



A SCIENTIFIC STUDY ON RAKTA DHATU AND ITS RELATED DISORDER AND EFFECT OF VARNYA MAHAKASHAYA GHANVATI AND CHANDRA PRABHA LEPA IN THE MANAGEMENT OF YUVAN PIDIKA (ACNE VULGARIS)

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ABSTRACT

Due to increased competition of earning prosperity in today era human adopted not only lifestyle but also food habits of western culture which is chiefly responsible to derangement in their physiology and responsible to number of skin disorder like *Yuvan pidika* (acne vulgaris). In *Ayurveda* vitiation of *Vata*, *Kapha* and *Rakta* are etiological factor that give rise to *Yuvan pidika*. That is why there is a need of such treatment that contains *Vata kapha shamaka* and *Raktasodhaka* property. For this *Varnya Mahakashaya Ghanvati* and *Chandra Prabha lepa* were selected for the study on 30 registered patients. Both of these were formulated compound. *Varnya Mahakashaya Ghanvati* was advocated to patient in a dose of 800 mg twice daily for 60 days while *Chandra Prabha lepa* was locally applied by making paste with *Gulab jala*. This study shows highly significant result to ameliorate the symptom of *Yuvan pidika* especially on *Vata dosha pidika* as well as *Kapha dosha pidika*. Both these drugs proved their efficacy to manage *Yuvan pidika* by making homeostasis of *Vata*, *Kapha* and *Rakta*.

KEY WORDS: *Yuvan pidika*, Acne Vulgaris, *Varnya Mahakashaya Ghanvati*, *Chandra Prabha lepa*.

INTRODUCTION

Ayurveda is the oldest system of healing and provide service to mankind in which body physiology is too much emphasized to understanding the etiology and pathogenesis of a disease, so that the best treatment can be searched out in front of humanity. This is assumed in *Ayurveda* that *Dosha*, *Dhatu* and *Mala* are the root of human physiology.^[1] Equilibrium of all these three is essential to maintain a human disease free while any derangement in these will produce disease. Out three *Doshas*, *pitta* is considered as *Agni* which is chiefly responsible for digestion of *Dhatu*. On vitiation of this *Pitta* will produce a number of disorders in human body.^[2] In present lifestyle nobody have time to keep themselves healthy by following *Ayurvedic* principles. Every person wants more and more prosperity in this developing era, going far away from nature and

completely follows the western culture and adopting modern modalities to overcome their disease. This is the main reason that becomes the leading cause to develop *Raktaja rogas* (hematological disorders). In addition to this the role of our media to popularize the harmful chemical and cosmetics to achieve momentary beauties is not less. They also provide the path to develop skin disorders like *Yuvan pidika* (Acne Vulgaris), *Vyang* (mole) etc. These disorders never hurt physically but affects mentally to an individual. Ancient *Acharya Susruta* and *Bhav prakasha* stated that *Kapha*, *Vata* along with *Rakta* is chiefly responsible for *Yuvan pidika*.^[3]

In modern science *Yuvan pidika* is considered as Acne Vulgaris which is very common disorder of adolescence and often continues into adulthood. Acne affects mostly skin with the densest population of sebaceous

follicles, these areas include the face, the upper part of the chest, and the back.^[4] In adolescence, acne is usually caused by an increase in testosterone which accrues during puberty, regardless of sex.^[5] For most people, acne diminishes over time and tends to disappear - or at the very least decreases - by age 25.^[6] There is, however, no way to predict how long it will take to disappear entirely, and some individuals will carry this condition well into their thirties, forties, and beyond.^[7]

Many different treatments exist for acne in modern science which includes antibiotics, retinoids, antiseborrheic medications, anti-androgen medications and hormonal treatments but these produce a large number of side effects. That is why there is a need of such treatment that not only cures *Yuvan pidika* (Acne Vulgaris) but also free from side effects. *Varnya Mahakashaya*^[8] *Ghanvati* and *Chandra Prabha lepa* (formulated compound) was selected for the study to understand their effect in *yuvan pidika*. *Varnya Mahakashaya Ghanvati* contains all ingredients of *Varnya mahakashaya* described by *Acharya Charka* described in *sutra sthana* while *Chandra Prabha lepa* was a formulated compound which contain *Sheeta Virya* drugs which provide relief from *Yuvan pidika*.

AIMS AND OBJECTS

1. To evaluate the effect of *Varnya Mahakashaya Ghanvati* in the management of *Yuvan pidika*.
2. To evaluate the effect of *Chandra Prabha lepa* in the management of *Yuvan pidika*.
3. To establish the side effect free treatment of *Yuvan Pidika*.

MATERIALS AND METHODS

Patients were selected from OPD and IPD of the *Arogyashala* (hospital) and *Surajmal Bombayvala* Hospital of the National Institute of *Ayurveda*, Jaipur, India after fulfilling the criteria of *Yuvan pidika*. The diagnosis was done on the basis of carefully history taking and clinical examination. For the present study total 35 patients of both sexes were randomly selected and registered. Five patients were discontinued in the middle of the treatment, remaining 30 patients were treated with *Varnya mahakashaya Ghanvati* and *Chandan Prabha lepa* locally for 60 days. Follow up was done 20th, 40th and 60th day of the study.

Inclusion criteria

- Patients in the age group between 15-25 years.
- Patients fulfill the criteria of *Yuvan pidika*.

Exclusion criteria

1. Patients were less than 15 years and more than 25 years.
2. Patient having skin disease like Psoriasis, Atopic dermatitis, skin tuberculosis, leprosy etc.

Discontinuation criteria

Patient were not willing to continue the treatment.

Diagnosis of the patients

Diagnosis of *Yuvan pidika Roga* was made on the basis of sign and symptoms described in *Ayurvedic* Text books.

Criteria of Assessment

The assessment of patients were done before starting treatment, during follow up (after 20 days, 40 days) and at the end of the trial (after 60 days). As most of the complaints were subjective in nature, grading scales were adopted to assess the complaint. The grading system of the Acne Vulgaris as follows:

1. *Pidikasankhya* (numbers of acnes)

- a. Zero - None
- b. + - Less than 10
- c. ++ - 10 to 20
- d. +++ - > 20

2. *Pidikaghanata* (Area of acnes)

- a. Zero - None
- b. + - Less *ghanata*
- c. ++ - Moderate *ghanata*
- d. +++ - Severe *ghanata*

3. *Pidika snigdhatta* (numbers of acnes)

- a. Zero - Normal skin
- b. + - Less *snigdhatta*
- c. ++ - Moderate *snigdhatta*
- d. +++ - Severe *snigdhatta*

4. *Pidikaraktima* (Redness of acnes)

- a. Zero - None
- b. + - Less *Raktima*
- c. ++ - Moderate *Raktima*
- d. +++ - Severe *Raktima*

5. *Pidikavedana* (Pain in acnes)

- a. Zero - None
- b. + - Less *vedana*
- c. ++ - Moderate *vedana*
- d. +++ - Severe *vedana*

SELECTION OF DRUG

For the present study, two drugs named *Varnya mahakashaya Ghana vati* and *Chandra Prabha lepa* were selected.

Both of the drugs *Varnya mahakashaya Ghana vati* and *Chandra Prabha lepa* were formulated compound.

Table 1: Constituents of Varnya Mahakashaya Ghan Vati

S.No.	Drug	Useful Part	Quantity
1.	<i>Chandana (Santalum album Linn.)</i>	<i>Kandasara</i>	1 part
2.	<i>Nagakshera (Mesua ferrea Linn.)</i>	<i>Punkeshar</i> (pollen grain)	1 part
3.	<i>Padmaka (Prunus cerasoides D. Don.)</i>	<i>Twak, Beej majja</i> (stem barks and seed)	1 part
4.	<i>Khasa (Vetiveria zizanioides (L.) Nash.)</i>	<i>Mool</i> (Root)	1 part
5.	<i>Madhuyeshti (Glycyrrhiza glabra Linn.)</i>	<i>Mool</i> (Root)	1 part
6.	<i>Manjista (Rubia cordifolia Linn.)</i>	<i>Mool</i> (Root)	1 part
7.	<i>Sariva (Hemidesmus indicus R. Br.)</i>	<i>Mool</i> (Root)	1 part
8.	<i>Payasya (Ipomoea digitata)</i>	<i>Kanda</i> (Tuber)	1 part
9.	<i>Sweta doorva (Cynodon dactylon Pers)</i>	<i>Panchanga</i> (whole plant)	1 part
10.	<i>Shyam doorva (Cynodon dactylon Pers)</i>	<i>Panchanga</i> (whole plant)	1 part
11.	<i>Kiratatikta (Swertia chirayita Roxb. Ex Flom Karst)</i>	<i>Panchanga</i> (whole plant)	1 ½part

Drug preparation

All the ingredients were taken in above quantity, soaked them in 16 times water and left it overnight. On the next morning the soaked drugs with 16 times water were heated to make decoction till reduced its one fourth. Then after the decoction was filtered and again heated till it become so dense to make its pill, after making

pills dry in high sunlight to absorb the complete moisture for its long lasting use. Each pill (*Varnya mahakashaya Ghanvati*) was weighted 400 mg.

Dose of these pills (*Varnya mahakashaya Ghanvati*) was 800 mg. twice daily for 60 days with water.

Table 2: Constituents of Chandra Prabha lepa

S.No.	Drug	Useful Part	Quantity
1.	<i>Sweta Saraso (Brassica compestris Linn. Var. sarson Prain)</i>	<i>Beeja</i> (seed), <i>Tail</i> (oil)	1 part
2.	<i>Vacha (Acorus calamus Linn.)</i>	<i>Mool</i> (root), <i>Bhomikkand</i>	1 part
3.	<i>Lodhra (Symplocos racemosus Roxb.)</i>	<i>Twak</i> (bark)	1 part
4.	<i>Chironji (Buchanania lanzan Spreng)</i>	<i>Twak</i> (bark), <i>Beejmajja</i>	1 part
5.	<i>Masoor ki Dal (Lens culinaris Medik.)</i>	<i>Beeja</i> (seed)	1 part
6.	<i>Sandhav Lavana (Sodium chloride)</i>		1 part

Drug preparation

All the drugs taken in equal quantity were cleaned properly and dried under sunlight. After complete drying of the drug they were pulverized to make powder. These powders were packed in poly packs of 150 gm.

This powder was administered to patient locally by making its thin paste with *gulabjala* in a dose of five gram twice daily for 60 days.

OBSERVATION

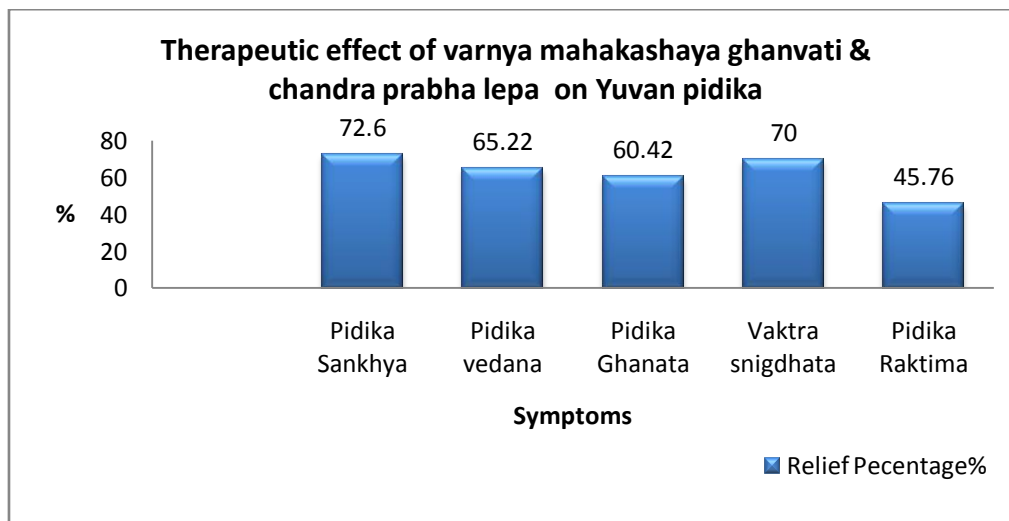
Table 3: Patient wise observation in Acne Vulgaris

SNo.	Observation	Maximum	Percentage
1.	Age	15-20yrs	56.66
2.	Religion	Hindus	96.66
3.	Sex	Male	60.00
4.	Marital Status	Unmarried	90.00
5.	Socioeconomic status	High	56.00
6.	Dietary pattern	Non vegetarian	90.00
7.	Habitat	Urban	78.00
8.	Occupation	Students	83.33
9.	Sharirka Prakrati	Vata pittaj	36.66
10.	Lakshananusar	Vaktra snigdghata	50.00
11.	Satva	Madhyam	56.00
12.	Kostas	Madhyam	73.33
13.	Jatharagni	Manda	70.00

RESULT

Table 04: Therapeutic effect of Varnya mahakashaya Ghanvati and Chandra Prabha lepa

Symptom	Mean		Mean Dif.	Mean %	n	S.D.	S.E.	't'	'p'
	B.T.	A.T.							
Pidika Sankhya	2.43	0.66	1.77	72.60	30	0.82	0.15	11.84	<0.001
Pidika Vedana	1.60	0.53	1.07	65.22	30	0.66	0.13	8.56	<0.001
Pidika Ghanata	1.63	0.63	1.00	60.42	30	0.51	0.10	10.79	<0.001
Vaktra Snigdghata	2.0	0.6	1.40	70.00	30	0.50	0.09	15.39	<0.001
Pidika Raktima	1.96	1.00	0.96	45.76	30	0.84	0.16	6.09	<0.001



DISCUSSION

In Ayurveda whatever take in the form of food that was assimilated and produced *rasa*. This *Rasa* reached liver and spleen through portal vein and get converted in to *Rakta* which can be compared to the blood as per modern concept. *Acharya Chakrapani* described its property as per *Doshika Prakrati* like *Vataja*,

Pittaj, *Kaphaja* and *Sama Prakrati*. *Sama Prakrati* individual have *Rakta* just like *Veerbhuti* [9] while all other *Doshika Prakrati* have colour of blood like heated gold, red lotus and *Laksha rasa* (Gunja). [9] This is also proved by modern science that the colour of blood differs as levels of oxygen, carbon di oxide and other gases in

human body.^[10] In this condition oxygen combined with hemoglobin and formed oxyhemoglobins which look like bright red (*veerbhuti*).

Acharya Sushruta mentioned the composition of blood on the basis of *Panch mahabhuta* (five elements) like *Visrata* (*Pathavi mahabhuta*), *Dravta* (*Jala mahabhuta*), *Raga* (*Agni mahabhuta*), *Spandan* (*Vayu mahabhuta*) and *laghuta* (*Akasha mahabhuta*).^[11] In the same way modern physiology illustrated that *Prathavi mahabhuta* include serum protein, hemoglobin, glucose etc, *Jala mahabhuta* include plasma, lipids etc, *Agni mahabhuta* include potassium, magnesium, iodine, chloride, acid phosphate, lipase, insulin etc, and *Vayu mahabhuta* include oxygen, carbon di oxide, vitamin C and thyroxin.

According to *Acharya Charka and Susruta* the seat of *Ranjak Pitta* is liver and spleen,^[12,13] *Vagbhata* ^[14]accept *Amayasya* its seat while *Acharya Sharangadhara* accepted the place of it is *Amayasya and Hridya*.^[15] *Ahara rasa* reached *yakrita* via absorption from *Pachmanasya* then it is stained with *Ranjak pitta* and gets converted into *Rakta*. This *Rakta* reached into the heart from where it pumps to body circulation. Thus *Ranjak pitta* plays an important role in erythropoiesis. In modern science the stage of erythropoiesis depend up on maturation factors such as iron, Vitamin B₁₂, B₆, C and folic acid and other substances. All these factors can be assumed as *Ranjak pitta* in *Ayurveda*.

In *Ayurveda* *Yuvan pidika* is considered as *Kshudra Roga* by various *Ayurvedic Acharya* like *Sushrut*,^[16] *Madhav*, *Sharangadhara*, *Vangsen* and *Chakrapani* while *Charaka* counted *pidika* in *rakta pradoshaja roga* (hematological disorder). All *Acharya* accept vitiation of *Kapha*, *Vata* and *Rakta* as its etiology.

Discussion regarding effect of drug

It is mentioned that the study was conducted on 30 patients. All these patients were treated with two tablets of *Varnya Mahakashaya Ghanvati* twice daily for sixty days along with *Chandra Prabha Lepa*. (formulated compound).

To assess the efficacy of therapy before and after treatment scores of the core symptoms of *Yuvan pidika* were obtained and used to assess the efficacy of therapy. Thus, obtained results in each group were statistically analyzed by using "Student's paired t test".

Varnya Mahakashaya Ghanvati along with *Chandra Prabha Lepa* (formulated compound) shows highly statistically significant result in all the adopted parameters like *Pidika* numbers, *Vedana*, *Ghanta*, *Snigdghata* and *Raktima* (<0.001). (Table-04)

Probable mode of action of drug

Both drugs "*Varnya Mahakashaya Ghanvati*" and "*Chandan Prabha lepa*" have property to reduce *Pidikaghanata* and *Pidikasankhya* and the main Role of *Padmaka* in *Pidikavedana* because the *Charaka* also mention *Padmaka* in *Vedanasthapana mahakashaya*. All ingredients of "*Varnya Mahakashaya Ghanavati*" and "*Chandan prabha lepa*" have *Madhur*, *Tikta*, *Kashaya Rasa*, *Madhur Tikta Vipaka* and *Sheeta Virya*.^[17]

Rasa: Analysis of *rasa* present in the individual drugs reveal that maximum number of drugs have *Madhur*, *Tikta* and *Kashaya rasa*. *Tikta rasa* is dominant in *Aakash mahabhuta* ^[18] and *Laghu guna* with probable action of *Arochakaghna* (treat loss of appetite), *Agnidipana* (increases metabolism) *Aharapachana* (helps in digestion), *lekhana* and *Ropana* property.^[19] (Healing of *yuvan pidika*)

Vipaka: *Vipaka* of all ingredients present in the trial drug compound have *Madhur* and *Katu Vipaka* ^[20] that cause catabolism in our body and thus remove obstruction of *Rakta Vaha Channels*. Thus pure *Rakta* was prepared which cause reduction in the numbers and density of *Yuvan pidika*.

Virya: Ingredients used in the preparation of trial drug compound chiefly of *Sheeta Virya*^[20]. *Sheeta Virya* by virtue of its *pita* and *Rakta* alleviating property it suppress burning, pain and redness of *Yuvan pidika*.

In this way these medicine provide relief in symptoms of *Yuvan pidika*.

CONCLUSION

On this basis of above study it is concluded that *Yuvan pidika* is *Kapha vata rakta janya* disorder. Both trial drugs *Varnya Mahakashaya Ghanvati* and *Chandra Prabha Lepa* are studied show improvement in symptoms like *pidikaghanatva* (density), *Vedana* (pain), *Snigdghata* (oiliness), *Raktata* (redness) of *Yuvan pidika*. Both drugs show highly significant (>0.001) efficacy in ameliorating disease.

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DRUG PHOTOGRAPHS

