“Yuvanpidika : A modern and Ayurvedic perspective.”
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ABSTRACT

Acne vulgaris is a chronic skin disease of the pilo-sebaceous unit and develops due to blockages in the skin's hair follicles. It is characterized by blackheads or whiteheads, pimples, oily skin, and possible scarring. It primarily affects areas of the skin with a relatively high number of oil glands, including the face, upper part of the chest, and back. These blockages are thought to occur as a result of the following four abnormal processes: a higher than normal amount of oily sebum production (influenced by androgens), excessive deposition of keratin protein leading to comedo formation, colonization of the follicle by Cutibacterium acnes (C. acnes) bacteria, and the local release of pro-inflammatory chemicals in the skin. The resulting appearance can lead to anxiety, reduced self-esteem and, in extreme cases, depression or suicidal thoughts.

In Ayurveda, it is termed as Mukhadushika. In Ayurveda, Mukhadushika is described under the heading of Kshudra rogas. These diseases are called as Kshudra because of their lesser severity. According to Sushruta Samhita Nidan Sthana, these are Shalmali thorn like eruption found on the face of adolescents are called as Mukhadushika or Yuvan Pidika. These are impregnated with Meda. Vitiated Vata Dosha, Kapha Dosha and Rakta Dosha are considered to be the main Samprapti Ghatak of Mukhadushika.

In Ayurveda treatment of diseases is mainly of two types of Chikitsa are described i.e. Shodhana Chikitsa and Shamana Chikitsa. Similarly in Mukhadushika also Shodhana and Shamana Chikitsa is done.

Keywords: Mukhadushika, Ksudra rogas, Yuvanpidika, Samprapti Ghatak Shodhana chikitsa, Shamana chikitsa, Yuvanpidika

Introduction:

Face is a representation of any human's personality, even in this era first impression of a human being is based on the face value. And Acne vulgaris is the most common disease faced by teenagers which mostly affects the face. Which has now become a big reason for social stigma, anxiety and low confidence.

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Yuvanpidika or Mukhadushika in Ayurvedic Literature is described under the heading of Kshudra Rogas. These diseases are called as Kshudra because of their lesser severity. According to Sushruta Samhita Nidana Sthana, painful eruptions like thorn of Shalamali, impregnated with meda are found on the face of adolescent are called as Mukhadushika or Yuvanpidika. In Ayurveda, it has been mentioned that almost all diseases are attributed to an abnormality of tri doshas and sapta dhatus. Vitiated Kapha dosha, Vata dosha, Rakta dhatu are main Samprapti Ghatak in development of Mukhadushika. According to Sushruta Samhita, Rakta dhatu dushti is one of the main causative factor in Yuvanpidika. (2)

Yuvanpidika resembles Acne vulgaris. Skin being the largest body organs needs to be taken care of. It is important to pay attention of this part of the body. Skin is said to be the presentation of our state of heath and mind. Its appearance reflects our age, origin, health and even state of mind Tvak according to Ayurveda is not only the outer covering of body, but it is a Gyanendriya called Sparshanendriya, which encompasses the body and Mana (Udbhayendriya). The most common ailment that a teen suffers in this age is acne. They mostly occur in the youths or the Yuva and in form are like small pustules or boils or Pidika hence they are called, ‘Yuvanpidika’. And for the same reason it is also called ‘Tarunyapitika’. This disease affects the face and vitiates the facial appearance; this is why it is called ‘Mukhadushika’.

Patho-Physiology:
Acne vulgaris is a chronic skin disease of the pilosebaceous unit and develops due to blockages in the skin's hair follicles. These blockages are thought to occur as a result of the following four abnormal processes: a higher than normal amount of oily sebum production, excessive deposition of keratin protein leading to comedo formation, colonization of the follicle by Cutibacterium acnes (C. acnes) bacteria, and the local release of pro-inflammatory chemicals in the skin. The earliest pathologic change is the formation of a plug (a microcomedone), which is driven primarily by excessive growth, reproduction, and accumulation of skin cells in the hair follicle. Increased production of oily sebum in those with acne causes the dead skin cells to stick together. The accumulation of dead skin cell debris and oily sebum blocks the pore of the hair follicle, thus forming the microcomedone. (4)
There are three major factors thought to be important in the pathogenesis of *Acne vulgaris*:

**Over-production of sebum.**

- Sebum is lipid produced by sebaceous glands and is liquid at room temperature.
- It consists almost entirely of triglyceride and hydrolysis products of triglyceride, wax esters (esters of long chain fatty acids and long chain fatty alcohols) and squalene (a long chain hydrocarbon precursor of cholesterol).
- The role of this lipid in normal physiology and in the pathogenesis of acne vulgaris is not clear, but it is known that acne patients, as a group, produce more sebum than controls.

**Abnormal follicular keratinization**

- The upper part of the follicle produces a stratum corneum, similar to that found on normal skin, which must "desquamate" (that is, lose cell to cell cohesion) in an orderly way.
- This seems to not occur in acne patients and leads, at least in part, to the formation of the follicular plug. This is the sine qua non of *Acne vulgaris*.

**Presence of follicular bacteria, specifically *Propionibacterium acnes***

- This is a normal colonizer of human follicles but seems to be present in excessive numbers in patients with acne and plays a role in the induction of inflammation in association with the follicular plugs.
- The relation and importance of the above three factors has not been worked out. There is still hot debate over the role sebum may play in the formation of comedones or inflammation, and it is known that reduction in sebum will be associated with improvement in acne.
- On the other hand, improvement in acne can be seen from topical treatments that do not alter sebum production but do alter follicular keratinization.\(^5\)

Risk factors for the development of acne, other than genetics, have not been conclusively identified. Possible secondary contributors include hormones, infections, diet, and stress. Studies investigating the impact of smoking on the incidence and severity of acne have been inconclusive. Sunlight and cleanliness are not associated with acne.

**Genes:**

Acne appears to be strongly inherited; genetics explain 81% of the variation in the population. \(^6\) Studies performed in affected twins and first degree relatives further demonstrate the strongly inherited nature of acne. \(^6\) \(^7\) Acne susceptibility is likely due to influence of multiple genes, as the disease does not follow a classic inheritance pattern. These gene candidates include certain variations in Tumor Necrosis Factor-alpha (TNF-alpha). \(^8\)

**Hormones**
Hormonal activity, such as occurs during menstrual cycles and puberty, may contribute to the formation of acne. During puberty, an increase in sex hormones called androgens causes the skin follicle glands to grow larger and make more oily sebum. The androgen hormones testosterone, dehydrotestosterone (DHT), and dehydroepiandrostosterone (DHEA) are all linked to acne. High levels of growth hormone (GH) and insulin-like growth factor (IGF-1) are also associated with worsened acne. Medical conditions that commonly cause a high-androgen state, such as polycystic ovary syndrome, congenital adrenal hyperplasia, and androgen-secreting syndrome, can cause acne in affected individuals. Conversely, people who lack androgenic hormones or are insensitive to the effects of androgens rarely have acne. Pregnancy can increase androgen levels, and consequently, oily sebum synthesis.

Infections

The anaerobic bacterial species Cutibacterium acnes (formerly Propionibacterium acnes) contributes to the development of acne, but its exact role is not well understood. There are specific sub-strains of C. acnes associated with normal skin and others with moderate or severe inflammatory acne. It is unclear whether these undesirable strains evolve on-site or are acquired, or possibly both depending on the person. These strains have the capability of changing, perpetuating, or adapting to the abnormal cycle of inflammation, oil production, and inadequate sloughing of dead skin cells from acne pores.

Infection with the parasitic mite Demodex is associated with the development of acne. It is unclear whether eradication of the mite improves acne.

Environmental factors

Mechanical obstruction of skin follicles with helmets or chinstraps can worsen pre-existing acne.

Nidan Panchak of Mukhadushika Nidan

(i) Ahara - Ati ushna, ati snigdha, ati tikshna, Guru, Vidahi Annapana causes the disturbance of Tridoshas.
(ii) Vihara - Ratrijagaran, Atapsevan, Diwaswapna
(iii) Kala - The Vata and Kapha are vitiated by sheeta Guna of climate and Ushna Kala vitiated Rakta Dhatu.
(iv) Vaya - Mostly occurs in Tarunya or YuvaAvastha hence also called Tarunyapitika
(v) Mansik Nidan - Krodh, Chinta causes Pitta Prakopa and Vata Vridhi.

Ati Shoka
Kshobh (Botheration)
Santapa
(vi) Antahstravi granthi - Endocrinal factor increased production of sex hormones. The sebaceous gland hyperactive androgen and progesterone are responsible for hyperplasia of oil glands.

Purva- Roopa (Premonitory symptoms/signs) - Yuvanpidika's Poorva–Roopa are not specifically mentioned by any Granthakara, it may be as followed-Kandu (itching), Todvat vedna (pain), Shotha (swelling), Vaivarnya (skin discoloration).

3. Roopa (Signs and Symptoms)-
The following are clinically manifestations of *YuvanPidika* - *Pidika* (acne) is the main symptom with associated symptoms like *Ruja* (pain), *Kandu* (itching), *Strava* (discharge), *Ghan* (dense) and morphologically similar to *Shalmali Kantaka* (thorn of *Shalmali*).

4. **Samprapti Ghatak** -
   (i) *Dosha* - *Kapha, Vata, Rakta*.
   (ii) *Dushya* - *Twacha, Rasa, Rakta*.
   (iii) *Agni* - *Jataragni, Dhatwagni*.

5. **Symptoms** -
   (i) *Pain* (*Vedana*)
   (ii) *Itching* (*Kandu*)
   (iii) *Swelling* (*localized Shotha*)
   (iv) *Skin discoloration* (*Vaivarnya*)
   (v) *Discharge* (*Sraava*)
   (vi) *Acne* (*Pidika*)

**Management of YuvanPidika** -
In Ayurvedic text mainly two types of *Chikitsa* are described so following therapies are to be advised for the disease *Mukhdushika* as-
(i) *Shodhan Chikitsa* - *Vaman, Virechan, Nasya, RaktaMokshna* etc.
(ii) *Shaman Chikitsa* - Internal medicine and external applications of drugs.

1. **Shodhan Chikitsa** -
   a) *Vaman Karma* [Emesis] - It is said to be the best procedure to subside the *Kapha* abnormalities as told by both *Acharya Sushruta* and *Vagbhatha*. The *Vamak* dravyas help to expel the *Kapha Dosha* through *Mukha*. *Samprapti Vighatana* of *Mukhdushika* is done by *Vaman karma*. All classical texts state *Vaman* to be the prime treatment of *YuvanPidika*.
   b) *Virechana Karma* - *Virechan* therapy is said to be the best procedure to subside *Pitta Dosha*.

   The purgative drugs expel the excess *Pitta* from the *Guda Marga*. Properties of *Pitta* and *rakta* are similar, they are depended on each other therefore *Virechana* is also effective in *Raktaja Vikara*.

   c) (c) *Nasya Karma* - *Acharya Vagbhatha* has also described this process in *Mukhdushika*.

   d) *Raktamokshan* - *Raktamokhsan* by *Shirovedha* or *Jalaukavacharan* is described in *Mukhadushika*.

2. **Shaman Chikitsa** - For *Shaman* therapy many herbal and mineral compounds are being advocated either as internal or external medication. Single or in compound. Line of treatment as described by various *Acharyas* may be summarized as follows-
   - *Sushrut Samhita* - *Lepa and Vaman Karma* *(15)*
   - *Astang Hridaya* - *Lepa, Nasya, Vaman*. *(16)*
   - *Bhavprakash* - *Lepa, Vaman, Abhyanga*. *(17)*
   - *Yogaratnakara* - *Shiravedha, Pralepa*. *(18)*
   - *AstangSamgraha* - *Lepa, Vaman, Shiravedha*. *(19)*
   - *Chakradutta* and *Bhaishajya Ratnavali* - *Lepa, Pralepa, Abhyanga, Yamana, Shiravedha*. *(20)*


   **Viruddha Ahara** - Food that is incompatible to each other such as Milk with Fish etc.
Pathya- Food items with Tikta Rasa like Patola, Giloya, Methika etc. Fresh green and leafy vegetables, enough water intake (specially Lukewarm water), mental relaxation techniques like meditation and Yoga.

Drugs - Neem (Lodhra (Symlocos racemosa), Khadir, Sariva, Manjistha (Rubia cordifolia), Usheer (Vetiveria zizaniodes), Haridra (Curcuma longa), Chandana (Santalum album), Anantmula (Hemidesmus indicus).

Formulations (Aushadh Yoga)-

- Kwatha (Decoction) - Maha Manjisthadi Kwatha, Khadirashtak Kashaya, Patoladi Kwatha, Khadira Kwatha, Gudduchyadi Kwatha
- Asava-Aristha - Sarivadhyasava, Khadiraristha, Manjisthadhyaristha
- Churna (powder) - Aamalaki churna, Manjistha churna, nib bidi churn, Triphla churna, Giloya churna.
- Ghrut (Medicated Ghee) - Maha tikkta Ghruta, Pancha tiktaka Ghruta, Tikta shatpala Ghruta, Triphla Ghruta,
- Rasa Aushdhi - Rasamanikya, Gandhak Rasayana, Praval Panchamruta, Kamdudha Vati
- Bhasma - Praval Bhasma, Swarna Makshik

General Management of Acne Vulgaris:

For blackheads apply tretino in 0.025% at bedtime, benzoyl peroxide gel, salicylic acid for pustule erythromycin cream, clindamycin or tetracycline cream cap doxycycline, azithromycin orally; wash the face 4-5 times in a day. Severe nodulocytic acne not responsive to oral antibiotics, hormonal therapy or topical therapy may be treated with the synthetic retinoid isotretinoin (21).

Skin care

In general, it is recommended that people with acne do not wash affected skin more than twice daily. The application of a fragrance-free moisturizer to sensitive and acne-prone skin may reduce irritation. Skin irritation from acne medications typically peaks at two weeks after onset of use and tends to improve with continued use. Dermatologists recommend using cosmetic products that specifically say non-comedogenic, oil-free, and won't clog pores. (6)

Diet

Dermatologists also recommend a diet low in simple sugars as a method of improving acne. As of 2014, the available evidence is insufficient to use milk restriction for this purpose. (10)

CONCLUSION

Mukhadushika is explained very elaboratively by our Acharyas in the ancient texts. Vata, Kapha and Rakta vitiation is said to be the main cause in its occurrence. Various precautions and both Shaman and Shodhana Chikitsa is mentioned in the Samhitas which is helpful even in today's era.

Modern texts explain Acne vulgaris as a chronic skin disease of the pilo-sebaceous unit and develops due to blockages in the
skin’s hair follicles, characterized by blackheads or whiteheads, pimples, oily skin, and possible scarring. This review article is written in an attempt to showcase on Nidan Panchak and Chikitsa on Mukhadushika and its modern correlation Acne vulgaris.

References:


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