

## Clinical Research

# Effect of *Shalmalyadilepa* and *Guduchyadivati* in the management of *Yauvanapidika* (Acne)

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## Abstract

Acne is a common skin problem that affects almost 85% of teenagers, mostly occurs on face and some time on chest and upper back too. This condition resembles with *Yauvanapidika* described in Ayurveda under the caption of *Kshudraroga*. In this study, 50 patients with symptoms of *Yauvanapidika* were treated in two groups. In Group A, patients were given local application of *Shalmalyadilepa* twice a day with milk, while in Group B patients were given 2 gm of *Guduchyadivati* thrice along with local application of *Shalmalyadilepa*. At the end of treatment, Group B showed better improvement in comparison to Group A.

**Key words:** Acne, *Guduchyadivati*, *Shalmalyadilepa*, *Yauvanapidika*

## Introduction

Face is considered as an important part of the body as far as beauty and look is concerned. Hence, everyone in general and youngsters in particular are very cautious about beauty of their face. *Yauvanapidika* (acne) is such a condition that disfigures the face during adolescent to younger age. If the condition remains untreated, it leaves permanent scars over the face.

The disease *Yauvanapidika* occurs due to vitiation of *Kapha*, *Vata*, and *Rakta*.<sup>[1]</sup> *Swabhava* (natural status) has also been considered as one of the causative factors.<sup>[2]</sup> Though the *Tarunyaavastha* (adolescent period) is the age for *Shukra pradurbhava* (manifestation of *Shukra Dhatu*) and *Sharangadhara* has mentioned *Vakre Snigdghata* (unctuousness on face) and *Pidika* (boil) formation on face as *Mala* (waste product) of *Shukra Dhatu*.<sup>[3]</sup> So, development of the acne in this age is obvious. Charaka has described second half of *Balyaavastha* as *Vivardhamanaavastha* (growing period) for all *Dhatus* and *Anavasthita Chittatva* (unstable mind).<sup>[4]</sup> This indicates a specific phase of life cycle, where *Dhatu* maturation is going on and for the same, secretion of various growth hormones definitely took place. Imbalanced hormonal levels play a key role in development of various diseases.

According to modern medical science, acne is a chronic inflammatory condition of the pilo sebaceous units, characterized by the formation of comedones, erythematic papules and pustules, less frequently nodules or cysts too.<sup>[5]</sup> It occurs due to colonization of microbial flora (*p. acne*) and imbalance status of androgen like hormones. Excessive sweating, constipation, and stress are also considered as the aggravating factors.

To treat, modern medical science suggests hormonal therapy, antibiotics, and some surgical or para-surgical measures. As these measures have certain limitations, alternatives are being searched for significant relief. Herbal formulations that purify blood, check the status of *Kapha* and *Pitta* can be used safely in the condition for longer duration.

Taking into consideration of the above facts, present study was planned to evaluate the effect of *Shalmalyadilepa* and *Guduchyadivati* in *Yauvanapidika* as *Shamana* therapy.

## Materials and Methods

### Selection of patients

Total 50 patients with symptoms of *Yauvanapidika*, fulfilling the inclusion criteria were selected from O.P.D. of IPGT and RA Hospital, Jamnagar, and grouped into two groups. Ethical clearance was obtained from Institutional Ethics Committee (IEC) prior to starting the study.

### Inclusion and exclusion criteria

Patients of 15 to 30 years of age with signs and symptoms of *Yauvanapidika* were included in the study. *Yauvanapidika* due to other systemic diseases like *Prameha*, *Masurika* etc., were excluded.

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## Diagnostic criteria

Patients having cardinal symptoms of the disease like *Pidika* on face, and/or chest-upper back including *Medogarbhata*, *Ruja*, *Daha*, *Paka*, *Srava*, etc.

## Investigations

Routine hematological and urine routine and microscopic investigations were carried out before starting the treatment to exclude other systemic pathologies, if any.

## Drugs and Posology

Poly-herbal formulations, *Shalmalyadilepa* for external application and *Guduchyadivati* for oral administration were selected in the present study.

The Lepa was prepared from the herbs as mentioned in Chakradatta *Kshudrarogadhikara* and said to be useful in *Yauvanapidika*. The formulation composition includes *Shalmali* (*Salmaia malabarica* DC.) thorn, *Vata* (*Ficus bengalensis* Linn.) buds, *Jaatiphala* (*Myristica fragrans* Houtt.) fruits, *Lodhra* (*Symplocos racemosa* Roxb.) bark, *Masoor* (*Lens culinaris* Medic) seed, and *Raktachandana* (*Pterocarpus santalinus* Linn.) stem.

As vitiation of *Pitta*, *Kapha* and *Rakta* is considered in the development of acne, a formulation that can purify blood and check *aggravated Kapha and Pitta will be beneficial*. Taking in to consideration, *Guduchyadivati* containing powders of *Guduchi* (*Tinospora cordifolia* Willd.) stem, *Manjistha* (*Rubia cordifolia* Linn.) root, and *Krishnasariva* (*Hemidesmus indicus*) root in equal proportion was chosen for the present study.

Group A patients were advised to apply *Shalmalyadilepa* twice a day with milk over affected area of the face. It was advised to remove the *lepa* immediately after getting dried.

Group B patients were administered four tablets (500 mg each) of *Guduchyadivati* thrice a day with water along with local application of *Shalmalyadilepa*. Duration of the study was one month in both the groups. Follow-up was done for one month.

## Pathya apathya

All the patients of the study were explained *Pathya* and *Apathya* (do's and don'ts) of the disease and advised to follow it.

## Criteria for assessment

The result was assessed on the basis of specially prepared proforma and scoring pattern designed for each symptom.

## Scoring pattern

- Number of *Pidika*
  - No. *Pidika* : 0
  - No. of *Pidika* <5 : 1
  - No. of *Pidika* >5 but ≤10 : 2
  - No. of *Pidika* >10 but ≤20 : 3
  - No. of *Pidika* >20 : 4
- Area occupied by *Pidika* (nose/forehead/chick/chin/upper chest/upper back)
  - No Acne : 0
  - Any 1 part of the face is affected : 1
  - Any 2 part of the face are affected : 2

- Any 3 part of the face are affected : 3
  - Whole face with and without upper chest and/or back involvement : 4
- Kandu* (itching)
    - No itching : 0
    - Mild itching : 1
    - Frequent itch but no need of scratches : 2
    - Continuous itch likes to scratch more and more : 3
    - Severe itch leading to scratch and pus/blood discharge : 4
  - Daha* (burning)
    - No *Daha* : 0
    - Daha* only after itching : 1
    - Daha* while having sun exposure : 2
    - Feeling heat and burning even in shadow and relives after local *Lepa* application : 3
    - Continuous burning, doesn't relieve with application of *Lepa* : 4
  - Shotha* (inflammation)
    - No *Utsedha* : 0
    - Utsedha* with *Vedana* (pain) or *Gaurava* (heaviness) : 1
    - Symptoms of grade 1 along with *Raga* (redness) : 2
    - Symptoms of grade 2 symptoms along with *Aushnya* (heat) : 3
  - Srava* (discharge)
    - No *Srava* : 0
    - Srava* occasionally and small quantity : 1
    - Srava* produce after itching : 2
    - Srava* producing without itching : 3
    - Excessive *Srava* which requires mobbing or face washing : 4
  - Paka* (suppuration)
    - No *Paka* : 0
    - Paka* in 25% of the *Pidika* : 1
    - Paka* in 50% of the *Pidika* : 2
    - Paka* in 75% of the *Pidika* : 3
    - Paka* in all the *Pidika* : 4
  - Vedana* (pain)
    - No pain : 0
    - Mild pain on deep palpation : 1
    - Pain during superficial palpation : 2
    - Pain without touch : 3
    - Continuous feeling heaviness and unbearable pain : 4
  - Vranavastu* (Scar)
    - No scar : 0
    - Invisible scar that disappear with treatment : 1
    - Scar visible from near can't be felt with touch : 2
    - Scar visible from distance feel with touch : 3
    - Deep marked scar : 4
  - Medogarbhata* (Filling of sticky material inside)
    - No material filled inside any *Pidika* : 0
    - Filling of sticky material in <25% of *Pidika* : 1

- Filling of sticky material in 25-50% of *Pidika* : 2
- Filling of sticky material in 50-75% of *Pidika* : 3
- Filling of sticky material in >75% of *Pidika* : 4

### Overall effect of therapy

Total effect of therapy was assessed considering overall improvement in signs and symptoms based on below criteria.

- Complete remission : 100% relief
- Marked improvement : Relief between 75% and 99%
- Moderate improvement : Relief between 50% and 74%
- Mild improvement : Relief between 25% and 49%
- Unchanged : <25% relief.

### Statistical analysis

Statistical analysis was carried out by Students “*t*” test and comparison of both the groups was carried out by paired “*t*” test. The result was interpreted at  $P < 0.05$ ,  $P < 0.01$ , and  $P < 0.001$  as level of significance.

### Patients’ status

Total 50 patients were registered into two groups (25 in each group), out of those three patients from each group discontinued the treatment due to their personnel reasons and rest 44 (22 in each group) completed the treatment.

### Observations

Maximum (78%) of patients were from age group between 15 to 20 years. Observations reveal dominance of male gender (56%) of hindu religion (92%) from urban locality (84%) and from middle financial status (84%). Maximum (68%) patients had *Pitta Kapha Prakriti* and 90% of patients found *Rajasa Prakriti*. Majority (60%) of the enrolled patients were of *Avara Satva*. *Madhyama Sara* and *Samhanana* was observed in 58% and 76% of patients respectively. About 66% of the patients had a habit of *Ratrijagarana* (awakening in nights) while *Diwaswapa* (day sleep) was observed in 42% of patients. *Mandagni* (impaired digestive power) was observed in 64% of patients, while 76% of patients had a habit of *Virudhhashana* followed by *Adhyashana* in 60% of patients. *Amla* and *Madhura Rasa* dominant diet was preferred by 94% and 86% of patients respectively. *Guru* and *Snigdha* predominant diet (like *Dadhi*, *Pishtanna*, etc.) was preferred by more than 70% of the patients. Total 88% of patients had history of alternate

exposure to cold and heat during their working. All registered patients had *Dushti* of *Raktavaha srotas* while *Swedavaha Sroto Dushti* was found in 78% of patients. Around 50% of the female patients had noticed aggravation of *Pidika* during premenstrual period. *Pidika* and *Medogarbhata* were observed in all the registered patients, while *Shotha* had in 98% patients and *Vaivarnya* in 88% of patients. *Paka* and *Vedana* were complained by 84% patients. 78% and 76% of patients were suffering from *Kandu* and *Daha* respectively; *Srava* was found in 70% of the patients. All the registered patients had involvement of face, out of those 68% of patients had involvement of upper chest and/or back, while 58% patients were having involvement of upper back along with face. Total 54% of patients were having *Kapha* dominant symptoms like *Gaurava*, *Kandu*, etc., while 32% having *Pitta* dominant symptoms like *Daha*, *Raga*, *Aushnya*, etc.

### Effect of therapy

The data shows that after completion of therapy in Group A, patients got positive improvement on *Medogarbhata* and *Daha* by 62.50% and 83.33% respectively. *Pidika* was relieved by 54.17%. Number of *Pidika* and *Srava* were relieved by 52.94% and 45.45% respectively. *Shotha* was reduced by 39.29%. 34.48% improvement was observed in *Vranavastu* i.e., scar. Relief in all the symptoms found statistically highly significant ( $P < 0.001$ ) [Table 1].

In Group B, *Kandu* was relieved by 94.74%, *Vedana* and *Shotha* were reduced by 85.71% and 82.35% respectively. *Srava* was reduced by 80% where as *Paka* and *Vaivarnya* (discoloration) were reduced by 79.31% and 78.13% respectively. *Medogarbhata* and area occupied by *Pidika* were reduced by 71.11% and 66% respectively. The improvement was highly significant ( $P < 0.001$ ) except *Vranavastu* which remain significant ( $P < 0.05$ ) [Table 2].

The effect on *Rasavaha* and *Swedavaha sroto dushti* was found to be highly significant in Group A, while Group B showed highly significant effect on all the three *srotodushti* (*Rasa*, *Rakta*, and *Swedavaha srotas*) [Tables 3 and 4].

The images of Figures 1-6 show effect of the treatment in one of the patients of Group B.

**Table 1: Effect of *Shalmalyadilepa* on chief complaints**

Symptoms	Mean score		$\bar{x}$	%	SD±	SE±	‘ <i>t</i> ’	‘ <i>P</i> ’
	B.T	A.T						
No. of <i>Pidika</i>	2.32	1.09	1.23	52.94	0.42	0.09	13.42	<0.001
Area occupied	2.18	1.00	1.18	54.17	0.39	0.84	14.04	<0.001
<i>Shotha</i>	1.33	0.81	0.52	39.29	0.51	0.11	4.69	<0.001
<i>Vedana</i>	1.20	0.55	0.65	54.17	0.58	0.13	4.95	<0.001
<i>Srava</i>	1.22	0.67	0.56	45.45	0.52	0.17	3.16	<0.001
<i>Kandu</i>	1.32	0.74	0.58	44	0.60	0.13	4.15	<0.001
<i>Daha</i>	1.20	0.33	0.97	83.33	0.44	0.11	7.42	<0.001
<i>Paka</i>	1.25	0.50	0.75	60	0.44	0.11	6.70	<0.001
<i>Medogarbhata</i>	1.82	0.68	1.14	62.50	0.77	0.16	6.88	<0.001
<i>Vaivarnya</i>	1.40	0.87	0.60	42.86	0.63	0.16	3.67	<0.001
<i>Vranavastu</i>	1.61	1.11	0.56	34.48	0.51	0.12	4.61	<0.001

B.T: Before treatment, A.T.:After treatment, SE: Standard error, SD: Standard deviation

**Table 2: Effect of *Shalmalyadilepa* and *Guduchyadivati* on chief complaints**

Symptoms	Mean score		$\bar{x}$	%	SD±	SE±	't'	'P'
	B.T	A.T						
No. of <i>Pidika</i>	2.27	0.95	1.32	58.00	0.47	0.10	12.96	<0.001
Area occupied	2.27	0.73	1.50	66.00	0.59	0.12	11.77	<0.001
<i>Shotha</i>	1.55	0.27	1.27	82.35	0.55	0.11	10.84	<0.001
<i>Vedana</i>	1.27	0.18	1.09	85.71	0.42	0.09	12.00	<0.001
<i>Srava</i>	1.19	0.24	0.95	80.00	0.49	0.10	8.71	<0.001
<i>Kandu</i>	1.12	0.06	1.06	94.74	0.24	0.05	18.00	<0.001
<i>Daha</i>	1.05	0.00	1.05	100	0.22	0.05	20.00	<0.001
<i>Paka</i>	1.32	0.27	1.05	79.31	0.57	0.12	8.52	<0.001
<i>Medogarbhava</i>	2.05	0.59	1.45	71.11	0.73	0.15	9.23	<0.001
<i>Vaivarnya</i>	1.52	0.33	1.19	78.13	0.51	0.11	4.58	<0.001
<i>Vranavastu</i>	1.09	0.91	0.18	16.67	0.39	0.08	2.16	<0.05

B.T: Before treatment, A.T.: After treatment, SE: Standard error, SD: Standard deviation

**Table 3: Effect of *Shalmalyadilepa* on *Sroto dushti Lakshana***

Symptoms	Mean score		$\bar{x}$	%	SD±	SE±	't'	'P'
	B.T	A.T						
<i>Rasavaha</i>	2.50	1.82	0.73	29.09	0.76	0.17	4.44	<0.001
<i>Raktavah</i>	2.32	1.95	0.36	15.69	0.58	0.24	2.93	<0.01
<i>Swedavaha</i>	1.95	1.36	0.59	30.23	0.50	0.10	5.50	<0.001

B.T: Before treatment, A.T.: After treatment, SE: Standard error, SD: Standard deviation

**Table 4: Effect of *Shalmalyadilepa* and *Guduchyadivati* on *Sroto dushti Lakshana***

Symptoms	Mean score		$\bar{x}$	%	SD±	SE±	't'	'P'
	B.T	A.T						
<i>Rasavaha</i>	2.18	1.23	0.95	43.75	0.21	0.04	21	<0.001
<i>Raktavaha</i>	2.00	1.05	0.95	47.73	0.21	0.04	21	<0.001
<i>Swedavaha</i>	2.00	1.09	0.91	45.45	0.29	0.06	14.49	<0.001

B.T: Before treatment, A.T.: After treatment, SE: Standard error, SD: Standard deviation

## Overall effect of therapy

The observations reveal that, no patient had complete cure in both the groups. Total 50% patients had marked improvement in Group B while in Group A it was 13.64%. Moderate improvement was observed in 40.91% in Group B while in Group A, it was 31.82%. Mild improvement was observed in 9.09% of patients in Group B while in Group A, it was 50%. No one patient remain unchanged in Group B while in Group A it was 4.55% [Table 5].

## Probable mode of action

### *Shalmalyadilepa*

Ingredients of *Shalmalyadilepa* are *Laghu Guna* brings about *Lekhana* and *Vrana Ropana*.<sup>[6]</sup> *Ruksha Guna* has property of *Kharata* and *Stambhana*.<sup>[7]</sup> *Kharata* is expected to relieve symptoms of *Medogarbhava*. *Madhura Rasa* is *Kshina kshata sandhana kara*.<sup>[8]</sup> Hence, it improves wound healing, and in this way it reduces *Vranavastu* (scar). *Kapha-Pitta Shamaka* property of *Shalmalyadilepa*, relieves *Daha* and *Kapha* dominating symptoms like *Kandu*, *Medogarbhava*, *Shotha*, etc.

### *Gudoochyadivati*

*Guduchyadivati* possess *Madhura*, *Tikta*, *Kashaya Rasa* with dominancy of *Guru*, *Snigdha Guna*, and combination of *Ushna* and *Sheeta Virya* drugs exhibiting *Tridosha shamaka* property

**Table 5: Over all effect of the therapy in both groups**

Results	Group - A		Group - B	
	No. of patients	(%)	No. of patients	(%)
Cured	0	0	0	0
Marked improvement	3	13.64	11	50.00
Moderate improvement	7	31.82	9	40.91
Mild improvement	11	50.00	2	9.09
Unchanged	1	4.55	0	0.00
Total no. of patients	22	100	22	100

thereby exerts curative action on *Daha* and *Vrana*. *Tikta Rasa* has property of *Deepana* and *Pachana*, which potentiates *Jatharagni* and *Dhatvagni*, and in this way it reduces the formation of *Ama* resulting in arresting of progression in *Dhatu shaithilya*. *Madhura Rasa* by its *Prasadana* and *Varnakara* property improves fairness of the skin. Due to predominance of *Ushna Virya* in the composition of *Guduchyadivati* brings about





Figure 1: Before treatment - Front view



Figure 2: Before treatment - Side view



Figure 3: After treatment - Front view



Figure 4: After treatment - Side view

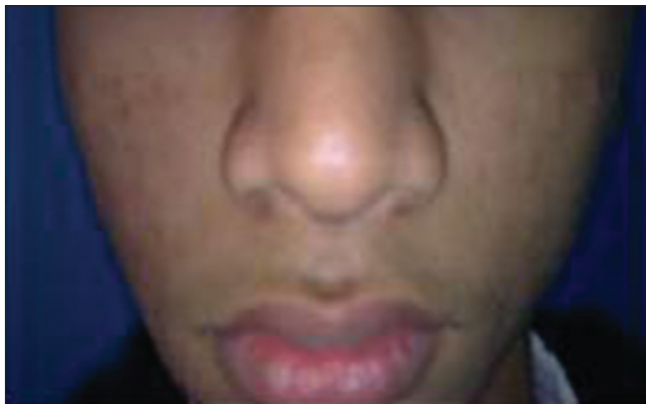


Figure 5: Follow up - Front view



Figure 6: Follow up - Side view

pacification of *Vata Dosha* and relieves symptoms like *Vedana* and also improves *Dhatvagni*. *Guduchi* and *Sariva* having properties of *Tridosahara* while *Manjishtha* is *Vata kapha shamaka*. Hence, collectively all these drugs may act on *Pitta* and may have shown improvement in *Raktavaha Sroto Dushti Lakshana*.

## Conclusion

*Yauvanapidika*, generally appears between 15 to 20 years, the age of adolescent to younger hood, but it may appear even at the

age of 30 years too. Male individuals, who are dominant with *Kapha Pitta Prakriti* are more prone to this condition. *Kapha*, *Pitta*, *Rasa*, and *Rakta* are the involved *dosha* and *dushya* in this condition. Hence, local along with internal medications is required to check the pathogenesis. In the current study, *Shalmalyadilepa* along with *Guduchyadivati* (Group B) has shown better effect than only external application of *Shalmalyadilepa*. As the condition is *Yapya*, in order to obtain good results, the duration of the therapy may be increased.

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## हिन्दी सारांश

### यौवनपीडिका पर शाल्मल्यादिलेप एवं गुडुच्यादिवटी का प्रभावात्मक अध्ययन

#### पियुष पम्पानिया, दर्शना पंड्या

यौवनपीडिका क्षुद्ररोगाधिकार में वर्णित व्याधि है। जिसमें कफ, पित्त एवं रक्तधातु की दुष्टि प्रधान रूप से पायी जाती है। प्रस्तुत शोधकार्य में यह व्याधि १५-२० साल की उम्र के रुग्णों में ज्यादातर पायी गयी। इस शोधकार्य में कुल पंजीकृत ५० रुग्णों में से ४४ रुग्णों ने चिकित्सा अवधि पूर्ण की। केवल शाल्मल्यादिलेप का दुग्ध के साथ लेपनार्थे उपयोग किये जाने पर १३.६४% रुग्णों में उत्तम लाभ, ३९.८२% रुग्ण लाभोन्मुख, ५०% रुग्णों में अल्पलाभ एवं ४.५५% रुग्णों में अलाभ प्राप्त हुआ और ६६.६६% रुग्णों में एक मास पश्चात् इस रोग के लक्षणों की पुनरावृत्ति पायी गयी। शाल्मल्यादिलेप एवं गुडुच्यादिवटी का प्रयोग किये जाने पर ५०% रुग्णों में उत्तम लाभ, ४०.९९% रुग्ण लाभोन्मुख एवं ९.०९% रुग्णों में अल्पलाभ केवल ४२.९% रुग्णों में एक मास पश्चात् इस रोग के लक्षणों की पुनरावृत्ति पायी गयी। यह व्याधि याप्य होने से पुनः आवृत्ति पायी जाती है।