

Comparative Study of Mruttika Lepa and Vachadi Lepa in Mukhadoooshia with Special Reference to Acne Vulgaris

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Abstract

Mukhadoooshika affects the beauty as well as personality of the person. The laxanas of Mukhadoooshika can be found in the disease "Acne" in contemporary science. Mud (Mruttika) is used for prevention and cure of diseases and maintenance of health. In this clinical trial, Patients between the age group of 17 years to 25 years having the history of Pidaka resembling Shalmali Kantaka, Medo Garbha and one or more other features with the duration of more than two months were included. 30 patients from OPD were selected and divided into two groups i.e. Mruttika Lepa group and Vachadi Lepa group and each group consists of 15 patients. Both the applications were applied for 15 days once a day in evening before sunset. There was significant result in the reduction ($p < 0.01$) of size and numbers of Pidaka by Mruttika Lepa. There was significant reduction in the snigdghata of skin ($p < 0.01$) in Mruttika group compared to Vachadi Lepa. There was significant decrease in vedana of the Pidaka in Mruttika group ($p < 0.01$).

Keywords: Mruttika Lepa; Vachadi Lepa; Mukhadoooshika; Acne.

Introduction

Acne vulgaris is a chronic inflammatory disease of the pilosebaceous units [1]. It is believed to be the most common disease of the skin [2]. The condition is usually found in adolescence, increases at the ages of 14 to 19 years and frequently reduces by mid-twenties. Acne vulgaris develops earlier in females than in males, which may be due to earlier onset of puberty in females. The most severe forms of acne vulgaris occur more frequently in males, but the disease tends to be more persistent in females. Acne is an inflammation of the pilosebaceous units of certain body area (face, trunk, rarely buttocks) that occurs most frequently in adolescence and manifest itself as comedones (comedonal acne), papulopustules (papulopustular acne) or nodules and cysts (nodulo cystic acne and acne conglobata) pitted depressed or hypertrophic scars may fallow all types but especially nodulocystic acne and acne

conglobata. Acne primarily includes whiteheads, blackheads and mild inflammatory acne. Acne is a polymorphic disease, which occurs predominantly on the face (99%) and, to a lesser extent, occurs on the back (60%) and chest (15%). Although it is usually a condition of adolescent, acne affects 8% of 25-34 year olds and 3% of 30-44 year old age group [3,4]. Aside from scarring, its main effects are psychological, such as reduced self-esteem and in very extreme cases, depression or suicide [5]. These symptoms can be correlated with the disease Mukhadoooshika in Ayurveda, which affects the beauty as well as personality of the person. In recent years, due to better understanding of the pathogenesis of acne, new therapeutic modalities are designed [6]. Various treatments have been in practice in the management of Acne. Topical therapy is useful in mild and moderate acne as monotherapy, in combination and also as maintenance therapy.

Mud (Mruttika) is used for prevention and cure of diseases and maintenance of health and this is achieved by Thermal, Mechanical, Chemical and Electrical effect of mud over the skin. Black colour of Mruttika absorbs all the colours of the sun and conveys them to the body [7] retains moistures for a long time, causes cooling effect, increases the blood circulation and energizing the various skin tissues and it is cheap and easily evadable [8]. Frequent application of mud helps in improving the complexion of the skin by getting rid of spots and

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patches [9]. Mud invigorates the circulatory system by diverting a large amount of blood to the periphery and hence useful in cleansing, reduce the inflammation and strengthening the skin tissue. Thus, it is hypothesized that application of mud will reduce the symptoms of Acne.

Objective of the study

To evaluate the effect of Mruttika Lepa (black mud) in Mukhadoooshia

Materials and Methods

Study design and patient selection: In this clinical trial, 30 patients from OPD were selected and divided

Intervention

Table 1: Showing the study design

Group	Intervention	Duration of trial
Group I	Mruttika Lepa	15 days
Group II	Vachadi Lepa	15 days

Application of Mruttika Lepa

Collection of mud: Mruttika was collected from 3 feet deep non-contaminated land in a sterilized paper bag. The mud was dried under sun for 8-10 hours and then on next day was soaked in water for 2 days. On day 4, the wet mud is dried in sun light for until it gets completely dried. After drying it was triturated

into two groups i.e. Mruttika Lepa group and Vachadi Lepa group and each group consists of 15 patients. The patients in Vachadi Lepa were taken as a control group.

Inclusion criteria

Patients between the age group of 17 years to 25 years having the history of Pidaka resembling ShalmaliKantaka, MedoGarbha and one or more other features with the duration of more than two months were included.

Exclusion criteria

Patients having Pidaka of other Kshudra Roga, Kushta and associated with other systemic disorders were excluded from the study.

in Khalva Yantra to make minute powder and sheaved through a mesh and collected in an air tight container.

Application of Lepa: The Mud was made into a smooth paste by mixing it with water. It was then applied over the affected part in the opposite direction of hair follicles up to complete dried and later it was washed with the normal water.

Table 2: Ingredients of vachadi lepa

S. No	Drug	Botanical Name	Part used
1	Lodhra	<i>Symplocos racemosa</i> Lin	Bark
2	Sarshapa	<i>Brassica nigra</i>	Seeds
3	Vacha	<i>Acorus calamus</i>	Rhizome
4	Saindava Lavana	<i>Potassium Chloride or Black Salt</i>	Powder

The above drugs were collected locally and authenticated by Dravyaguna Experts. The drugs were then made into a fine powder and sieved with a mesh. Equal quantities of drugs were taken in a vessel and mixed with water in quantity sufficient until it forms a fine paste.

Duration of application: The applications were applied once daily in the evening before sunset for 15 days. The application was removed after it got dry.

Duration of the study: 15 days

Assessment Criteria: The assessment was performed on the basis of changes in Acne subjective and objective parameters as Size of the Pidaka, Number of Scars, Number of Pidaka, Vedana of lesion and Type of skin face etc., before and after treatment and 1 month of follow up.

Ethical clearance: Institutional Ethical Committee approved the design of the study. Written consent was taken from each patient willing to participate before the start of the trial. Patients were free to

Table 3: Showing Gradation Index

Objective parameters		Grade
Size of Pidaka	No Pidaka	00
	Less than 5 mm	01
	In between 5 to 10 mm	02
	More than 10 mm	03
Number of Scars	No Scars	00
	Less than 1-5 on one side	01
	In between 6-10 on one side	02
	More than 10 on one side	03
Number of Pidaka	No Pidaka	00
	Less than 1-5 on one side	01
	In between 6-10 on one side	02
	More than 10 on one side	03
Subjective Criteria		
Vedana of Pidaka	No tenderness	00
	Pain on deep pressure over the Pidaka	01
	Pain on touch	02
	Pain without touch	03
Oiliness of the face	Normal skin	00
	Face becomes oily 3-4 hours after wash	01
	Face becomes oily 1-2 hours after wash	02
	Requires face wash once in every half an hour.	03
Dryness of the face	Normal skin	00
	Feels dryness of skin during winter	01
	Dryness subsides with application of moisturizers	02
	Feels dryness of skin in all seasons and do not subside by application of moisturizers	03

Table 4: Effects of the Therapy

Parameter	Group	Before treatment	After treatment	Follow – up
Size of Pidaka	Mruttika Lepa (n=15)	2.47 + 0.50	0.27 + 0.44**	0.13 + 0.34**
	Vachadi Lepa (n=15)	2.40 + 0.61	2.27 + 0.57	1.93 + 0.68*
	P value		P<0.0001	P<0.0001
Number of Pidaka	Mruttika Lepa (n=15)	2.67 + 0.47	0.60 + 0.49**	0.29 + 0.45**
	Vachadi Lepa (n=15)	2.47 + 0.50	2.27 + 0.57	2.27 + 0.77
	P value		P<0.0001	P<0.0001
Number of Scars	Mruttika Lepa (n=15)	2.40 + 0.61	2.40 + 0.61	2.07 + 0.77
	Vachadi Lepa (n=15)	2.60 + 0.49	2.40 + 0.61	2.33 + 0.60
	P value		1	0.2712
Vedana of Pidaka	Mruttika Lepa (n=15)	2.33 + 0.79	0.40 + 0.49**	0.07 + 0.25**
	Vachadi Lepa (n=15)	2.20 + 0.65	2.13 + 0.62	2.07 + 0.57
	P value		P<0.0001	P<0.0001
Type Of Skin	Mruttika Lepa (n=15)	2.40 + 0.71	0.27 + 0.44**	0.14 + 0.35**
	Vachadi Lepa (n=15)	2.27 + 0.68	1.93 + 0.47*	1.93 + 0.85*
	P value		P<0.0001	P<0.0001

Values indicated are Mean + Standard deviation, *p< 0.05

withdraw their name from the study at any time without giving any reason.

Observations

Age: 25.3% were of 17-18 years age group, 27.1% belonged to 19-20 years age group, 6.4% are 21-22 years age group and 41.2% were of 23-24 age groups

Sex: 80% were females and 20% were males. Control group consists of 15 patients, in which 80% patients were female and 20% were male. In the experimental group there were 15 patients, of these 80% patients were female and 20% were male.

Duration: Duration of Pidaka from 1-2 yrs in 37% of peoples, followed by from 2-3 yrs (30%), 20% were from 4-5 yrs and 13.3% patients complaining of Pidaka from 6-7 yrs.

Number of Pidaka: 40% patients were having 6-10 pidaka/cm², followed by 27% were having 11-15 pidaka/cm² and 17% were having 1-5 and >15 pidaka/cm².

Types: Out of 30 patients maximum. i.e., 77% patients were having papules, followed by 10% were having Macule and 3.33% were having Nodules and Cysts.

Results and Discussion

There was significant result in the reduction ($p < 0.01$) of size and numbers of Pidaka by Mruttika Lepa. Mruttika is Ruksha and Shothahara (Anti-inflammatory). When Mruttika Lepa is applied over face it reduces Snigdghata of the skin, opens the skin pores and removes the sebum and creates the dryness from the skin. Thus it leads to reduction in the size and number of Pidaka. There was no significant change in control group.

There was significant change in type of skin in both the groups. However, there was significant reduction in the snigdghata of skin ($p < 0.01$) in Mruttika group compared to Vachadi Lepa. Due to Rooksha Guna mruttika produces the dryness and removes the oiliness from the skin.

There was significant decrease in vedana of the Pidaka in Mruttika group ($p < 0.01$). Mruttika Lepa helps for removal of Sebum and reduction in the size

of the Mukhadoooshika, which helps for the reduction in the vedana of the Pidaka.

There is no improvement in reduction of scars in both the groups.

Conclusion

Mruttika lepa significantly reduced size, number, and oiliness of skin and vedana of Pidaka compared to Vachadi lepa. There was no significant improvement in scars.

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