

A COMPARATIVE CLINICAL STUDY ON THE EFFECT OF VIRECHANA ON MUKHA-DOOSHKA USING TWO SHODHANANGA SNEHAS

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ABSTRACT

Mukhadooshika is a *Kshudraroga* affecting almost all individuals in their adolescent age. *Acharyas* clearly mentioned about the disease which is characterised by *Shalamalikandakakara pidaka* (resembles thorns of *Bombax malabarica*) with *ghanavat*, *medogarbhata* and *shoola*.¹ It is correlated to *Acne vulgaris* manifested by comedones, papule, pustule with pain and burning sensation. *Vata*, *Kapha* and *Rakta*² are the *doshas-dooshya* involved in *Mukhadooshika*. *Pitta* is the *ashraya sthana* of *rakta*.³ Accordingly, *Virechana* which is the best line of treatment for *Pittaja vyadhi* is selected in the study in both the groups with *Trivrit lehya*.⁴ *Panchatikta guggulu ghrita*⁵ is used for *snehapana* in Group A and *Tiktashatphalakam ghrita*⁶ is used for *snehapana* in Group B. *Lepa* is also included in the treatment in both the groups with *choorna* of *triphal*, *nimba*, *vacha* and *manjistha*. The ingredients of *lepa* were selected according to their own properties. Hence this study was carried out to compare the effect of *virechana* on *Mukhadooshika* vis-a-vis *acne vulgaris* using two *Shodhananga sneha*.

Objectives: To evaluate efficacy of *Virechana* by using *Panchatikta guggulu ghrita snehapana* in *Mukhadooshika* along with *lepa*. To evaluate the efficacy of *Virechana* by using *Tiktashatphalakam ghrita snehapana* in *Mukhadooshika* along with *lepa*. To study in detail about *Mukhadooshika* and *Acne vulgaris*. To compare the efficacy of *virechana* using two different *ghrita* for *snehapana*.

Study Design: A comparative clinical study. **Intervention:** 15 patients, each diagnosed with *Mukhadooshika* were subjected to *virechana* with *Panchatikta guggulu ghritha snehapana* and *Tiktashadpalakam ghritha snehapana* along with *lepa* in each group.

Result: From the statistical analysis of recorded data, it was evident that in 16.33% of patients there was complete relief, 43.83% got the best improvement and 40% got moderate improvement in symptoms of *Mukhadooshika*.

Keywords: Acne Vulgaris, *Lepa*, *Mukhadooshika*, *Snehapana*, *Virechana*

INTRODUCTION

Mukhadooshika has got major importance as it is a cosmetic problem in society. Agents and factors such as Propionic bacteria, endocrine secretion and stress are associated with the occurrence. Acne is an inflammation of the pilosebaceous units of a certain body area (face, trunk, rarely buttocks) due to obstruction with plugs of sebum and desquamated keratinocytes that occurs most frequently in adolescence.⁷ Most cases are pleomorphic, presenting with a variety of lesions-comedones, papules, pustules, nodules, cyst and as a sequel to active lesions- pitted or hypertrophic scars. In general, estrogen decrease sebaceous gland activity and androgens increases it. While males experience a peak in testosterone at 18yrs, female testosterone peaks at 31yrs. Birth control pills by their estrogenic effect affect acne. Oily seborrhoea and acne often go hand in hand, and there is often a family tendency. Lifestyle guidance has got an important role in its management. Involvement of *sukradhatu* influence the hormonal imbalance in the adolescent period. Here the *sanchaya*, *prakopa* and *prasara* of *doshas* in *shadkriya kala* shows the increased level of hormones. Hormones like androgen and progesterone in excess stimulates sebaceous glands and secrete more sebum. This leads to *Srotos anga* ie. obstruction of hair follicles where the sebaceous glands open. Meanwhile altered keratinization also trigger the obstruction by keratinous plug. This *sroto sanga*-obstruction is the pathology behind the formation of acne. Here *sthanasamsraya* takes place. It is manifested as *Vaktra snigdhatata* (oily face) which is the *poorvaroopaa vastha* and later on *pidika*. *Vaktra snigdhatata* and *pidika* are *sukradhatumala*⁸(ref: Gudhartha Deepika comm.) Acne is of 2 types- non-inflammatory and inflammatory. Closed comedones

and open comedones are non-inflammatory acne. There are chances of bacterial colonization and release of inflammatory mediators on basis of severity of obstruction in the hair follicles. This leads to the formation of inflammatory acne which is manifested as papule, pustule, nodule or cyst and is the *Vyakta avastha* in *shatkriyakala*. Inappropriate treatment in this stage leads to *Bheda Avastha*, scar formation or hyperpigmentation.

MATERIALS AND METHODS: Drugs used for the study are *panchathiktaguggulu ghritha*, *Tiktashatphalakam ghritha*, *Trivrit lehya*, and *lepa of triphala, nimba, vacha* and *manjistha*.

PREPARATION OF PANCHATIKA GUGGULU GHRITA (Ref. B.R 54/233-236)

Ingredients: *Nimba, amrita, vasa, Patola, kantakari, shudha guggulu, Goghritha, Patha, vidanga, jala, pip-pali, Yavakshara, shunti, haridra, Chavya, kushta, Tejo vati, Marica, Chitraka, rohini, vacha, Manjistha, Haritaki, Yavani, devadaru, nagara, Shatapushpa, Kutaja, Ajamoda, Bhallataka, Ativisha* and *Sarjakshara*.

Preparation: 200 gm. each of *Nimba, Amrita, vasa, kantakari* and *Patola* was taken. Coarsely powder them together and boil in water measuring 16 litres. Reduce the liquid to one-fourth of the original quantity. Add to this decoction, 250gm.of *shudha guggulu* and 1 litre of *murchita Goghritha*. After it is cooked 11.5 gm. powder of each of *Patha, vidanga, pippali, Yavakshara, shunti, haridra, Cavya, kushta, Tejo vati, Maricha, Chitraka, rohini, vacha, Manjistha, Haritaki, Vibhitaki, amalaki* and *Yavani* added. Properly stir the preparation.

PREPARATION OF TIKTASHADPALAKAM GHRITA (Ref. C.D 50/95-98)

Ingredients: Nimba, Patola, Daruharidra, Duralabha, Katuka, triphala, parpata, traayamaana, Chandana, kiratatikta, pippali, must haka, indryabala, jala, Goghrita

Preparation: 125 gm. Each of Nimba, Patola, Daruharidra, Duralabha, Katuka, triphala, parpati and traayamaana was taken. Coarsely powder them together and boil in water measuring 16 litres. Reduce the liquid to one-fourth of the original quantity. 1litre of *murchita Goghrita* added to this decoction. After it is cooked 30gm. each powder of *Chandana*, *kiratatikta*, *pippali*, *Mustaka* and *indryabala* is added. Properly stir the preparation.

The above-mentioned quantity of drugs is to prepare 1 litre of each *ghrita*.

PREPARATION OF CHOORNA FOR LEPA: Nimba (leaf), *amalaki*(fruit), *haritiki*(fruit), *Vibhitaki* (fruit), *vacha*(rhizome) and *Manjistha*(moola) were taken in equal quantity and finely powdered.

SOURCE OF DATA

a) Sample source

- Subjects were randomly selected from OPD of JSS Ayurvedic College Hospital, Mysore.
- Camps conducted in and around Mysore and other referrals.

b) Drug source

The raw drug was properly identified and selected from JSS Ayurveda College pharmacy. Preparation of *Panchatiktaguggulu Ghrita*, *Tiktashatphala ghrita*, *Trivrit lehya* and *Triphaladi lepa* was done in *Bheshajagara* of JSS Ayurveda College, Mysore.

METHOD OF COLLECTION OF DATA

Study design: A randomised comparative clinical study. 30 subjects fulfilling the diagnostic criteria and inclusion criteria were randomly selected irrespective of sex, religion, occupation, socioeconomic status and assigned into two equal groups Group A and Group B.

Diagnostic Criteria: The clinical features of *Mukha-dooshika* will be taken as basis for diagnosis

1) *Shalmali Kantaka Sadrusha pidaka* (Similar to the thorns of *Bombax malabaricum*)

2) Presence of *Ghana pidaka*

3) *Medogarbha pidaka*

4) *Ruja yukta pidaka*

5) *Inflammatory pidaka*

Inclusion Criteria: Patients having *lakshanas* of *Mukhadooshika*

1. *Shalmali Kantaka Sadrusha pidaka*

2. Presence of *Ghan Pidaka*

3. *Medogarbha pidaka*

4. *Rujayuktapidaka*

5. Patients of either sex between the age group of 15-40 years.

6. Patients fit for *Snehapana*.

7. Patients fit for *Virechana Karma*

Exclusion Criteria:

1. Patients not fit for *virechana karma* and *snehapana*.

2. Pregnant and lactating women were excluded.

3. Those who suffer from systemic diseases which interfere with the treatment were excluded.

4. Patients suffering from PCOS were excluded.

INVESTIGATION

USG-Pelvis if necessary (in females to exclude PCOS)

INTERVENTION

Group – A: *Snehapana* with *Panchatikta Guggulu ghrita*, *Virechana* with *Trivrit lehya*, *Lepa* with *triphala*, *Nimba*, *Vacha* and *Manjistha choorna* with water.

Purvakarma: *Deepana*, *Pachana* was given with *panchakola churna*⁹ 5gtid (Before food) for 3-5 days (till *nirama lakshana*). *Snehapana* was done with *Panchatikta guggulu ghrita* for a period of 3-7 days by using the *Arohana krama*. Here the *hrasiyasi matra* of 30 ml was given on the first day. Then depending on the time of digestion of the *sneha* the dose of the successive days was calculated and continued *snehapana* till the patient achieved *Samyak snigdha lakshanas*. *Shodhana purva abhyanga* with *Tila taila* and *Bashpa sweda* was done for next 3 days.

Pradhan Akarma:

On the fourth day after *abhyanga* & *Bashpa sweda*, *Virechana yoga* was given with a dosage of approx.

10 - 30g of *Trivrit lehya*. The dose was fixed according to *Agnibala* and *Kostha bala*.

Paschatkarma:

Samsarjana krama was given, depending on the *Shuddhi lakshanas* for 3-7 days. *Peyadi Samsarjana karma* was followed after *virechana*.

Group – B: *Snehapana* with *Tiktashadpalakam ghrita*, *Virechana* with *Trivrit lehya*, *Lepa* with *triphala*, *Nimba*, *Vacha*, *Manjistha choorna*

Purvakarma:

Deepana, *Pachana* was given with *panchakola churna* 5g tid (Before food) for a period of 3-5 days (till *nirama lakshana*). *Snehapana* was done with *Tiktashadpalakam ghrita* for a period of 3 -7 days by using the *Arohana krama*. Here the *hrasiyasi matra* of 30 ml was given on the first day. Then depending on the time of digestion of the *sneha* the dose of the successive days was calculated and continued *snehapana* till the patient achieved *Samyak snigdha lakshanas*. *Shodhana purva abhyanga* with *Tila taila* and *Bashpa sweda* was done for next 3 days.

Pradhan akarma: On the fourth day after *abhyanga* & *Bashpa sweda*, *Virechana yoga* was given with dosage of approx. 10 - 30g of *Trivrit lehya*. The dose was fixed according to *Agnibala* and *Kostha bala*.

Paschatkarma:

Samsarjana krama was given, depending on the *Shuddhi lakshanas* for 3-7 days. *Peyadi Samsarjanakarma* was followed after *virechana*.

ASSESSMENT CRITERIA

The effect of treatment was assessed statistically on the basis of gradation of the following criteria before and after *virechana*.

- 1.Number of pidaka
- 2.Presence of *Ghana pidaka*
- 3.*Salmalikandaka Sadrusha pidaka* (Similar to the thorns of *Bombax malabaricum*)
- 4.*Medogarbhapidaka*
- 5.*Rujayuktapidaka* and
- 6.IGA scale.¹⁰

GRADING OF ASSESSMENT CRITERIA

- 1.No: of Pidakas
- 0-5: Mild
- 6-20: Moderate

21-50: Severe
More than 50 – very severe

2. Size of pidaka

- SP0: Normal
SP1: 0- 0.9 mm
SP2: 1-1.9 mm
SP3: 2-2.9 mm

3. *Ruja*

- R0 –No pain
R1 – mild pain
R2 – moderate pain
R3- severe

4. *Salmalikandakasadrusa pidaka*

SP0: Normal
SP1: mild, some non-inflammatory lesion with no more than a few inflammatory lesions. (Papules, pustules only no nodular lesions)

SP2: moderate, many non-inflammatory lesions and some inflammatory lesions, but not more than one small nodular lesion.

SP3: severe, up to many non-inflammatory and inflammatory lesions but not more than a few nodular lesions.

5. *Medogarbh pidaka*

- MG0: normal
MG1: Mild
MG2: moderate
MG3: Severe

IGA SCALE

- Grade 0- clear skin with non-inflammatory lesions.
- Grade 1- almost clear, rare non-inflammatory lesions with no more than one small inflammatory lesion.

Grade 2- Mild severity, greater than grade 1, some non-inflammatory lesions with no more than a few inflammatory lesions. (Papules, pustules only, no nodular lesions).

- Grade 3- Moderate severity, Greater than grade 2, up to many non-inflammatory lesions, and may have some inflammatory lesions, but no more than one small nodular lesion.

- Grade 4- Severe, greater than grade 3, up to many non-inflammatory and inflammatory lesions but no more than a few nodular lesions.

STATISTICAL ANALYSIS

Data obtained during the clinical study were analyzed using the Wilcoxon signed-rank test and Mann-Whitney U test, the non-parametric analogue of paired and independent t test respectively.

RESULTS

Results are interpreted after statistically analysing the gradings given for the signs and symptoms men-

tioned in assessment criteria before and after treatment in all 30 patients of *Mukhadooshika*. And finally, an overall assessment was also done based upon the results. The effect of treatment is compiled using Wilcoxon signed-rank test and the result for group A and group B are reported in Table 1 and Table 2 respectively.

Table 1: Effect of Panchatiktaka guggulu ghrita snehapana

Sl. No:	Features	Mean BT	Mean AT	% of change	V- value	P value associated with WILCOXON SIGNED RANK TEST	Result
1.	No: of <i>pidaka</i>	17.533	3.733	78.7%	120	0.0007	SIGNIFICANT
2.	Size of <i>pidaka</i>	2.333	0.600	74.37%	120	0.0005	SIGNIFICANT
3.	<i>Medogarbhata</i>	1.933	0.200	89.65%	91	0.0014	SIGNIFICANT
4.	<i>Salmalikandakasadrusa pidaka</i>	1.8	0.267	85.17%	105	0.0008	SIGNIFICANT
5.	<i>Ruja</i>	1.333	0	100%	78	0.0019	SIGNIFICANT
6.	IGA scale	2.4	0.666	72.25%	120	0.0005	SIGNIFICANT

Table 2: Effect of Tiktashadpalakam ghrita snehapana

Sl. No:	Features	Mean BT	Mean AT	% of change	V- value	P value associated with WILCOXON SIGNED RANK TEST	Result
1.	No: of <i>pidaka</i>	20.933	4.0666	80.57%	120	0.0007	SIGNIFICANT
2.	Size of <i>pidaka</i>	1.9333	0.6	68.96%	105	0.0007	SIGNIFICANT
3.	<i>Medogarbhata</i>	1.9332	0.533	72.42%	78	0.002	SIGNIFICANT
4.	<i>Salmalikandaka sadrusa pidaka</i>	1.666	0.400	76.26%	105	0.0007	SIGNIFICANT
5.	<i>Ruja</i>	1.1333	0.066	94.14%	91	0.0007	SIGNIFICANT
6.	IGA scale	2.333	0.466	80.02%	105	0.0009	SIGNIFICANT

In Table 3, we reported the result of the comparative study done using the Man-Whitney test. The overall effect of the treatment is given in Table 4.

Table 3: Result of comparative study between group A and group B

Sl. No:	Features	Difference in Mean for grp. A	Difference in Mean for grp.B	w-value	P value associated with MANN WHITNEY U TEST	Result
1.	No: of pidaka	13.8000	17.7330	82	0.2125	NOT SIGNIFICANT
2.	Size of pidaka	1.733	1.333	144	0.1550	NOT SIGNIFICANT
3.	Medogarbhata	1.5333	1.4000	138	0.2785	NOT SIGNIFICANT
4.	Salmalikandakasadrusa pidaka	1.7330	1.3330	119.5	0.7679	NOT SIGNIFICANT
5.	Ruja	1.3300	1.0666	126	0.5407	NOT SIGNIFICANT
6.	IGA scale	1.7333	1.8666	97.5	0.5232	NOT SIGNIFICANT

Table 4: Overall effect

	Group A		Group B		Total	
	No:	%	No:	%	No:	%
Completely relieved	3	20%	2	13.33%	5	16.33%
Best improvement	6	40%	7	46.67%	13	43.33%
Moderate improvement	6	40%	6	40%	12	40%
Mild improvement	0	0%	0	0%	0	0%
Unchanged	0	0%	0	0%	0	0%

DISCUSSION ON TREATMENT

In Group A, *deepana*, *pachana* was given with *panchakola choorna* because it is the best drug for *deepana*, *pachana*. At a dose of 5gms tid/day (before food) until *nirama lakshanas* appeared.

After which *Snehapana* was carried out with *Panchatikta Guggulu ghrita* for a period of 3-7 days by using Arohana method. The ingredients of *Panchatikta guggulu ghrita* were chiefly having *Kushtaghna* property. It is indicated in *Kushta chikitsa adhyaya* of *Bhaishajya Ratnavali*. The drugs were mainly *tikta*

rasa pradhana. The *laghu, rooksha guna* is helpful for drying the excess amount of *kleda* present in the body. Most of the drugs were having *vata kaphahara* or *tridoshahara* properties which are mentioned for *Kushta chikitsa*. So, the effect of the drug itself may also help control the disease. Here the *hrasiyasi matra* of 30ml was given on the first day. Then depending on the time of digestion of *sneha* the dose of the second day was calculated, the daily dose was fixed according to the time of digestion, till the patient achieved *Samyak snigdha lakshanas*. *Ghrita* with the inherent properties of ingredients helps in the reduction of the size of *pidaka, ruja* and *Medogarbh* during *snehapana*. For *Shodhana, Sarvanga abhyanga* with *tila taila* and *Bashpa sweda* was given for 3 days which cause the increase in the lymphatic drainage. On the fourth day of *Sarvanga abhyanga* and *Bashpa sweda, Virechana yoga* was given with 10-30 gm of *Trivrit lehya*. *Mukhadooshika* is a *pitta dosha pradhana vyadhi*. Even though *virechana* is indicated in *Pittaja vikara, Bhela Samhita* (Su.5/6) and *Kashyapa Samhita* (Si.7) mentioned about its administration in *sannipata dosha Avastha*. Considering the involvement of *Vata, Kapha* and *Rakta* in *Mukha-dooshika Virechana* can be considered as the prime line of treatment. *Kashaya* and *madhura rasa dravya* is indicated for *virechana* in *paitika vikara*. *Trivrit* is one such drug having *kashaya* and *madhura rasa*. *Charaka samhita* (Ka.7) opines *Trivrit moola* as *sreshta dravya* for *virechana*. Thus, by reducing the *pitta, virechana* reduces the *lakshanas* of *Mukha-dooshika*.

Trivrit lehya is administered as *virechana yoga* along with *Ushnajala* as *Anupana*. The dose was decided and administered after examining the *Koshta* of the individual. *Trivrit lehya* is considered *sukha virechak*. *Trivrit* is said to be *sarvarogahara*. During the process of *sodhana* the body fluids are influenced for therapeutic purposes, here body fluids are removed either through the upper or lower route. The gastrointestinal tract is lined by a mucous membrane which has a dual of absorption and secretion. The absorption nature is explored for *Shamana chikitsa* and the secretory nature is explored in *Shodhana chikitsa*.

During the process of *Virechana*, cellular fluid is drained into the Gastrointestinal tract for elimination. After which *samsarjana krama* was given, depending on for 3-7 days depending on *suddhi*.

Lepa prepared out of *choorna* of *triphala, Nimba, vacha* and *manjishta* were advised from the first day of treatment in both the groups. The mode of action of drugs used in *lepa* under trial can be understood on the basis of the inherent properties of drugs. *Tikta* and *kashaya rasa pradhana* drugs used in this *lepa* help to encounter *pitta, kapha* and *rakta*. *Nimba* is *tikta* and *kashaya rasa pradhana*, *Manjistha* is *tikta* and *madhura rasa pradhana*, *vacha* is *tikta* and *katu rasa pradhana*, *Vibhitaki* is *kashaya rasa pradhana*, *amalaki* and *haritiki* is having all *rasas*, except *lavana*. *Tikta rasa* is *Kustahara, pittakaphahara* and *kleda medo vishodhana*. *Kashaya rasa* is also *pittakaphahara*. It is *raktasodhana, ropana, kledamedovishodhana* and *twak Prasadana*. Thus *tikta-kashaya dravyas* used in this trial helps to reduce *twak snigdhatva* (seborrhoea). It acts as an anti-inflammatory. *Kashaya rasa* purifies the vitiated blood and increases the lustre of skin.

Nimba, vacha and *Vibhitaki* are *laghu* and *rooksha guna pradhana dravya*. *Manjistha* is having *guru* and *rooksha guna, vacha* is *laghu* and *teekshna* and *amalaki* is *rooksha* and *sara guna pradhana*. *Rooksha* and *laghu* helps to mitigate *kapha dosha*. *Nimba* and *amalaki* are having *seeta veerya* and other drugs used in a trial for *lepa* are *ushna veerya*. Thus, it acts as *tridoshahara*. *Doshagnata* of the drugs used in this *lepa* also shows the *tridoshahara* property of this combination of drugs. *Nimba, Manjistha* and *vibhitaki* are *kapha pitta hara*. *Amalaki* and *Haritiki* are *tridoshahara*. *Vacha* is *Kapha vatahara*. *Kandughna, Kushtaghna, krimighna* and *vranapaachana-sodhana* of *Nimba* shows their anti-inflammatory and antibacterial action. *Varnya, Pittasamsodhaka* and *vishaghna* property of *Manjistha* shows its antibacterial, blood purifier and anti-hyperpigmentation activity. *Vacha* is having *lekhana* property. Its rhizome is said to be having antifungal activity. *Triphala* which is *ropana* is said to be having anti-inflammatory, antibacterial and antifungal action also.

Hence it can be concluded that this lepa can act as *Tridoshaghna*. These drugs as a whole can act as an anti-inflammatory, anti-fungal, anti-bacterial and blood purifier. Thus, increases the lustre of skin also. In Group B, the same procedure was followed except the *snehapana* with *Tiktashadpalakam ghrita*. *Thika shadpalakam ghrita* is mentioned in *kushta adhyaya* of *Chakradatta*. The indications of *Tiktashadpalakam ghrita* are *kushta*, *pidaka*, *kandu*, *swayadhu* etc. *Tikta rasa pradhana*, *laghu-rooksha guna*, *Vatakaphahara*, *tridoshahara*, *kandughna*, *krimighna*, *dahaprasamana*, *kushtaghna*, *sophahara*, *leghaneeya* properties of the drugs helps control the disease.

Since the trial was parallel and comparative, patients in both the groups were treated during the same time and after the completion of the treatment, the results were statistically analysed, and the results were compared. To calculate the test for significance before and after treatment, in the present clinical study "Wilcoxon Signed Rank Test" was used. While to calculate the test for significance between the groups "Mann Whitney U Test" was selected. Statistical analysis was done using "R -software".

CONCLUSION

Shodhananga snehapana and *virechana* with *lepa* can be safely carried out in patients having *Mukha-dooshika*. In Group A (*Snehapana* with *Panchatik-taka Guggulu ghrita*) there was a significant reduction in all 6 parameters. Group B (*Snehapana* with *Tiktashadpalakam ghrita*) also see a significant reduction in all the 6 parameters we considered. Even though the results are significant between group A and group B the difference between these two groups are not significant. That means our study shows *Virechana* with *lepa* is effective in *Mukhadooshika* irrespective of the *ghrita* used for *snehapana*. Reduction in size of *pidaka*, *Medogarbha* and *ruja* were evident during *snehapana* itself.

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