaghna*, *Raktaprasana*, *Raktashodhan*, *krimighna*, and *Malanuloman karmas*[16] the Unique combination of herbs as internal administration is highly effective in treating *Mukhadushika*

Herbal drugs used for external application in the form of *Lepa* are *Amalki*, *Khadir*, *Lodhra* and *Priyangu* have *Vranaropan*, *Kledaghna*, *Kushthaghna*, *Vedanasthapan*, *Shothahara*, *Vranashodhana*, *Krimighna* and *Dahaprashaman Karmas*[16]. So they are effective in *Mukhadushika*.

## CONCLUSIONS

*Mukhadushika* is one of the commonest diseases affecting skin on face in adolescents. It produces various signs and symptoms due to vitiation of mainly *Kapha*, *Vayu* and *Rakta*. It causes scars and hyper pigmentation if not treated within proper time. Treatment responses of all the parameters were highly significant in all experimental Groups. Drugs used in Unique combination of herbs as internal administration and external application are highly effective in the treatment of *Mukhadushika*. This study proves that unique combination of drugs for internal treatment and external application is highly effective in combined manner than single treatment of *Mukhadushika*.

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