



Research Article

www.ijrap.net (ISSN:2229-3566)



EFFICACY OF SHODHANA AND SHAMANA THERAPY IN MUKHADUSHIKA (ACNE VULGARIS)

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Received on: 16/12/19 Accepted on: 18/01/20

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DOI: 10.7897/2277-4343.110225

ABSTRACT

Acne vulgaris is a chronic disease that occurs in young adults when hair follicles are clogged with dead skin cells and oil from the skin. It is characterized by both inflammatory (papules, pustules and nodules) and non-inflammatory (Comedones, open and closed) lesions. In Ayurvedic classics, in the context of Kshudra Roga, it is mentioned that Mukhadushika occurs in yuvaavastha and its signs and symptoms are similar to that of Acne vulgaris. It is due to vitiation of Vata, Kapha and Rakta having the Shalmali thorn like thick or hard painful eruptions which are impregnated with Meda. The aim is to evaluate the combined efficacy of shodhana and shaman therapy in Mukhadushika (Acne Vulgaris). It is an open randomized clinical trial. A total of 32 patients randomly divided in two groups; Group A - Shodhana (Vamana and Virechana Chikitsa); Group B- Shodhana along with Shamana (Lodhradi lepa and Brihat Manjisthadi kashaya). 'Wilcoxon matched pairs signed rank test' applied for efficacy within the group and 'Mann-Whitney Test' to compare the efficacy of two groups. In Group A, maximum number of patients i.e. 73% showed significant relief, 20% have moderate improvement, 6.7% of patients showed excellent relief; whereas in Group B, 60% of patients showed excellent relief and significant relief was observed in 40% of the patients. Shodhana therapy and Shaman therapy given together have significant effect in the management of Acne Vulgaris as compared to Shodhana therapy alone.

Keywords: Shodhana, Shamana, Mukhadushika, Acne vulgaris

INTRODUCTION

Acne vulgaris is a disorder of hair bearing skin mainly on face in which hair follicles develop obstructing horny plugs (comedones) as a result of which inflammation later develops around the obstructed follicles, causing tissue destruction and scar formation.¹ Acne is estimated to affect 9.4% of the world's population with the highest prevalence in adolescents.² According to the Global Burden of Disease (GBD) study, acne vulgaris affects ~85% of young adults aged 12-25 years representing eight most common medical disorders worldwide.³ Any hair-bearing skin can develop acne, but certain areas are much more prone than others. These acne-prone areas tend to have hair follicles with small terminal hairs and larger sebaceous glands (sebaceous follicles). The face and particularly the skin of the cheeks, lower jaw, chin, nose and forehead are usually affected. The scalp is not involved, but the back of the neck, front of the chest, the back and shoulders are all 'favoured areas' for the development of lesions.⁴ In Ayurveda, it is described under the Mukhadushika which is a type of Kshudra Roga. It is due to vitiation of Kapha, Vata and Rakta having Shalmali thorn like eruptions on face.⁵

Aim

To evaluate the combined efficacy of shodhana and shaman therapy in Mukhadushika (Acne Vulgaris)

Objectives

To compare the efficacy of shodhana therapy alone and in combination with shaman therapy in treating Mukhadushika (Acne Vulgaris)

MATERIALS AND METHODS

Total 32 patients of Mukhadushika in between the age group of 16-35 years were randomly selected irrespective of their sex, religion, occupation etc., from the OPD and IPD section of Panchakarma, CBPACS, Khera Dabar and New Delhi, India. Study was approved by Institutional Ethical Committee, with letter no. F1 (553)/13/CBPACS/Adm./IEC/1259, dated 5/01/17. The clinical trial is registered under CTRI (CTRI/2018/02/012065).

Inclusion criteria

- Patient of age group 16-35 years.
- Patients of either sex.
- Patient having symptoms of Acne Vulgaris (Mukhadushika) like multiple papular eruptions on face associated with pain, inflammation, discharge, and discoloration.
- Patient having associated symptoms like itching, blackheads, roughness, smoothness.
- Patient willing to participate.

Exclusion criteria

- Patients of age less than 16 year and more than 35 years.
- Patients having any systemic pathology.
- Patients having any other skin problem like scabies, eczema, and fungal infection was excluded.
- Immunodeficiency state.
- History of hypersensitivity.
- Patient not willing to participate.
- Pregnancy and lactating women.

Grouping of patients

Group A - The Patients of this group was subjected to Vamana karma and Virechana Karma as per classical method.

Group B - The Patients of this group was subjected to Vamana karma and Virechana karma as per classical method followed by shamana chikitsa (Brihat Manjisthadi Kashaya twice a day before meal and Lodhradi Lepa for local application for one month).

Criteria for assessment

The patients presenting with Acne Vulgaris were subjected to detailed clinical history and physical examination. The following criteria were taken into consideration for the final diagnosis.

Table 1: Ayurvedic Assessment Criteria

Kandu (Itching)	Vedana (Pain)	Vivarnta (Discoloration)	Shotha (Inflammation)
Continuous itching-2	Pain without touch-2	Reddish yellow-4	10 mm-3
Occasional itching-1	Pain on touch-1	Reddish pink-4	5 mm-2
No itching-0	No pain-0	Reddish brown-4	2 mm-1
		Red-3	No swell-0
		Black-2	
		Black grey-1	
		Normal-0	

Table 2: Global Acne Grading System (GAGS)

Location factor	Score	Type of lesion	Score
Forehead	2	No lesion	0
Right cheek	2	Comedo	1
Left cheek	2	Papules	2
Nose	1	Pustules	3
Chin	1	Nodules	4 ⁶
Chest and upper back	3		

The score for each area (Local score) was calculated using the formula:

Local score = Factor × Grade (0-4)

The global score is the sum of local scores, and acne severity was graded using the global score.

Mild -1-18

Moderate 19-30

Severe-31-38

Very severe >39

Table 3: Assessment of overall effect

Excellent Improvement	75-100% relief in signs and symptoms.
Significant Improvement	50-75% relief in signs and symptoms.
Moderate Improvement	26-50% relief in signs and symptoms.
Mild Improvement	1-25% relief in signs and symptoms.
No Change:	0% relief in signs and symptoms.

Follow up: After 1 month.

Observations

In this study, 32 patients of Mukhadushika were registered, out of which, 30 patients completed the full duration of treatment, while 2 patients left the treatment at different stages. So, observations were made on 30 patients and the assessment and results were drawn on 30 patients. Among 30 patients, the prevalence of

disease was more common in age group between 21-25 years i.e. 70%. Maximum numbers of patients registered were female i.e. 56.7%. Majority of patients were of middle-income group i.e. 60% of patients. 21 (70%) were non-vegetarians. Out of 30 patients of Mukhadushika, 18 (60%) had vata-pitta prakriti. Maximum numbers of patients had vishamagni (46.7%). Maximum patients, 22 (73.3%) patients were of krura koshta. The disease in most of the cases was chronic in nature as 70% were having duration of illness ranging in 4-6 years.

Table 4: General Observations

Observations (maximum)	Group A	Group B	Total	Percentage
Age (21-25 years)	12	9	21	70%
Sex (F)	8	9	17	56.7%
Socioeconomic status (Middle)	7	11	18	60.0%
Diet (Non Veg)	11	10	21	70.0
Sharirika Prakriti (VP)	11	7	18	60%
Koshtha (Krura)	10	12	22	73.3%
Chronicity Sub Acute (4-6 years)	11	10	21	70%

RESULTS

In patients of Group A, highly significant results were seen in Kandu (78.9%), Vedana (86.4%), Vivarnta (53.7%), Shotha (54.3%), GAGS (62.3%). In patients of Group B, highly significant results were seen in Kandu (91.3%), Vedana (95.5%), Vivarnta (73.6%), Shotha (71.0%), GAGS (84.0%).

Table 5: Intra group analysis of therapy on Kandu

Kandu	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	FU				
Group A	1	0	0	-3.217 ^a	0.001	78.9	V.S
Group B	2	0	0	-3.391 ^a	0.001	91.3	V.S

Table 6: Intra group analysis of therapy on Vedana

Vedana	Median			Wilcoxon Signed Rank W	P-Value	%Effect	Result
	BT	AT	FU				
Group A	1	0	0	-3.578 ^a	0.000	86.4	V.S
Group B	1	0	0	-3.520 ^a	0.000	95.5	V.S

Table 7: Intra group analysis of therapy on Vivarnta

Vivarnta	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	FU				
Group A	4	2	0	-3.477 ^a	0.001	53.7	V.S
Group B	4	1	0	-3.439 ^a	0.001	73.6	V.S

Table 8: Intra group analysis of therapy on Shotha

Shotha	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	FU				
Group A	2	1	0	-3.578 ^a	0.000	54.3	V.S
Group B	2	1	0	-3.372 ^a	0.001	71.0	V.S

Table 9: Intra group analysis of therapy on GAGS

GAGS score	Median			Wilcoxon Signed Rank W	P-Value	% Effect	Result
	BT	AT	FU				
Group A	24	8	5	-3.414 ^a	0.001	62.3	V.S
Group B	21	4	1	-3.418 ^a	0.001	84.0	V.S

Table 10: Inter group comparison of Group A and Group B (Mann Whitney W test)

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	P-Value	Result
Kandu	Group A	15	13.10	196.50	76.500	0.005	S
	Group B	15	17.90	268.50			
	Total	30					
Vedana	Group A	15	14.50	217.50	97.500	0.004	S
	Group B	15	16.50	247.50			
	Total	30					
Vivarnta	Group A	15	12.57	188.50	68.500	0.005	S
	Group B	15	18.43	276.50			
	Total	30					
Shotha	Group A	15	14.23	213.50	93.500	0.004	S
	Group B	15	16.77	251.50			
	Total	30					
GAGS score	Group A	15	14.30	214.50	94.500	0.005	S
	Group B	15	16.70	250.50			
	Total	30					

For comparison between Group A and Group B, we have used Mann Whitney U Test. From the Table 9, we can observe that P-Values for all parameters are less than 0.05. Hence we conclude that there was significant difference in Group A and Group B.

Further we can observe that mean rank for Group B is greater than Group A. Hence we conclude that effect observed in Group B was more than Group A.

Table 11: Overall effect of therapy in both groups

Overall effect of therapy	Group A		Group B	
	Frequency	Percentage	Frequency	Percentage
Excellent Improvement (75-100%)	1	6.7	9	60.0
Significant Improvement (50-75%)	11	73.3	6	40.0
Moderate Improvement (26-50%)	3	20.0	0.0	0.0
Mild Improvement (1-25%)	0	0.0	0	0.0
No Change (0%)	0	0.0	0	0.0
Total	15	100	15	100

In overall effect in Group A, maximum number of patients i.e. 73% showed significant relief, 20% have moderate improvement, 6.7% of patients showed excellent relief; whereas in Group B, 60% of patients showed excellent relief and significant relief was observed in 40% of the patients.

DISCUSSION

In this study, maximum (70%) patients were in age group of 21-25 years. Mukhadushika (Acne Vulgaris) is a disease of younger age group. This can be because of the fact that this is the age group when an individual's body is undergoing hormonal changes and unhealthy dietary habits.⁷ There were more female patients, 17 (56.7%) as compared to male patients. However, since the number of cases is too small to draw any inference as regard to the distribution of patients according to disease in particular sex. Majority of patients i.e. 60% were of middle class. It suggests the indulgence of middle and lower class in incompatible dietary habits. In our study, 70% were non-vegetarian, this shows that the occurrence of the disease is more frequent in non-vegetarians as Ayurvedic texts have already explained that Viruddha Aahara and dietetic irregularities are one of the chief causative factors of Mukhadushika. Therefore, Pathyapathya is a very significant causation and management of the disease.⁸ Out of 30 patients of Mukhadushika, 60% had Vata-Pitta prakriti. According to study, patients were observed in all the three types of Dwandaja Prakriti that shows that this disease affects all type of Prakriti. As we know that disease is due to predominance of Vata and Kapha⁹ so it is very important factor responsible for Sadhya type of disease because the Prakriti of the disease and Prakriti of the person are different. The only important thing is that the clinical presentation of Mukhadushika (Yuvana-Pidika) reflects the dominance of that particular Dasha of the particular Prakriti. Maximum patients, 73.3% patients were of Krura Koshtha. The highest number of patients of Krura Koshtha i.e. suffering from constipation indicates the predominance of Vata Dasha¹⁰ particularly during the acute phase of the disease. The maximum number of patient's i.e. 21 (70%) had chronicity of the disease. This suggests that the disease Mukhadushika is a chronic pathology.

Probable Mode of action of Vaman Karma

Vamaka Dravyas have ushna, tikshna, vyayavi, vikasi, sukshma and urdhvabhagaharana properties. Due to Ushna Guna, it induces Pachana, Dahana, Swedana and spreading of the drug at cellular level. Lavana enhances Vishyandana in the body that is why Vamaka Dravyas are administered with Lavana. Tikshna Guna of Vamaka Dravya is responsible for its quick action. With the help of Sukshma Guna, the Vaman Dravya enters at the level of micro circulatory channels (Srotasas) and leads to Pachana and Vishyandana of Doshas and ultimately directs Doshas towards Koshtha, from where they can be eliminated easily with the help

of Shodhana. Due to Vishyandi and Vikasi Gunas, the Vamaka Dravya reaches at the cellular level (all Dhatus) without being digested and produces Sandhi Shaithilya i.e. Doshas imbibed in Dhatus are attacked by the Vamaka Dravya and migrated to Koshtha for elimination. Vamaka Dravyas produce Vaman due to its "Urdhwhabhagahara Prabhava"¹². As per the mode of action of Vamana Karma, as described above, it clears the channels (Srotas) from the Sanga, created by vitiated Kapha, Meda and Ama. Maximum Doshas are pacified because of Shodhana i.e. extraction, by this process. The remaining Doshas are controlled by Shaman therapy which causes Pitta Shaman, Rakta Prasadana, Vrana ropana, Kapha-Vata hara etc. Since, it is much easier to pacify the small quantity of Doshas with Shaman therapy which remains after Shodhana, in spite of starting medication in the excessive vitiation of Doshas.¹¹

Probable mode of action of Virechan

Virechana Karma expels out the Doshas dragging them towards the Adhobhaga through the Guda. Amashaya is the specific seat of Pitta and Kapha. Though Virechan is a specific therapy for Pitta Dasha, but it also evacuates Kapha Dasha. Virechana dravya which are having Ushna, Tikshna, Sukshma, Vyayavi and Vikasi property reaches the Hridaya by virtue of its Virya then following the Dhamani it spreads to the whole body through large and small Srotas.

Virechaka dravya by virtue of their properties and Prithvi and Jala Mahabhuta dominancy and Prabhava of Adhobhagahara helps to eliminate the Dasha from Adhobhaga. Virechaka drug should be administered after Sleshma Kaala (morning hours) has been passed to avoid vomiting.¹⁴ For Virechana Karma, Abhayadi Modaka was selected. Most of the drugs in Abhayadi Modaka are Kapha Vatahara by virtue of its Ushna Veerya and Katu Vipaka. Hence it ceases the pathogenesis of Mukhadushika.¹³

Probable mode of action of BrihatManjisthadi Kashaya

The ingredients of Brihat Manjisthadi Kashaya are Manjistha, Musta, Kutaja, Guduchi, Kustha, Nagara, Bharangi, Vacha, Nimba, Haridra, Daruharidra, Triphala, Patola, Katuka, Khadira, Chandana, Trivrit, Bakuchi, Karanja, Ativisha, Murva, Vidanga, Chitraka, Shatavari, Trayamana, Indervaruni, Sariva, Inderyava, Vasa, Mahadaru, Patha. Most of the drugs are Tridoshaghna or Kapha Pittahara property by virtue of Tikta, Katu, Kashaya Rasa; Laghu, Ruksha Guna and Ushna Veerya; Katu Vipaka. Manjistha is Varnya and Rakta Prasadana, Nimba is Kandughna, Haridra is Kusthaghna, Vacha is Sroto Shodhan. All these drugs perform the therapeutic pharmacological action on the basis of innate qualities i.e. Rasa, Guna, Veerya, Vipaka and Prabhava altogether and follow the Samprapti Vighatana Chikitsa Siddhanta.¹⁵

Probable mode of action of Lodhradi Lepa

Lodhradi Lepa was selected for external application. It has been described in Sharangadhara Samhita¹⁶. It contains 3 drugs namely Lodhra, Vacha and Dhanyaka. As it has been said earlier, that this disease occurs mainly due to vitiation of Kapha, Vata and Rakta Doshas, it is understood that the drugs should possess the Kapha Vata hara and Pitta (Rakta) Shamaka effect. Here almost all drugs, except Lodhra which is Shita Virya, have Ushna Virya property to counteract the aggravation of Vata and Kapha. The Shita Viryatva of Lodhra subsides the aggravation of Rakta and Pitta. Moreover, Dhanyaka is Tridosha Shamaka, Shotha hara and Shula hara properties. Vacha have Kapha Vata Shamaka, Lekhana and Swedajanana properties along with Vedana Sthapaka and Shotha hara. Lodhra has Kapha Pittahara, Shotha hara, Kushthaghna, Ropana, Rakta Stambhaka and Srava Stambhaka properties. Sroto Shodhana is done by Vacha by its Lekhana property, while drying up vitiated Kapha, whereas, Vrana Ropana and Vrana Prakshalana property of Lodhra aids in the further accumulation of Srava in the acne. Thus, all these combinations of drugs cease the pathogenesis of Mukhadushika (Acne Vulgaris).

CONCLUSION

Mukhadushika is a disease of adolescent age group and primarily involves the face. The patients suffering from this disease has higher stress levels because of cosmetic disfigurement. It is a chronic pathology and has a nature of gradual onset. It is observed that symptomatology of Mukhadushika resembles to that of acne vulgaris. Both Groups showed significant relief in Mukhadushika but Group B (Shodhana and Shaman Chikitsa) is significantly more effective in reduction of all the cardinal signs and symptoms viz- Kandu, Vedana, Vivarnta and Shotha and GAGS Score. No major adverse or side effects were encountered during the course of the study. Therefore, Shodhana therapy and Shaman therapy given together have significant effect in the management of Acne Vulgaris as compared to Shodhana therapy alone.

Further scope of study

The effectiveness of Lodhradi Lepa and Shodhana therapy in Mukhadushika (Acne Vulgaris) of adolescent age suggests that the study should be conducted on multicentre with larger sample size to reproduce the results.

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Cite this article as:

Ekta Sharma et al. Efficacy of Shodhana and Shamana therapy in Mukhadushika (Acne Vulgaris). Int. J. Res. Ayurveda Pharm. 2020;11(2):27-31 <http://dx.doi.org/10.7897/2277-4343.110225>

Source of support: Nil, Conflict of interest: None Declared

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