

## CLINICAL STUDY ON EFFECT OF PASTE OF MANJISTADIYA ON YUVANA PIDAKA (ACNE VULGARIS)

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### ABSTRACT:

**Background:** Acne vulgaris, can affect people from 10 to 40 years of age. Based on symptoms, acne vulgaris can be correlated with *Yuvana Pidaka*. It leaves erosions on the face, resembling the thorns of a *Shalmali* tree. Acne vulgaris is one of the most common dermatosis and is a chronic inflammatory disease of the pilosebaceous unit. Comedones, macules, papules, nodules, pustules, scars, cysts are its signs and symptoms. **Aim:** this study aims to evaluate the effect of paste of Manjistadiya in management of *Yuvana Pidaka* (Acne vulgaris). **Method:** paste of Manjistadiya is prepared by mixing powders of roots of *Rubia cordifolia*, seeds of *Coriandrum sativum*, stems of *Santulum albam*, stem barks of *Kokoona zeylanica*, rhizomes of *Curcuma aromatic* and stem of *Coscinium fenestratum* together in equal quantities. 10 ml of water is added to 5g of above mixture, to make a paste. Sixty patients suffering from *Yuvana Pidaka* were selected and randomly divided into two groups, named as Group A and B; each of thirty patients. Group A, was treated with 5g of paste of Manjistadiya; once a day for 14 consecutive days. The mixture left for 20 minutes and rinsed off with freshwater. Group B, was treated with 10ml of placebo. Placebo was prepared by adding 5 drops of permitted food colouring to water and applied similarly as Group A. The responses to the treatment were recorded and therapeutic effects evaluated by symptomatic relief. **Results:** Of these two groups, significant symptomatic relief in eruptions, pain, tenderness, scars, greasiness of the face, was observed in group A. Fairness in face also increased after treatment. **Conclusion:** It is concluded that paste of Manjistadiya is beneficial in treatment of *Yuvana Pidaka* (Acne vulgaris) and to improve the fairness of the skin.

**Key Words:** *Yuvana Pidaka*, Acne vulgaris, Paste of Manjistadiya

### INTRODUCTION:

Present day people are very much concerned about their health and good looks. They pay a lot of attention to the face which is a prime feature of the body. As an index of the mind it reflects joy, sorrow, anger, excitement and most of the emotions. Like all other regions of the body, face too is often affected by a disorder which is known as *Yuvana Pidaka* (Acne vulgaris) in Ayurveda. *Yuvana Pidaka* which is described under the *Ksudra Roga* in Ayurvedic authentic texts, occurs due to vitiation of *Kapha Dosh*, *Vata Dosh* and *Rakta Dhatu*; especially among youths. *Mukhadusika* is a synonym for *Yuvana Pidaka*. According to Ayurveda, signs and symptoms of *Yuvana Pidaka* are: *Shalmali Kanta Pidaka* (eruptions resembling the thorns of a *Salmali* tree are arising on the face), *Saruja* (pain), *Medhogarbha* (eruptions packed with Meads) and *Gahana* (thickness)<sup>[1,2]</sup>. *Yuvana Pidaka* is correlated to Acne vulgaris which is described in modern medicine. It is one of the commonest dermatosis occurring among youths. There may be single or grouped comedones arising in adults and infants also. The main localization of acne is in the face and then follows the neck, the upper part of the chest, shoulders and the back. Occasionally acne may be seen in thighs and buttocks.

The distribution is usually bilaterally symmetrical. The primary lesion of acne is the comedones (appeared as a slightly elevated white dot or black dot). Macules, papules, nodules, pustules, scars, cysts are the other forms of lesion of acne vulgaris. Hemorrhagic crusts, tenderness, shiny appearance of the face, pain, excoriation, feelings of anger, inferiority, low self esteem, frustration, embarrassment, poor academic performance, depression are the other signs and symptoms of Acne vulgaris<sup>[3,4]</sup>. Certain chemicals, drugs may induce acne to form lesions. Psychogenic problems, stress, pricking pimples, can make them worse. Although Acne vulgaris is a universally very common skin problem, there is no very satisfactory treatment. It is a disease which has a cosmetic problem

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and also a psychological problem<sup>[5,6]</sup>.

#### **AIMS AND OBJECTIVES:**

To clinically evaluate the effect of paste of Manjistadiya in *Yuvana Pidaka* (*Acne vulgaris*), which is used as a home remedy

#### **MATERIALS AND METHODS:**

**Study design:** A randomized single blind, parallel, placebo controlled clinical study.

#### **Selection of drug:**

One of the coauthors of this research uses the paste of Manjistadiya as a home remedy in *acne vulgaris* with good effect. But no known scientific evaluation had conducted to evaluate the efficacy of paste of Manjistadiya in *Yuvana Pidaka* (*Acne vulgaris*). So the paste of Manjistadiya was selected as the research drug in the present study.

#### **Preparation of Paste of Manjistadiya:**

350g each of roots of *Rubia cordifolia* (Family: Rubiaceae; Sanskrit name: *Manjista*), seeds of *Coriandrum sativum* (Family: Umbeliferae; Sanskrit name: *Danyaka*), stems of *Santulum album* (Family: Santalaceae; Sanskrit name: *Chandana*), stem barks of *Kokoona zeylanica* (Family: Casuarinaceae; Sanskrit name: Not known), rhizomes of *Curcuma aromatica* (Family: Zingiberaceae; Sanskrit name: *Kastoori haridra*) and stem of *Coscinium fenestratum* (Family: Menispermaceae; Sanskrit name: Not known) were powdered separately, mixed together and stored in air tight container. Paste of Manjistadiya was prepared by mixing 5g of the aforesaid powder with 10 ml of water prior to application.

#### **Preparation of Placebo:**

The placebo was prepared by adding five drops of permitted brown food colouring to 10ml of water.

#### **Selection of patients**

**Sampling:** Randomization was done by using a random numbers table.

**Sample size:** 60 patients

#### **Study setting:**

Sixty patients of either sex with *Yuvana Pidaka* (*Acne vulgaris*) were selected from Ayurveda hospitals at Meegoda, Lunawa, and Teaching Hospital at Borella, Srilanka, from May 2007 to December 2009.

#### **Diagnostic criteria:**

*Pidaka* (eruptions), macules, pustules, scars, open comedones (blackheads), closed comedones (whiteheads) are the diagnostic criteria of *Yuvana Pidaka* (*Acne vulgaris*)

#### **Inclusion criteria:**

Prior to the treatment, patients were thoroughly examined and details were recorded by using a standard proforma. The patients having *Pidaka* (eruptions), macules, pustules, scars, open comedones (blackheads), closed comedones (whitehead), excoriation, hemorrhagic crust and greasy skin were included in the research.

#### **Exclusion Criteria:**

Patients suffering from following disorders were excluded from the research.

- Sebaceous hyperplasia
- Perioral dermatitis
- Folliculitis
- Rosacea
- and Acneiform eruptions

#### **Grouping**

These patients were randomly divided in to two groups, named as Group A and B. After selection of patients, they were informed about the study and their written consent was obtained. They were instructed to take their normal diet, and further advised to avoid use of face washes, soaps or creams on the face during research period. Further, patients were made to understand that they are able to withdraw from the study any time without prior notice.

#### **Lab Investigation:**

Routine examination on blood (WBC/DC, Hb %) and urine full report were done but no special laboratory investigation were carried out.

#### **Intervention**

##### **Group 1**

**Drug:** Paste of Manjistadiya

**Dose:** Group A, the treated group, was treated with 5g of paste of Manjistadiya, once a day. The mixture was applied on the face daily, left for 20 minutes and rinsed off using water.

**Duration:** Treatment was carried out daily for 14 days.

**Follow up:** Two weeks

##### **Group 2**

**Drug:** Placebo for Paste of Manjistadiya

**Dose:** Group B, was treated with 5g of placebo for Paste of Manjistadiya daily once a day. The placebo was applied on the face daily, left for 20 minutes and rinsed off with water.

**Duration:** Treatment was carried out daily for 14 days.

**Follow up:** Two weeks

**Criteria for Assessment**

Responses to the treatment were evaluated by using a specially prepared grading scale for clinical features.

Grading of the Signs and Symptoms of *Yuwana Pidaka* are given below

**A. *Pidaka* (eruptions)**

- 0 = No *Pidaka* in the face
- 1 = One to Five *Pidaka* in the face
- 2 = Five to Ten *Pidaka* in the face
- 3 = Ten to Fifteen *Pidaka* in the face
- 4 = More than Fifteen *Pidaka* in the face

**B. *Ghana* (thickness in eruption)**

- 0 = Do not feel thickness when touching the eruptions
- 1 = Feel very slight thickness when touching the eruptions
- 2 = Feel moderate thickness when touching the eruptions
- 3 = Feel hard when touching the eruptions
- 4 = Feel very hard when touching the eruptions

**C. *Medhogarbha* (*Pidaka* containing fat inside)**

- 0 = No *Pidaka* containing fat in the face
- 1 = One to Five *Pidaka* containing fat in the face
- 2 = Five to Ten *Pidaka* containing fat in the face
- 3 = Ten to Fifteen *Pidaka* containing fat in the face
- 4 = More than Fifteen *Pidaka* containing fat in the face

**D. Macules**

- 0 = No Macules
- 1 = One to Five Macules
- 2 = Five to Ten Macules
- 3 = Ten to Fifteen Macules
- 4 = More than Fifteen Macules

**E. Pustules**

- 0 = No Pustules
- 1 = One to Five Pustules
- 2 = Five to Ten Pustules
- 3 = Ten to Fifteen Pustules
- 4 = More than Fifteen Pustules

**F. Scars**

- 0 = No Scars
- 1 = One to Five Scars
- 2 = Five to Ten Scars
- 3 = Ten to Fifteen Scars
- 4 = More than Fifteen Scars

**G. Open comedones (blackheads)**

- 0 = No Open comedones
- 1 = One to Five Open comedones
- 2 = Five to Ten Open comedones
- 3 = Ten to Fifteen Open comedones
- 4 = More than Fifteen Open comedones

**H. Closed comedones (whitehead)**

- 0 = No Closed comedones
- 1 = One to Five Closed comedones
- 2 = Five to Ten Closed comedones
- 3 = Ten to Fifteen Closed comedones
- 4 = More than Fifteen Closed comedones

**I. Hemorrhagic crusts**

- 0 = No Hemorrhagic crusts
- 1 = One to Two Hemorrhagic crusts
- 2 = Three to Four Hemorrhagic crusts
- 3 = Four to Six Hemorrhagic crusts
- 4 = More than Seven Hemorrhagic crusts

**J. Excoriations**

- 0 = No Excoriations
- 1 = One to Two Excoriations
- 2 = Three to Four Excoriations
- 3 = Four to Six Excoriations
- 4 = More than Seven Fifteen Excoriations

**K. Sruja (Pain)**

- 0 = No Pain
- 1 = Occasionally feels Pain
- 2 = Intermittently feels Pain
- 3 = Often feels Pain
- 4 = Always feels Pain

**L. Tenderness**

- 0 = No Tenderness
- 1 = Occasionally feels Tenderness
- 2 = Intermittently feels Tenderness

3 = Often feels Tenderness

4 = Always feels Tenderness

**M. Greasy skin**

0 = No Greasy skin

1 = Occasionally feels Greasy skin

2 = Intermittently feels Greasy skin

3 = Often feels Greasy skin

4 = Always feels Greasy skin

Overall assessment criteria are given below.

- Completely relieved % = 100 % cure
- Partially relieved % = between 1% to 99%
- Unchanged % = 0% Cure
- Aggravated % = symptoms become aggravated

**Statistical Analysis**

Statistical analysis was done by using Mann–Whitney U test.

**OBSERVATIONS AND RESULTS:**

Most of the patients were below 30 years of age. They complained mostly of *Pidaka*, tenderness, pustules, macules and greasy skin. The therapeutic effect was evaluated through symptomatic relief and results are given in Table 1, 2 and figure 1. *Pidaka* (eruptions), macules, pustules, scars, open comedones (blackheads) and closed comedones (whitehead) were totally or partially relieved in more than 80% of patients suffering from *Yuvana Pidaka* (*Acne vulgaris*). In some patients, eruptions became worse in first week, and then decreased in second week. Fairness of the skin is increased in Group A; the patients treated with paste of Manjistadiya. The patients seemed to be very enthusiastic of the treatment as their skin complexion has become fairer.

**Table 1: Percentages of Symptomatic Relief during the treatment with paste of Manjistadiya on *Yuvana Pidaka* (*Acne vulgaris*)**

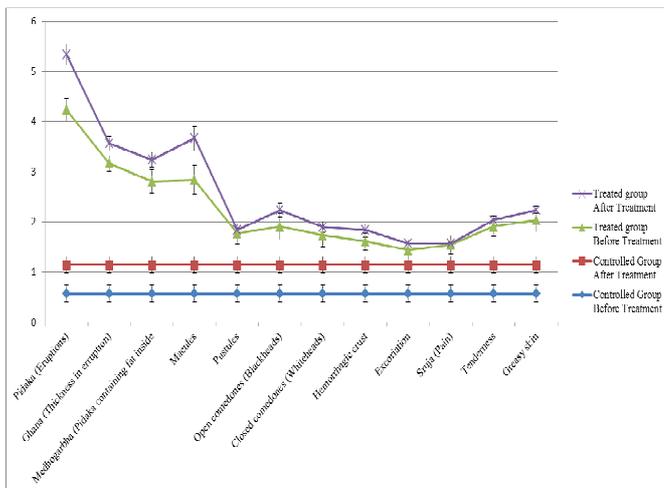
Symptoms	Control Group			Treated Group		
	Completely relieved	Partially relieved	Unchanged	Completely relieved	Partially relieved	Unchanged
<i>Pidaka</i> (eruptions)	0.00%	0.00%	100.00%	32.14%	64.2%	3.57%
<i>Ghana</i> (Thickness in eruption)	0.00%	0.00%	100.00%	74.07%	25.9%	0.00%
<i>Medhogarbha</i> ( <i>Pidaka</i> containing fat inside)	0.00%	0.00%	100.00%	70.83%	29.1%	0.00%
Macules	0.00%	0.00%	100.00%	35.00%	55.0%	10.00%
Pustules	0.00%	10.00%	90.00%	80.00%	0.00%	20.00%
Scars	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%
Open comedones (Blackheads)	0.00%	0.00%	100.00%	25.00%	75.0%	0.00%
Closed comedones (Whiteheads)	0.00%	0.00%	100.00%	57.14%	42.8%	0.00%
Hemorrhagic crust	0.00%	5.00%	95.00%	87.50%	12.5%	0.00%
Excoriation	0.00%	5.00%	95.00%	40.00%	20.0%	40.00%
Saruja (Pain)	0.00%	0.00%	100.00%	80.00%	20.0%	0.00%
Tenderness	0.00%	0.00%	100.00%	72.72%	27.2%	0.00%
Greasy skin	0.00%	5.00%	95.00%	50.00%	50.0%	0.00%

**Table 2: Symptomatic Relief during the treatment with paste of Manjistadiya on *Yuvana Pidaka* (*Acne vulgaris*) (mean ± SD)**

Symptom	Control group (mean ± SD)		Treated group (mean ± SD)	
	Before treatment	After treatment	Before treatment	After treatment
<i>Pidaka</i> (Eruptions)	0.57 ± 0.17	0.57 ± 0.17	3.10 ± 0.23	1.10 ± 0.21*
<i>Ghana</i> (Thickness in eruption)	0.57 ± 0.17	0.57 ± 0.17	2.03 ± 0.16	0.40 ± 0.14 *
<i>Medhogarbha</i> ( <i>Pidaka</i> containing fat inside)	0.57 ± 0.17	0.57 ± 0.17	1.67 ± 0.24	0.43 ± 0.15*
Macules	0.57 ± 0.17	0.57 ± 0.17	1.70 ± 0.29	0.83 ± 0.24*

Pustules	0.57 ± 0.17	0.57 ± 0.17	0.63 ± 0.21	0.07 ± 0.05 *
Open comedones (Blackheads)	0.57 ± 0.17	0.57 ± 0.17	0.77 ± 0.26	0.33 ± 0.14*
Closed comedones (Whiteheads)	0.57 ± 0.17	0.57 ± 0.17	0.60 ± 0.23	0.16 ± 0.11*
Hemorrhagic crust	0.57 ± 0.17	0.57 ± 0.17	0.47 ± 0.17	0.23 ± 0.14
Excoriation	0.57 ± 0.17	0.57 ± 0.17	0.30 ± 0.13	0.13 ± 0.08
Saruja (Pain)	0.57 ± 0.17	0.57 ± 0.17	0.40 ± 0.18	0.03 ± 0.03 *
Tenderness	0.57 ± 0.17	0.57 ± 0.17	0.77 ± 0.20	0.13 ± 0.08
Greasy skin	0.57 ± 0.17	0.57 ± 0.17	0.90 ± 0.23	0.20 ± 0.07 *
* p < 0.05 compare to control				

**Figure 1: Symptomatic Relief during the treatment with paste of Manjistadiya on Yuvana Pidaka (Acne vulgaris) (mean ± SD)**



## DISCUSSION:

*Yuvana Pidaka* (Acne vulgaris) is a common skin disorder which affects one's beauty as well as personality. *Yuvana Pidaka* is occurred by vitiation of *Kapha Dosh*, *Vata Dosh* and *Rakta Dhathu*. Ingredients of paste of Manjistadiya possess properties pacifying vitiated *Kapha Dosh*, *Vata Dosh* and *Pitta Dosh*. They also have *Madhura Rasa* which pacifies vitiated *Vata Dosh* and *Pitta Dosh*; *Kashaya Rasa*, *Tikta Rasa* and *Katu Rasa* that pacify vitiated *Kapha Dosh*; *Guru Guna* and *Snigdha Guna* pacify vitiated *Vata Dosh*; *Laghu Guna*, *Ruksha Guna* and *Tikshana Guna* pacify vitiated *Kapha Dosh*; *Ushna Veerya* pacifies vitiated *Kapha Dosh*; *Sheetha Veerya* pacifies vitiated *Vata Dosh* and *Pitta Dosh*; *Madhura Vipaka* pacifies vitiated *Vata Dosh* and *Pitta Dosh*; *Katu Vipaka* pacifies vitiated *Kapha Dosh*; Because of these properties, paste of Manjistadiya is beneficial in treatment of *Yuvana Pidaka* (Acne vulgaris), a disease occurred by vitiation of *Kapha Dosh* and *Vata Dosh*.

In the present study, patients suffering from *Yuvana Pidaka* are between 10-40 years of age. Among this age group *Pitta Dosh* and *Kapha Dosh* are the prominent *Dosh* in the body. As the paste of Manjistadiya possess properties of pacifying vitiated *Vata Dosh*, *Kapha*

*Dosh* and *Pitta Dosh*, it is able to placate diseases originating predominantly due to vitiation of *Pitta Dosh* and *Kapha Dosh*.

*R. cordifolia*, *S. album* and *C. fenestratum* have the property of *Rakta Shodhana* (Purify blood). This paste improves the luster and complexion of the face through purification of blood. *S. album*, *K. zeylanica*, *C. aromatic* and *C. fenestratum* have the properties of *Raktha prasadana* (promote blood) and *Varna Prasadana* (promote complexion/ fairness). In the group treated with paste of Manjistadiya, enhancement of fairness among the patients is due to the property *Varna Prasadana*. (promote complexion / fairness).

Anti-inflammatory, analgesic effects and antimicrobial activities of *Rubia cordifolia*<sup>[7,8]</sup>, *Coriandrum sativum*<sup>[9,10]</sup>, *Santulum album*, *Kokoona zeylanica*, *Curcuma aromatica* and *Coscinium fenestratum* are scientifically proven. Due to these properties, paste of Manjistadiya subdues the disease *Yuvana Pidaka* (acne vulgaris)

## CONCLUSION:

It could be concluded that paste of Manjistadiya is beneficial in treatment of *Yuvana Pidaka* (Acne vulgaris) as it completely or partially relieved the symptoms of *Yuvana Pidaka* (Acne vulgaris).

## REFERENCES:

1. Susruta. chapter 13, verse 39. In: Srikantha K.R. (eds.)Susruta Samhita Vol. 1. Varanasi, India: Chaukhambha orientalia; 2000. p550-551
2. Bhavamisra. Madhyama Kanda chapter 61. In: Srikantha K.R. (eds.) Bhavaprakasa Vol 11. Varanasi, India: Chowkhambha Krishnadas Academy; 2005. p656
3. Fitz Patrick, J.E. and Aeling, J.L.. Dermatological secretes in colour. 2nd ed. India: Jaypee Brothers; 2001. p146-154
4. Kumar, P. and Clark, M.. Kumar and Clark's Clinical Medicine, International. 7th ed. Saunders Elsevier limited; 2009. p1245-1247
5. Well, D.. Acne vulgaris: A review of causes and treatment options. *The Nurse Practitioner*. 2013; 38(10):22-31
6. Yosipovitch, G., Tang, M., Dawn, A. G., Chen, M., Goh, C. L., Chan, Y. H. and Seng, L. F.. Investigative Report - Study of

- Psychological stress, Sebum production and Acne vulgaris in Adolescents. *Acta Dermato-Venereologica*. 2007;87:135-139
7. Patel, A., Patel, T., Macwan, C., Patel, M., Chauhan, K. and Patel, J. Evaluation of Anti-inflammatory and Analgesic activity of roots of *Rubia cordifolia* in rats. *Journal of Pharmaceutical Sciences and Research*. 2010;2(12):809-813
  8. Naidu, C., Lalam, R., and Bobbarala, V. Antimicrobial agents from *Rubia cordifolia* and *Glycyrrhiza glabra* against phytopathogens of *Gossypium*. *International Journal of Pharm Tech Research*. 2009;1(4):1512-1518
  9. Bhat, S. P., Rizvi, W. and Kumar, A.. *Coriandrum sativum* on pain and inflammation. *International Journal of Research In Pharmacy and Chemistry*. 2014;4(4):939-945
  10. Xin-Zhi Cao, Jian-Ming You, Shen-Xin Li, You-Liang Zhang. Antimicrobial activity of the extracts from *Coriandrum sativum*. *International Journal of Food Nutrition and Safety*. 2012;1(2):54-59
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