



International Research Journal of Ayurveda & Yoga

An International Peer Reviewed Journal for Ayurveda & Yoga



SJIF Impact Factor : 5.69

ISRA Impact Factor : 1.318

ISSN:2581-785X

Review Article

Volume: 3

Issue: 10

Understanding Of *Yuvana Pidika* (*Mukhadushika*) W.S.R. To Acne Vulgaris And Their Management – A Review

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ABSTRACT: Acne vulgaris is chronic inflammation of pilosebaceous follicles, characterized by a polymorphic eruption of comedones, erythematous papules, pustules and nodules. Acne may manifest as a symptom of underlying hormonal disturbances and syndromes. It is extremely common, generally starts during puberty and has been estimated to affect 90% adolescents. It is usually most severe in the late teenage years but can persist in to the thirties and forties, particularly in females. Androgenic stimulation at puberty is believed to increase the activity of sebaceous glands and sebum production leading to increased oiliness of the skin. This is acted upon by the normal flora of the skin especially the *Propionibacterium acnes* which produce lipases to breakdown the oils in the sebaceous secretion and produce large quantities of the free fatty acids. These fatty acids along with other components of the sebaceous secretion and the bacteria, are responsible for the producing the acne lesion. In modern medicine corticosteroids are used to treat the Acne vulgaris which have many side effects. Acne vulgaris is correlated with *Yuvana Pidika* in *Ayurveda*. It is also known as *Mukhadushika*. *Acharyas* are mentioned in *Ayurvedic* text book *Mukhalepa*, *Raktamokshana* and *Vamana Karma* for treatment of Acne vulgaris which are so effective on acne vulgaris.

Keywords: Acne vulgaris, Sebaceous gland, *Yuvana Pidika*

Article received on-17 Sept

Article send to reviewer on-21 Sept.

Article send back to author on-5 Oct.

Article again received after correction on -11 Oct.

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How to Cite the Article Sahu Abhilasha, Vyas Dr. O.P. Understanding of *yuvana pidika (mukhadushika)* w.s.r. to acne vulgaris and their management – a review., IRJAY, October: 2020 Vol- 3, Issue-10; 244-253

Doi: <https://doi.org/10.47223/IRJAY.2020.3104>

INTRODUCTION:

Acne vulgaris is a chronic skin condition involving blockage and/ or inflammation of pilosebaceous units (hair follicles and their accompanying sebaceous glands). Acne is seen in most teenagers. Peak severity is in the late teenage years but acne may persist into the third decade and beyond, particularly in females¹. It is a disease in which the pilosebaceous follicle becomes oversensitive to normal level of testosterone². The permissive factor for expression of the disease in adolescence is the increase in sebum production by sebaceous gland after puberty³. Sebaceous glands are holocrine glands which occur in association with hair follicles and produce an oily secretion called sebum. This secretion has several biological functions, the main function being maintaining the suppleness of the skin. The glands are

present all over the body except for the palms, the soles, the eyelids the finger tips. These are most numerous on the scalp, the face, the upper middle portion of chest and the back. Androgens increase the size of the sebaceous glands, while estrogens reduce the size of the sebaceous gland⁴. In Acne vulgaris, small cysts called comedones, form in hair follicles due to blockage of the follicular orifice by retention of sebum and keratinous material. The activity of bacteria (*Propriobacterium acnes*) within the comedones releases free fatty acids from sebum, causes inflammation within the cyst, and result in rupture of the cyst wall. An inflammatory foreign- body- reaction develops as a result of extrusion of oily and keratinous debris from the cyst³. In *Ayurveda* Acne vulgaris is correlated with *Yuvana Pidika*, which is also called

Mukhdushika. Yuvana Pidika is caused by *Kapha, Vata, and Rakta dosha*. Boils like spines of *Salmali* appear on the face of youthful person. In modern medicine high dose of corticosteroids are used to treat the *Acne vulgaris*, which have many side effects. In *Ayurveda* mentioned application of *Mukhalepa, Raktamokshana, and Vamana Karma* to treat the *Yuvana Pidika* (*Acne Vulgaris*).

AIMS

1. The main aim of this article is to describe the treatment of *Yuvana Pidika* through *Ayurveda*.
2. To explain the *Yuvana Pidika*.

OBJECTIVE

1. To describe the etiology and symptoms of *Acne vulgaris*.
2. To describe the *Nidana* and *Rupa* of *Yuvana Pidika (Mukhdushika)*.

MATERIAL & METHOD

Ayurvedic and modern medicine literatures were referred to collect the relevant materials.

EPIDEMIOLOGY:⁵

Acne vulgaris is most common between the age of 12 and 20. It often begins around 10-

13 years of age, lasts 5-10 years and usually resolves by age 20-25.

ETIOLOGICAL FACTORS²:

Androgens

Follicular keratinization

Heredity

Propionibacterium acnes

Immunological factors

Environmental factors

Exacerbating factors- *Acne* worsens with stress and in premenstrual period. In patients with aggressive or recalcitrant *acne*, underlying causes may be a virilizing syndrome in women, acromegaly, occupational exposure to acnegenic agents. Drugs that worsen *acne* are steroids, hormones, anti-epileptic drugs, iodides; can follow facial massage.

ETIOPATHOGENESIS¹:

Acne occurs through the interplay of 4 major factors:

1. Increase sebum production
2. Follicular plugging with sebum and keratnocytes
3. Colonization of follicles by *Propionibacterium acnes*

4. Release of multiple inflammatory mediators.

Increase sebum production- with the onset of puberty, sebaceous glands enlarge and sebum production increases. There is a clear relation between severity of acne and sebum production. In the complete absence of sebum, acne does not occur. Androgens are mainly responsible for increased sebum production. Follicular plugging with sebum and keratinocytes: Blockage of pilosebaceous duct due to retention of keratinous material and sebum leads to formation of small cysts, called comedowns. Colonization and activity of bacteria (*Propionibacterium acnes*) within the comedowns release free fatty acids from sebum, causes inflammation within the cyst and rupture. Rupture of the cyst release oily and keratinous debris leading to an inflammatory foreign body reaction in the skin.

CLINICAL FEATURE:

The clinical hallmark of acne vulgaris is the comedowns appear as 1 to 2-mm pebbly white papules, which are accentuated when the skin is stretched. They are the precursors of inflammatory acne lesions of acne vulgaris³. The comedones are open or closed. The contents of closed comedones

are not easily expressed. The closed comedone, a whitehead, is a small, flesh colored papule, that has only a microscopic opening, which prevents its contents from escaping. Continued production of sebum and keratin, leads to rupture of the follicular wall, releasing the contents into the dermis and initiating an inflammatory response⁶. Open comedowns, which rarely result in inflammatory acne lesions, have a large dilated follicular orifice and are filled with easily expressible oxidized, darkened oily debris. Comedowns are usually accompanied by inflammatory lesions: papules, pustules, or nodules⁷. The lesions are localized to the face, neck, back, anterior chest, and extremities⁸. The earliest lesions seen in early adolescence are generally mildly inflamed or non inflammatory comedowns on the forehead. Subsequently, more typical inflammatory lesions develop on the cheeks, nose and chin. The most common location for acne is the face, but involvement of the chest and back is not uncommon. However, a small number of patients develop large inflammatory cysts and nodules, which may drain and result in significant scarring⁷.

In Ayurveda:

Acharya Sushruta mentioned *Yuvana Pidika* in *Kshudra Roga Prakarana*. Acharya Sharangdhara mentioned *Yuvana Pidika* as the *Mala* of *Shukra Dhatu* along with *Vaktra snigdhta*.

Nidana: *Vata, Kapha, & Rakta* produce the *Yuvana Pidika*.

Ahara- *Katu, Guru, Madhura, Atisnigdha, Dugdha, Vidahi, Tikshna, Lavana, Madya, Adhyashana*

Vihara- *Vegavidharana, Jagarana, NidraViparyaya, Upvasa, Atapa Sevana, absence of bloodletting, suppression of urge of vomiting*

Manasika- *Atishoka, Kshobha, Krodha, Santap*

Kala- *Vasanta, Grishma, Sharat kala*

Samprapti Ghataka:

Dosha: *Kapha, Vata*

Dushya: *Dhatu- Rasa, Rakta, Meda*

Upadhatu- *Tvacha*

Mala- *Sveda, Tvakasneha*

Srotas: *Svedavaha*

Srotodusti: *Sanga*

Agni: *Jathragni Mandya*

Sthana: *Tvaka*

Samuttha: *Amashaya*

Marga: *Bahya Marga*

Rupa: Eruption arising on the face, resembling the thorns (spouts) of a *Shalmali* tree, especially in youths, produced by *Kapha, Vata* and *Rakta* is known as *Mukhdushika*⁹. They are also known as *Yuvana Pidika*¹⁰. *Pidika* is painful, thick containing fat inside, appearing on the face¹¹.

INVESTIGATION:

Investigations are not required in typical acne vulgaris, secondary causes and suspected underlying disease or virilization should be investigated.

MANAGEMENTS¹²:**In modern medicine-**

Treatment of acne vulgaris is directed towards elimination of comedones by normalization of follicular keratinization, decreasing sebum production, decreasing the population of *P. acnes*, and decreasing inflammation.

Local measures:

Regular washing with soap water.

Topical keratolytic agents- retinoic acid, benzoyl peroxide, or salicylic acid. They prevent the formation of comedones.

Topical antibacterial agents – azelaic acid, topical erythromycin, or clindamycin. They inhibit *Propionibacterium acnes*.

Incision and drainage of cysts.

Intralesional injection of triamcinolone acetonide reduces inflammation and hastens the resolution of cysts.

Dermabrasion and excision of scars to improve skin appearance.

Systemic measures:

Useful in severe acne with preminent inflammatory component.

Antibiotics- tetracycline (250-500 mg BD), or doxycycline (100 mgBD). These antibiotics have anti- inflammatory effect in addition to their antibacterial effect. Oral antibiotics should be given for at least 6 months.

Systemic retinoids (isotretinoin) are useful in severe acne unresponsive to other

therapies. Retinoids have significant adverse effects including teratogenicity.

Estrogens (oral contraceptive) also improve acne in women.

CHIKITSA:

The first step of treatment is *Nidana Parivarjana*.

Principle of treatment :1) *Shodhana Chikitsa* 2) *Shamana Chikitsa*

Shodhana Chikitsa:

When the *Mukhdushika* does not subside; *Vamana* therapy, *Nashya*, *Raktamokshana* (cutting the vein in the forehead) should be resorted to.¹³

Vamana Karma: *Vamana Karma* means expel out the vitiated *Doshas* through oral rout. The main action of *Vamaka Dravya* is on the stomach of the individual. In the stomach it acts on the very root causes of the vitiation of *Kapha*. The vitiated *Kapha* present in entire body is alleviated and expelled out though the mechanism of *Vamana* and the disease process is stopped¹⁴.

Raktamokshana: The best *Shodhana* for *Raktadushti*. It is useful in very intractable cases, where all the method of treatment has

been tried with no favorable response. *Jalouka-avacharana* is the mildest of all the methods used for extracting blood. *Jalauka* (Leach) is useful for bloodletting in *Yuvana Pidika* (*Mukhadushika*) caused due to vitiated *Rakta*.

Nashya Karma: *Nashya Karma* refers to administration of medicines in various forms through nostrils¹⁵. *Tikshna Nashya* is a Shodhana type of *Nashya* which uses herbs in a sesame oil base. They increase secretions which help remove *Ama* from nose and head. *Nashya* is *Kaphanisharaka*, *Vatashamaka* which help to treat the *Yuvana Pidika*¹⁶.

Shamana Chikitsa:

Rasa Aushadhi: *Gandhka Rasayana*

Talkeshvara Rasa

Rasamanikya Rasa

Dose: 125 mg – 250 mg; *Anupana* ; luke warm water; Two time/ day empty stomach

Vati: *Kaishore Guggulu*

Arogyavardhani Vati

Panchatiktagrita Guggulu

Khadiradi Vati

Dose: 250mg- 500mg; *Anupana* ; luke warm water, *Khadira Kashaya*, *Panchtikta Kashaya*; Two time/ day empty stomach

Grita: *Mahatiktaka Grita*

Khadiradya Grita

Tiktaka Grita

Dose: 5-10 ml; *Anupana* : luke warm water; One time/ day empty stomach

Churna: *Panchnimba Churna*

Nimbadi Churna

Triphala Churna

Dose: 3-6 gm; *Anupana* : luke warm water, *Khadira Kashaya*, *Panchtikta Kashaya*; Two time/ day empty stomach

Kwath: *Mahamanjisthdi Kwath*

Sarivadyaashva

Khadirarishta

Dose: 15ml-30 ml; *Anupana* : *Sama Bhaga Jala*; Two time/ day after meal

Avaleha: *Hridrakhanda*

Dose: 5-10 gm; *Anupana* : luke warm water, milk ; Two time/ day empty stomach

Sthanika Prayogartha: A paste of *Rodhra*, *Kustumburu* is useful in *Mukhdushika*.

Apply paste of tender leaves of *Vat* (*Ficus Benghalensis*), and *Narikela Shukti* (Coconut shelles)¹³.

Mukhkantikara Lepa:

Sharp thorns (sprouts) of *Salmali* tree made a paste with milk and applied to the face.

Paste of *Siddharthaka*, *Vacha*, *Lodhra*, and *Saindhava* applied on the face.¹⁷

Apply paste of paste of *vacha*, *Rodhra*, and *Saindhava* mixed with *Sarshapa*.

Apply paste of paste of *dhanyaka*, *Vacha*, *Lodhra*, and *Kustha*.¹⁸

CONCLUSION:

Acne vulgaris is a disorder characterized by chronic inflammation of blocked piloceaceous follicles. It predominantly affect on teenagers. It is correlated with *Yuvana Pidika (Mukhdushika)*¹⁹. *Yuvana Pidika* produced by *Kapha*, *Vata*, & *Rakta Doshas*. *Raktamokshana* (bloodletting) is the best for *Rakta Dushti*. *Vamana* therapy expel the vitiated *Doshas* throughout the body and balance between all *Doshas*. *Mukhalepa* subside the *Lakshana* of *Yuvana Pidika* due to vitiated *Doshas*.

Acknowledgement:- Nil

Financial Assistant:- Nil

Conflict of interest :- Nil

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