



A COMPARITIVE STUDY OF THE EFFICACY OF KOLAPHALAMAJJA AND SHALMALIKANTAK ON MUKHADOOSHIKA

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ABSTRACT :

It is the general opinion that smooth and glowing skin of face not only enhances the beauty of a person but it also provides tremendous self confidence. One of the leading cosmetic problems which affect the facial skin is Acne vulgaris and it is affecting 85% of teenagers of the World population. So there is a need for potential well tolerated treatment which can limit the disease and thus reduce psychological impact of the condition. In Ayurvedic classics in the context of Kshudra rogas, there mentioned about Mukhadooshika occurring in yuvavastha and its signs and symptoms are similar to that of Acne vulgaris. In Ayurvedic classics many lepa are considered to be the effective treatment for Mukhadooshika. The present study was carried out with an objective to compare the efficacy of lepa of Kolaphalamajja with that of Shalmalikantaka in Mukhadooshika.

Study design: The study was 'Single blind comparitive study' conducted on 30 patients of Mukhdooshika of either sex. Patients were randomly recruited to Trialgroup and Standard group of 15 each. The Trial group patients were adviced Kolaphalamajja lepa and the Standard group prescribed Shalmalikantaka lepa, one time a day for 49 days.

Results: Kolaphalamajja lepa showed significant response in Oily skin texture and Shalmalikantaka lepa in Dry skin texture of Mukhadooshika, hence proved that Kolaphalamajja and Shalmalikantaka which is easily available one, is effective in combating Mukhadooshika.

Key words: Mukhadooshika, Lepa, Acne Vulgaris, Kolaphalamajja, Shalmalikantaka.

INTRODUCTION: "A Good Face Is the Best Letter of Recommendation". Shakespeare.

Ayurvedic amenities have mentioned disease ailment called 'MUKHA DOOSHIKA' which emphasised with its rupa and chikitsa in detail.. The treatment explained in Ayurveda not only aims at curing Mukhadooshika without leaving scars but also to improve the complexion. The features of the disease are similar to those of Acne Vulgaris. One of the leading cosmetic problems which affect

adolescents is Acne vulgaris. Data shows that more than 85% of teenagers suffer from Acne vulgaris¹. Wide range of treatment exists for Acne vulgaris – which includes both topical application and oral medicine. But side effects like skin irritation, contact dermatitis, photo sensitivity by topical application and gastro-intestinal disturbance and other systemic disorders by oral medication are often noticed. So there is an intense need for potential, well tolerated treatment which can limit the disease without affecting the beauty and re-

duce its psychological impact While mentioning the treatment modalities for disease Mukhadooshika all the acharyas of Ayurveda have given importance on Lepa. So there is a need to evaluate the efficacy of the dravyas mentioned in classics.

Shalmali is one of the known dravya which is in use as effective one for lepa in combating Mukhadooshika. Kola is one of the dravya which is quoted by Vagbhata and Chakrapani in the treatment of Mukhadooshika. It is one of the easily available dravyas, so it is selected to study its efficacy. Mukhadooshika is due to Kapha-Vataja rakta dusti. Kola is vatapittagna and having usna guna. So with the motto of evaluating the efficacy of Kola in Mukhadooshika, work has been carried out.

OBJECTIVES OF THE STUDY:

- 1) To evaluate the efficacy of Kolaphalamajja lepa (Kolaphalamajja with navaneeta, guda, kshoudra) in Mukhadooshika.
- 2) To evaluate the efficacy of Shalmalikantaka lepa (Shalmalikantaka with ksheera) in Mukhadooshika.
- 3) To compare the efficacy of Kolaphalamajja lepa with that of Shalmalikantaka lepa in Mukhadooshika.

KOLA- Zizyphus jujuba Lam^{2,3,4}.

In Ayurvedic classics it is described under Asthapana dravya, Vicharana sneha, Vatasamshamana varga, Amlavarga, nyagrodhadi gana and in the treatment pramehapidaka, vidradhi, Mukhadushika, kushta jwara, atisara, chardi, arochaka Gulma, Unmaada, Udara, m Gunas; Madhura, Graahi, Usna, Guru, Saraka
Constituents - Vitamin C, Sugars and Minerals.

Fruit: saponin, jujuboside B, flavone-C-glucosides-6, carotenes, jujubosides A & B, **SHALMALI: Bombax ceiba^{2,3,4}:**

We found references in Ayurveda saying Shalmali pushpa is a Supya shaka as noted by Acharya Charaka and in Shaka varga by Sushruta. Its different parts like vruntha, pushpa, moola, niryasa useful in Rakta pitta, raktatisara, pravahika, yonidosha etc

The reference of Shalmali kantaka is found in Astanga Hrudaya in the context of the disease Mukhadooshika and dosha dushta jihwa, as its appearance resembles that of Shalmali kantaka.

Stem bark: lupeol, beta-sitosterol, tannins

Karmas-

Rasayani, Grahi, Vrushya, Brumhani, Sukra vardani, Balya, Varny

Lepa Kalpana^{5,6,7,8}: Types of Lepa: According to Sushruta, lepas are of 3 types viz. Pralepa, Pradeha and Alepa.

Pralepa: Sheeta lepa in Pittadosha pradhana twak rogas.

Pradeha: Ushna lepa in Vata and Shleshma doshaja skin problems.

Alepa: will be moderate in Rakta and Pitta dosha pradhana skin diseases

According to Sharangadhara lepas are classified into

Doshaghna lepa: should be applied to the thickness of 1/4th of an angula.

Vishaghna lepa: Should be applied to the thickness of 1/3rd of an angula.

Varnya lepa: should be applied to the thickness of 1/2 of an angula

Rules for the application of lepa: Lepas should be prepared freshly and used. They should be used only once. The thickness of the lepa is said to be of that of wet skin of Buffaloes. Over the previous lepa, fresh one should not be applied, not be applied at night. Lepas always be applied in the opposite direction of the hair follicles.

Pradeha should be applied during day
The lepa which is stale (kept overnight)
should never be applied.

Importance of lepa: Alepa is the first line
of treatment in vrana shopha. In all types
of shophas it is the commonest and
the important one. Just like water poured
over burning house extinguishes the fire,
lepa applied over the vrana reduces the
vedana.

Topical ppplication^{9,10,11}: The major step
in percutaneous absorption include the
establishment of a concentration-gradient,
which provides a driving force for drug
movement across the skin, the release of
drug from vehicle into the skin-partition
co-efficient; and drug diffusion across the
layers of the skin- diffusion co-efficient.
The relationship of these factors to one
another is summarised in the following
equation (Piacquadio & Kligman, 1998).

$J = C_{veh} \cdot K_m \cdot D / X$, Where, J= rate of ab-
sorption

C_{veh} = concentration of drug in the vehi-
cle

K_m = partition co-efficient

D = diffusion co-efficient

X = thickness of stratum corneum

Physiological factors that affect percutane-
ous absorption include-Hydra-
tion,Occlusion, Age, Intact versus Dis-
rupted skin, Temperature, Site.

Vehicle^{9,10,11}: Most topical applications
are incorporated into bases or vehicles that
bring drugs into contact with the skin. The
vehicle chosen will greatly influence the
drug's absorption and vehicles themselves
can have a beneficial effect on the skin if
chosen appropriately. The choice of appro-
priate vehicle in a topical application is
important. Factors that determine the
choice of vehicle and transfer, the rate of
drug across the skin are-

- Drug's hydrophobic/hydrophilic
partition co-efficient,
- Molecular weight,
- Water solubility
- Lipid solubility.

Clinical study proper: The Clinical trial
was conducted at SJIIM hospi-
tal, Bengaluru, were registered randomly
for this study.

INCLUSION CRITERIA:

a. Patient having classical signs and symp-
toms of Mukhadhooshika-
Shalmalikantakakara pidaka, Ghanavat and
Shula.

b. Age group between 12-30 years.

c. Patients of either sex will be taken.

EXCLUSION CRITERIA:

a. Mukhadoooshika of severe degree – cystic
form

b. Patients who are on long term treatment
with corticosteroids.

STUDY DESIGN: "Single blind
comparitive clinical study" for 49 days.
Lepa was advised once a day for 49 days.

Patients were categorized randomly into
two groups (A and B) comprising 15 in
each.

Group A: Advised Kolaphalmajja
lepa^{12,13,14} (external application to the site).

Group B:^{12,14} Advised Shalmalikantaka
ASSESSMENT CRITERIA^{5,6,7,15,16}:

SUBJECTIVE CRITERIA: Nature of
Pidika, Shula

OBJECTIVE CRITERIA: Pidika,
Number of Pidika, Site of Pidika,
Frequency of occurrence

(a)Pidika-

- No- 0
- Comedone- 1
- +Papule- 2
- +Pustule- 3
- +Nodule- 4

(b)No. of pidika-

No pidaka - 0
 Mild-20comedones
 Or 15inflammatory
 Lesions ,Total Of≤30
 Moderate-20 to100 comedone
 Or 15 to 20 Inflammatory lesion 2
 Total of 30-125
 Severe- ≥5cysts
 comedones≥100 - 3
 total of ≥125

(c) Site of pidaka-

No- 0
 Face- 1
 +chest- 2

+back- 3
(d) Nature of pidaka-

ghanavat- 0
 Alpa ghanavat- 1

(e) Shula-

Ashula - 0
 Alpa shula- 1
 Madhyama shula- 2
 Teevra shula- 3

(f) Frequency of occurrence -

No- 0
 Less frequent (once in 30days) - 1
 More frequent (once in 15 days) - 2
 Always present 3

OBSERVATION:

Before treatment

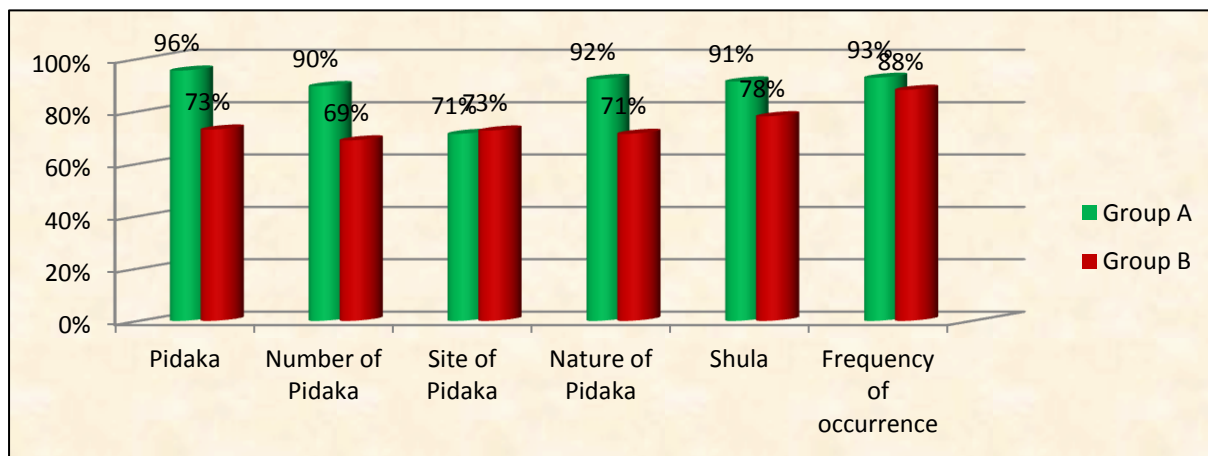
After treatment





Statistical analysis between the two groups

Parameter	Groups	Mean	%diff	SD	SE	t-Value	p-value	Remark
Pidaka	Group-A	2.8	95.56%	0.7746	0.2	5.6	<0.0001	HS
	Group-B	1.266	73.05%	0.4577	0.1182			
Number of Pidaka	Group-A	1.8	89.65%	0.414	0.1069	2.432	0.0217	S
	Group-B	1.33	58.91%	0.6172	0.1594			
Site of Pidaka	Group-A	1.067	71.42%	0.2582	0.0666	0.5641	0.5772	NS
	Group-B	1	72.66%	0.3780	0.09759			
Nature of Pidaka	Group-A	1.533	92.34%	0.5164	0.1333	3.228	0.0032	HS
	Group-B	1	71.42%	0.3780	0.09759			
Shula	Group-A	2.2	91.41%	0.6761	0.1746	2.256	0.032	S
	Group-B	1.66	78.1%	0.6172	0.1594			
Frequency of occurrence	Group-A	2.6	92.85%	0.5071	0.1309	0.6325	0.5322	NS
	Group-B	2.467	88.2%	0.6399	0.1652			



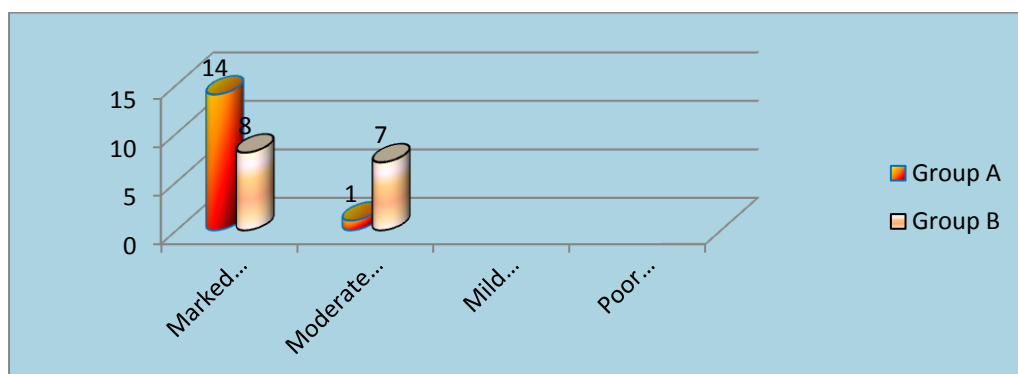
- As table and graph showed, in comparison between the groups,
- Group A is more significant in relieving Pidaka and Nature of pidaka in comparison with Group B.

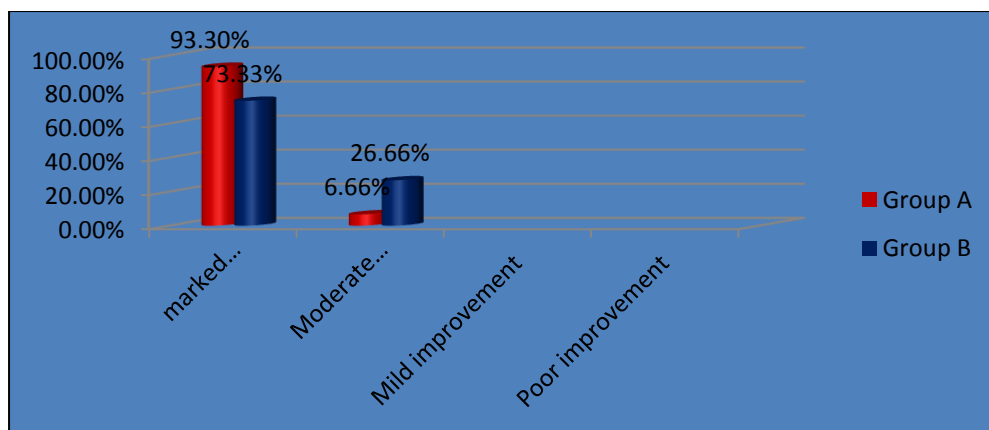
- Group A showed only significant result in shulahara action in comparison with Group B
- There is no significant findings between the groups in other parametes namely- Site of pidaka and frequency of occurrence.

• Overall assessment of the treatment of the two trial groups:

Table Showing the overall assessment of the treatment of the two groups

Response	Group A		Group B	
	No. of patients	%	No.of patients	%
Good response/Marked improvement	14	93.33%	8	73.33%
Moderate/Improved	1	6.66%	7	26.66%
Mild/Unchanged				
Poor/Deteriorated				





In Group A , 93.33% (14) patients showed Marked response and onl 6.6%(1) showed moderate improvement. Whereas in Group B, 73.33% (8) patients showed Marked response and 26.66%(7) showed Moderate improvement.

So by comparing the overall assessment of treatment, we can say that Group A showed Marked improvement than Group B

DISCUSSION ON OBSERVATION:

Age: All the patients presented were within 30 years of age. Active hormonal changes taking place during this age may be the reason for this.

Sex: Out of 30 patients,20%(6) are male and 80% (24) are female. Females suffer from hyperandrogenesis more and therefore are more prone to acne.

Ahara(Rasa,Gunata): Among 30 patients, more of mishrahari with Madhura and Katu rasa pradhanahara and snigdhabhari patients found to be suffering from this Acne.

Koshta and Agni : Among 30 patients, most of were of Madhyama koshta having Madhyamagni.

Prakruti: In case of prakruti, 60% (18) are of vatapitta. Comparatively, madhyamakoshti patients are more in the study which signifies that Kapha-pitta prakriti persons usually suffer from twakrogas.

Vihara and Nidra: 63.33%(19) patients were doing less physical work and 66.6%(20) were with disturbed sleep. Patients who were of sedentary lifestyle and disturbed sleep were suffering more with Acne. (<http://EzineArticles.com/466603;en.jinlongtech.com>)

DISCUSSION ON RESULTS:

Statistically highly significant result found in all the parameters in both the groups i.e., Group A and Group B.

Kolaphalamajja is attributed with madhurakashaya rasa, usna guna and swedajanaka properties. So it is successful in relieving mukhadoooshika by removing ardhrata and producing sweda. This being one of the udardaprashamana gana dravyas help in reducing the pidakas. Kola contain triterpinoid, flavonoids which are mainly anti-inflammatory and antibacterial. Flavonoids also help in regenerative process thus relieving acne. The Kolaphalamajja lepa comprises of navaneeta, guda and kshoudra which are having madhura-kashaya rasa and varnyakara, ropana, lekhana karmas . These medias being lipid nature may be enhanced the permeability of Kola and honey, butter possessing healing quality (Subrahmanyam 1991 Topical application of honey in treatment in burns.) and honey

is antibacterial too (*Ther Med: Eur J Med Res*) thus help in relieving the acne.

Shalmalikantaka is having kashaya rasa, sandhaneeya, vranaropana and shoshakaguna gunas is successful in relieving pidaka. Here ksheera taken as media which is madhura rasa, sheeta gunayukta and varnya, dahaprashamana in action. Due to its properties, Ksheera supported Shalmali in combating acne. Shalmali contains oxalate crystals and tannin which help in the exfoliation of hardened tissue. Lepa which is having more topical action, was found to be efficient way to get rid of Mukhadoooshika.

Group A is more significant in relieving Pidaka, hard consistency of pidaka and combating shula in comparison with Group B. There is no significant differences between the groups in other parametes. In Group A, 93.33% (14) patients showed Marked response ,Whereas in Group B, 73.33% (8) patients showed Marked response . So by comparing the overall assessment of treatment, we can say that Group A showed Marked improvement than Group B.

CONCLUSION:

- Mukhadoooshika is one such disease affecting almost all individuals in their lifetime, which can be roughly correlated with Acne vulgaris by comparing clinical features of Ayurvedic reference with Allopathic science.
- The treatment consists of shodhana, lepa and shamanoushadis. Modern science also gives the treatment comprising of oral and topical antibiotics and retinoids, corticosteroids. But no treatment is so far found to be effective or with minimum side effects.

•The present study is taken to evaluate efficacy of lepa in acne.. So an attempt is made to compare the efficacy of two different lepa viz., Kolaphalamajja (*Zizyphus jujuba Lam*)lepa and Shalmalikantaka (*Bombax ceiba Linn.*) lepa.

•It is found that Kolaphalamajja showed better result than Shalmalikantaka in curing Mukhadoooshika , particularly in the kind of papular, pustular form.

•Shalmalikantaka also showed better result in relieving acne , especially in case of comedone form.

•From this study it is evident that the Kola is found to be more effective than Shalmali. Results showed that the Kolaphalamajja is more beneficial in Mukhadoooshika of popular-pustular form and Shalmalikantaka in comedone form

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