



**ROLE OF JALOUKAVACHARANA IN MUKHADUSHIKA(ACNE VULGARIS)**

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**ABSTRACT**

*Acharya Sushrut* has mentioned the skin disease under “*Kshudra Rogas*” *Mukhadushika* is one of them. These are *Shalmali*, thorn like eruptions on the face. It is termed as *Mukhadushika*, due to its nature of deteriorating the beauty of one’s face and most commonly seen in adolescent age group. It affects the personality and appearance of an individual. *Doshas* and *Dushyas* involved in *Mukhadushika* are *Kapha*, *Vata*, *Rakta* & *Medha* and these affects the individual locally (face). Modern science described *Acne Vulgaris* as chronic inflammatory disease of Pilosebaceous unit in adolescence characterized by comedones, papules, nodules, cysts and often scars and affects about 80% of teenagers. *Acharya Sushrut* has considered *Raktamokshana* as *Shodhan chikitsa* and he also considered *Raktamokshana* as *chikitsaardha*. In this clinical study 30 patients of 16-30 age group were taken and *Jaloukas* were applied on patients locally. Anticoagulant, anti-inflammatory, analgesic property of leech saliva helps in relieving the symptoms such as inflammation, pain, papules, pustules, comedones, nodules etc. Results were highly significant and encouraging. *Jaloukavacharna* proved to be an easy and less invasive treatment without causing any adverse effect.

**Keywords:** *Mukhadushika*, *Acne Vulgaris*, *Jaloukavcharana*.

**INTRODUCTION:** Since ancient times, leeches were used to treat many illness and disease through bloodletting. *Sushrut* included bloodletting procedure under fine biopurification procedures stating that the removal of impure blood from the body treats the root cause of the sufferings. Leech therapy is used for many diseases e.g:- Arthritis, Varicose veins, Deep vein thrombosis(DVT), Ulcers, Bedsores, Cellulitis, Abscess and various skin diseases including Acne. *Acharya Sushrut* has emphasized the importance of *Rakta dhatu* and considered it as a *dosha*<sup>1</sup>. The best

treatment for vitiated *Rakta* is *Raktamokshana*. *Acharya Sushrut* has considered *Raktamokshana* as *Shodhan chikitsa* and he also considered *Raktamokshana* as *chikitsaardha*<sup>2</sup>. *Raktamokshana* includes *Prachana* & *Jaloukavcharna*. *Jaloukavcharna* is for localized area. Leeches by sucking the impure blood improves circulation of the affected area & helps in faster healing. Leech sucks only impure blood is described in *Ayurveda*. The bloodletting with the help of leech is painless and non invasive way of bloodletting.

Acne Vulgaris is a disease that affects almost 80% of individuals. It is the most common skin disease seen around the world. Approximately 95% to 100% of adolescent boys and 83% to 85% of adolescent girls aged 16 to 17 years are afflicted with this disease<sup>3</sup>. Face is the reflection of body and mind. For a person to be called healthy, he must be disease free as well as cheerful from inside, as *Ayurveda* also states in the definition of *Swastha*<sup>4</sup>. Although Acne itself is not life threatening, but it causes a severe distress to the human psyche. This disease causes a severe psychosocial burden in the patients, displaying the stigma on their skin for the world to see and criticize on a daily basis. Between 30% and 50% of adolescents experience psychological difficulties associated with acne, including concern about their body image, embarrassment, social impairment, anxiety, frustration, anger, depression, and poor self-esteem. Additionally, suicidal tendency related to the negative psychological impacts of acne have also been documented. Acne not only causes emotional distress, but also the anxiety evoked by acne aggravates the skin condition, thereby creating a vicious cycle. Acne Vulgaris is a polymorphic chronic inflammatory disease of pilo-sebaceous units characterized by comedones, papules, pustules, nodules, cysts, abscesses, and even widespread scarring sometimes. It occurs predominantly on the face and to a lesser extent on the back and chest. Non-inflamed lesions, the comedones, are either open comedones (black heads) or closed comedones (white heads). Inflammatory

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lesions may be superficial or deep and include papules, pustules and nodules.

There are various theories and researches which suggest the pathology of acne, but are not well proven.

These mainly involve:

1. Androgen-dependent overproduction of sebum
2. Follicular hyperkeratosis (closed and open comedones)
3. Increase in microbial flora (propionibacteria acnes)
4. Immunological processes and inflammation<sup>5</sup>

These events are not individual events, and are affected by each other.

In *Ayurveda*, a very similar description is given by *Ayurveda* stalwarts by the name of *Mukhadushika*, due to its nature of deteriorating the beauty of one's face. And as the disease is seen in adolescent age group, *Yuvanpidika* term is also given by the *Acharyas*. *Sushrut Samhita* is the first *Ayurveda* text to explain *Mukhadushika*. This disease is mentioned in most of the texts as *Kshudra-roga*. *Acharya Sushrut* have mentioned the vitiation of *Vayu*, *Kaph* and *Rakt* in the pathology of the disease<sup>6</sup>. *Acharya Vaghbhatt* has mentioned the role of *Meda* in the pathology of *Mukhadushika* which resembles the modern theory of sebum involvement in the pathogenesis of acne<sup>7</sup>. Acne Vulgaris is regarded as a normal phenomenon by the common mass, especially parents, so that most people do not seek treatment for acne. Unfortunately this leads to progression of acne into

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inflammatory lesions which heal only after leaving behind cosmetically troublesome scars (*Vranavastu*)<sup>8</sup>. Most teenagers tend to spend a huge sum of money in buying OTC ointments/lotions making condition more troublesome. Modern medications for acne include topical therapies; antimicrobials, hormones, surgery, U-V Irradiations; Intra lesions injections etc. But these have their own limitations. The topical treatment includes Benzoyl peroxide (2.5-10%), Topical retinoids (tretinoin, isotretinoin, adapalene, tazarotene etc.), Topical antibiotics (erythromycin, clindamycin etc.), and other topical agents like (salicylic acid, azelaic acid etc.). Systemic therapy includes systemic antibiotics, hormonal therapy and oral Isotretinoin. However, long term daily use of this drug results in frequent side effects, some of which may lead to disastrous complications resulting in difficulties in complying with the treatment. While Antibiotic resistance in acne patients to doxycycline, azithromycin, clindamycin, tetracycline is also an emerging problem. But all these modern treatment modalities burn a hole in the pocket without permanently curing the disease and are only effective until used, with a very high rate of relapse on leaving medicine<sup>9</sup>. Looking into the above mentioned facts there is a need for a treatment which can prevent complications of the disease as well as reduces the recurrence effectively. In *Ayurveda* texts, *Vamana Karma* and *Raktamokshana* are chief purificatory procedures mentioned for the treatment of *Mukhadushika*. *Raktamokshana*, *Jalaukavacharana* is a

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method, which is much safer, less complicated and an almost painless procedure as compared to others<sup>10</sup>.

#### AIM AND OBJECTIVES:

1. To evaluate the effect of *Jaloukavacharana* in the management of *Mukhadushika*.
2. To study the clinical resemblance of *Mukhadushika* with *Acne Vulgaris*.

#### MATERIAL AND METHODS:

**Source of Data:** A minimum no. of 30 patients diagnosed as *Mukhadushika* was randomly selected for the study from OPD and IPD of Department of *shalyatantra*, Jammu Institute of Ayurveda & Research Hospital, Nardni (Raipur), Jammu.

#### Method of Collection of Data

- The patient selected for study will be selected to *Jaloukavacharana* by *Nirvish Jalouka*.
- A special performa will be prepared with all the points pertaining to history, physical signs and symptoms to confirm the diagnosis as mentioned in the classics as well as from allied sciences.
- The patient will be treated with *jaloukavacharana* weekly once for four weeks.

**Assessment Criteria:** The assessment criteria are as follows:

#### Inclusion Criteria:

- Clinically diagnosed patients of *Mukhadushika* will be included for the study.
- Patients between the ages 15 to 30 years will be taken.
- Patients presenting with cardinal features like *Shalmali Kantakakara*, *kandu*, *toda*, and *Mukhadushika* and who are fit for *Raktamokshana*.

**Exclusion Criteria:**

- *Raktamokshanaayogya*.
- Bleeding tendency disorders.
- Diabetes mellitus.
- Acne Rosacea.
- Sycosisbarbae.
- Staphylococcal boils.
- Gram negative folliculitis.
- Pregnancy and lactation.

**Grading of Acne:****Grades      Morphology of Leisons**

Grade 1      Whiteheads, blackheads, few or no red papules and inflammation of skin.

Grade 2      Multiple red papules (2-4mm) with some pustules and slight inflammation of skin.

Grade 3      Papules and pustules in greater number few larger (>5mm) red nodules, inflammation of skin is obvious, involves chest, shoulders and upper back as well. Chances of scarring are high.

Grade 4      Numerous papules, pustules, nodules and cysts. Inflammation is pronounced. It is very painful, affects entire back, shoulders and upper arms. Scarring is a prominent feature.

**Table 1:- Grading for symptoms of acne**

Grading	Pain	Inflammation	Redness	Tenderness	Papules	Pustules	Nodules
0	No pain	No Inflammation	No Redness	No Tenderness	No Papules	No Pustules	No Nodules
1	Mild	Mild	Mild	Mild	Mild	Mild	Mild
2	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
3	Severe	Severe	Severe	Severe	Severe	Severe	Severe

**Mode of Action:** Leech resides in the water, hence being *Sheeta* in nature pacifies *pittadosha*<sup>11</sup>.

**Lab investigations:**

Hb%,T.L.C.,D.L.C.,E.S.R.,Random Blood Sugar ,BT/CT

These investigations were carried out before the initiation of trial to rule out any systemic pathology.

**Causes For Acne According To Ayurveda:**

1. Intake of fried & junk food – vitiates *kapha* & *pitta*, leads to blood vitiation & acne formation.
2. Night awakening.
3. Over use of cosmetics – direct impact on facial skin.

4. Stress & anxiety – leading to metabolism imbalance and produce toxins.

5. Physiological changes taking place during adolescence.

6. Excess intake of non- vegetarian food. Due to above reasons *Kapha*, *Vatadosha* vitiates they inturn leads to vitiation of *Rakta* and this causes constant irritation in the localized areas like face, neck, chest and back and multiple small lesions are manifested which are known as Acne (*Mukhadushika*).

**Method of Leech Application:****Purva Karma:-**

- a. **Preparation of the leeches:-** On every sitting new leeches were used for the procedure. Leeches were first prepared for the *Karma* by keeping in *Haridra Jala*,

prepared by adding a few pinches of *Haridra churna* (*Curcuma powder*) in a kidney tray half filled with fresh water. When the leech became active i.e. started moving quickly in the vessel, it was taken out and transferred into a vessel containing fresh cold water.

**b. Preparation of patient:-** Patient was advised to do self-*Abhyanga* of face followed by *Ushanodaka Prakshalana* for 3 days at his/her home. While on the 4th day, the patient was given mild *Abhyanga* followed by *Vashpa Swedana* (steam fomentation) over the face for a few minutes to facilitate the blood-letting. Patient's face was then cleaned by dry cotton to remove all the greasiness over the face. After that, patient was made to lie in a comfortable position.

**II. Pradhan Karma:-** Pricks by lancet were done near the location of the lesion for application of leeches at that particular site. Prepared active leeches were then kept over the oozing blood. When a leech attached itself to the site, wet cotton pad was placed over it. In most of the patients, 3-5 leeches, 3-4 inches in size, were used during each sitting that sucked 60-100ml of blood.

### **III. Paschat Karma:-**

**a. Leech Care:-** Generally after 30-45 minutes, leech automatically detached itself from the site. *Haridra churna* was then sprinkled over the leech's anterior sucker (mouth) for inducing vomiting. Sometimes gentle squeezing of the leech was required (from its posterior sucker toward anterior sucker) to expel out the sucked blood. After expelling all the blood from its gut, the leech became active again and such evacuated leeches were kept separately in fresh water

mentioning the date of their use. Similar procedure was applied 4 times on a weekly interval.

**b. Patient Management:** When the leech detached itself from the site, there occurred a secondary bleeding from the site of application for 2-4 hours or more. *Shatdhauta Ghrita* was applied over the bite lesions. A few minutes later, cotton gauze pieces were kept over the bleeding sites with firm pressure to absorb the secondary bleeding. When the piece got attached to the site forming a clot, the patient was advised not to remove it until the next morning to avoid any bleeding.

In a few patients in whom continuous bleeding was present even on the next day, tight compression bandaging was done to check the bleeding<sup>12</sup>.

**Side Effects of Leech Therapy:** All medicinal treatment involve some risks. Some common complications with leech therapy are :-

- Infection.
- Anaemia.
- Leech migration.
- Allergic reaction.

**Infection:** *Aeromonashydrophila* is the bacteria associated with these infections. Septicemia, cellulitis & meningitis due to this bacteria can be seen.

**Anaemia:** Leech can extract as much as 15ml of blood. In some cases bite may continue to ooze for days and about 50% of patients may require transfusion.

**Justification:** Ayurvedic treatment believes in expelling the root cause of acne by *shodhanachikitsa* (*Jaloukavacharana*). Leech therapy is a well accepted treatment for vitiated *Raktadosha*. As the circulating blood acts as a carrier of vitiated doshas & responsible for the disease producing pathology. The process of removing this stagnated blood i.e. leech therapy will prove significant to treat the disease. Leech when

applied at the site of the disease, removes the stasis of blood. It also improves the micro – circulation to the tissues by removing stagnated blood. Leech therapy also improves capillary tissue perfusion & thus supplying proper oxygen & nourishment to the skin. Hence, we conclude the leech therapy is the best alternative in treating acne.

### RESULTS AND OBSERVATIONS: TABLE NO 2:

	Mean Bt	Mean At	Sd Bt	Sd At	Se Bt	Se At	T	Df	Sig. (2-Tailed)
Comedone_BT - Comedone_AT	.4333	.1000	.77385	.30513	.14129	.05571	3.010	29	.005
Papules_BT - Papules_AT	.4000	.0667	.72397	.25371	.13218	.04632	3.010	29	.005
Pustules_BT - Pustules_AT	.2667	.0333	.58329	.18257	.10649	.03333	2.536	29	.017
Nodules_BT - Nodules_AT	.0667	.0000	.25371	.00000	.04632	.00000	1.439	29	.161
Scar_BT - Scar_AT	.3333	.0667	.71116	.25371	.12984	.04632	2.504	29	.018
Pain_BT - Pain_AT	1.3000	.1333	.46609	.34575	.08510	.06312	16.858	29	.000
Inflm_BT - Inflm_AT	1.2000	.1000	.40684	.30513	.07428	.05571	14.966	29	.000
Redness_BT - Redness_AT	1.3333	.1333	.47946	.34575	.08754	.06312	16.155	29	.000
Tenderness_BT - Tenderness_AT	1.2667	.1333	.44978	.34575	.08212	.06312	17.954	29	.000

**DISCUSSION:** *Mukhadushika* is included in *kshudrarogas* by different Acharyas. *Doshas*

involved in *mukhadushika* are *Kapha*, *Vata*, *Rakta*. *Mukhadushika* mainly affects the

face of an individual and considered as barrier in beauty. It harasses the individual physically as well as mentally. *Mukhadushika* considered as *Mala* of *Shukra Dhatus*. Thus increase in *Shukra Mala* causes physiological changes in the body during adulthood due to which some hormones increase in the body which in turn cause the disease.

Leeches sucks the vitiated blood from the local area and at the same time leeches also release enzymes. Leech's saliva contains many enzymes like Hirudin (anticoagulant), Bdellin (anti-inflammatory), Apyrase (platelet anti-aggregate factor), Hyaluronidase (factor for diffusion and as antibiotic), vasodilator substances etc. When leech applied on the face of patient, enzymes and other compounds that are present in leech's saliva enters into patient's blood. Anticoagulant present in leech's saliva helps in free flow of blood through vessels. Vasodilator substances also helps in free flow of blood by dilating the vessels. Anti-inflammatory and analgesic property of leech's saliva helps in relieving pain and inflammation<sup>13</sup>. According to *Ayurveda* in *Mukhadushika* vitiated *dosha*, *dhatu* and *mala* get accumulated in *srotas* causing blockage and leads to *Pidika* formation. *Jalaukavacharana* is a bio-purificatory method that removes deeply seated toxins by letting out blood, clearing *srotasa* and pacifying vitiated *doshas*.

**CONCLUSION:** According to *Acharya Sushrut* cardinal feature of the disease is *Shalmali Kantakvat pidika*, *Todha* and *Ghanpidika*. *Mukhadushika* is considered as *Sadhyu Vyadhi*. It can be seen at any age but

frequently seen in young age. Acharyas have described this disease as *Yauvanpidika*, which shows the age of occurrence of the disease. *Acharya Charaka* has described the age of 16-30 as *Vivardhamana Dhatus Kala*, which is the starting period of functional state of *Shukra Dhatus*<sup>14</sup>. Modern medical science considered hormonal imbalance, specially of androgens as one of the important causative factor, which in turn stimulates the sebaceous glands to produce excess sebum. This may be the cause of occurrence of disease because hormones and *Shukra Dhatus* are more active during this period.

Leech therapy is very simple and cheaper tool for the treatment of *Mukhadushika*. It plays an important role in purification of blood and it also maintains blood flow in the face and it helps in reducing the symptoms of Acne. Leech therapy has very least side effects and it is a quite effective remedy for the treatment of *Mukhadushika*.

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