



Acne Vulgaris: An Ayurvedic Review

Bisht H*, Srivastava AK and Sharma B

Department of Panchakarma, Uttarakhand Ayurveda University, India

***Corresponding author:** Himani Bisht, PG Scholar, Department of Panchakarma, Rishikul Campus, Haridwar, Uttarakhand Ayurveda University, Dehradun, Uttarakhand, India, Email: bishthimani8@gmail.com

Review Article

Volume 4 Issue 4

Received Date: November 18, 2020

Published Date: December 03, 2020

DOI: 10.23880/jonam-16000281

Abstract

Acne vulgaris is a very common skin disorder found in adolescent age group. It is a cutaneous disorder of the pilo-sebaceous unit involving the abnormalities in the production of sebum. It is characterized by both inflammatory (papules, pustules and nodules) and non-inflammatory (comedones, open and closed) lesions. In Ayurveda, this disease has been postulated by the name of *mukhadushika* and *yuvanpidika*. *Acharya sushruta* in his *sushruta samhita* has described this disorder under *Kṣudra Roga adhyay*. Due to imbalance in life style, stress and pollution, this problem is increasing day by day. *Guru Aahar, Madyapaan, Anidra, Upvas, Krodha, Santap, Svabhav* are some of the factor responsible for the development of *Mukhadushika*. It is generally due to vitiation of *Vata, Kapha* and *Rakta* resulting in *Shalmali* like eruption on face. In Ayurveda for the treatment of *Yuvana pidika (Kshudra-roga)* both shaman as well as *shodhan chikitsa* are described.

Keywords: Acne Vulgaris; *Mukhadushika*; *Yuvanpidika*; *Kshudraroga*; *Ayurveda*

Introduction

Acne is a common chronic inflammatory condition of skin with cutaneous and psychological disease burden [1]. Acne affects both males and females but males are more prone during onset of puberty. Acne affects 80% of individuals between Pubescence and 30 years of age throughout the world [2]. Many research studies shows that acne is prevalent in 79-95% in the age group of 16-18 years. In India, the percentage of acne is 50.6% in boys and 38.13% in girls in the age group of 12-17 years [3]. Acne causes emotional distress and anxiety. This anxiety aggravates the condition of skin and creates a cycle [4]. In Ayurveda, a disease named *mukhadushika* has similar symptoms. As the disease is seen in adolescent age group, the term *yuvanpidika* is also used for same. *Acharya sushruta* has explained *mukhdushika* for first time in his *sushruta samhita*. This disease is mentioned under the heading of *Kṣudra-roga* in texts. *Acharya sushruta* mentions the vitiation of *vata, kapha* and *rakta* in the pathology of *mukhadushika* [5]. *Acharya vagbhata* depict the involvement of *meda* in the development of *mukhadushika roga*. This involvement of *meda* can be considered to show

similarity with the involvement of sebum in the pathogenesis of acne.

Material and Methods

The data for study is collected from the ayurveda texts like *sushruta samhita, ashtang hrudaya, yog ratnakar, nibandha sangrah* etc.

Discussion

Causative factors of Yuvanpidika vis-a-vis Acne vulgaris

The causes as per modern science include excess androgen secretion. There are four major factors which are responsible for the development of acne [6]:-

- Increased and altered sebum production
- Follicular hyperkeratinization (leads to formation of comedones)
- Proliferation and colonization by *Propionibacterium acnes (P. acnes)* and *Staphylococcus epidermidis*

- Release of inflammatory mediators including cytokines.

Only a little description is available about the causative factors of *yuvanpidika* in Ayurveda. Any disease is caused by abnormality of *tridosha* (*vata*, *pitta* and *kapha*) and *sapta dhatus*. Anything which brings abnormality to these causes *yuvanpidika* [7-10]. *Kapha dosha* (in the form of sebum), *Vata dosha* (dry nature) and *Rakta dhatu* are main pathological units in the development of acne [11,12]. The *dushti* of *rakta dhatu* is one of the chief factors responsible for acne formation according to *acharya sushruta*. *Acharya sushruta* has also mentioned several components related to sexual changes during adolescence which are related to acne formation [13]. The causative factors of acne can be divided into 4 types:- *Kalaja*, *Aaharaja*, *Viharaja* and *Manasika*.

- **Kaalaj:** *taarunya, madhyaahan,vasant ritu, greeshma ritu, sharad ritu*
- **Aaharaj:** *ati katu and madhura, guru ahara, ati snigdha, dugdha varga ahara, mamsa, madya*
- **Viharaj:** *vegadharan, ratrijagaran, nidra mithyayog, upavasa, atapa sevan*
- **Mansik:** *ati shoka, kshobha, krodha, santapa, svabhava*

The changes in secondary sexual characters starts at the age of 16 years as said in *Kashyap samhita* [14]. *Acharya sushruta* and *acharya vagbhata* explains that the *mukdushika* or *yuvanpidika* is primarily a disease of adolescence. According to *Bhavaprakash*, acne is *Svabhavaj*. *Sharangdhara samhita* explains that acne is because of *shukra dhatu mala* [15-17].

Pathogenesis of Acne Vulgaris

The pathophysiology of acne is a multifactorial process. Initially, obstruction of sebaceous glands occurs. Acne vulgaris starts at adolescence as hormonal changes are on peak in the body. Androgens are involved in the regulation of cell proliferation and lipogenesis on the skin locally [18]. Follicular hyperkeratinization may also be affected by hormones. *Staphylococcus epidermidis* and *Propionibacterium acnes* colonizes the skin surface which are prone to acne [19]. Some experimental studies have suggested that *P. acnes* are the main organism which plays an important role in pathogenesis of acne vulgaris. The overgrowth of *P. acnes* hydrolyses sebum triglycerides, producing free fatty acids and release inflammatory mediators (cytokines) which may lead to inflammatory lesions including papules, pustules, cysts and nodules [20]. With the light of Ayurveda, the *samprapti* of acne can be understood. *Nidan sevan* leads to vitiation of *kapha*, *vata* and *rakta*. These vitiated *doshas* blocks the *lomakup* which in turns leads to localized swelling and formation of microcomedones. *Paka* in microcomedones cause pustule, papule and cyst formation [21,22]. Also, the

involvement of *Vata dosha* and *Rakta dhatu* may also cause hyperpigmentation of skin (*vyanga*) [23,24].

Rupa

The symptoms of acne vulgaris are as follows:-

- Blackheads
- Whiteheads
- Pustules
- Redness and inflammation around eruptions.
- If acne is severe, cysts, abscesses

Acharya Vagbhata has described the following sign and symptoms of the disease

- **Yunamvaktre:** site of disease and the age related with disease is explained by this phrase. The common site of *yuvanpidika* is face and is commonly seen in adolescence.
- **Shalmalikantakprakhya:** *shalmalikantak* has conical shape. And it is seen in most of the patients that the *pidika* is conical in shape.
- **Pitikahsaruj:** it explains the painful nature of disease. In patients, it can vary from mild tenderness to severe pain. It may be due to involvement of *vata*.
- **Ghana:** this term is indicative of the consistency of *pidika*. The *pidika* are thick, hard and indurated. It may be because of involvement of *kapha*.
- **Medogorbha:** it says that the *pidika* are filled with *meda*. It correlates with the modern concept of blockage of ducts due to sebum.

Other than these, symptoms like *kandu*, *daha*, *paka*, *shotha*, *srava*, *vaivarnyata* are also seen.

Treatment

The treatment includes use of topical and/or systemic agents. Topical medications include antibiotics, benzoyl peroxides and vitamin A acid derivatives. Benzoyl peroxides are antioxidants and bacteriostatic agents and are found in different strengths. These can be used as combination with topical antibiotics. The commonly prescribed topical antibiotics are Clindamycin (1% to 4%) and erythromycin (1.5% to 2%). A vitamin A acid derivative, Tretinoin increases the turnover of cells lining the follicular wall. Tretinoin decreases their stickiness and allows the expulsion of microcomedones. Vitamin A acid derivatives are available as a cream and gel, in percentages varying from 0.01% to 0.1% with Dryness as a side-effect [25]. Antibiotics are also used as systemic medications along with isotretinoin. Commonly prescribed antibiotics include tetracycline, erythromycin and minocycline. Tetracycline is contraindicated before the age of eight years and during pregnancy [26]. Minocycline is a tetracycline derivative that has the advantage of once daily dosing. Loading doses of minocycline may cause

dizziness in some patients [27]. In a tetracycline-allergic patient, erythromycin can be used as an alternative. For the treatment of nodulocystic Acne, scarring Acne and Acne that is recalcitrant to other forms of therapy Isotretinoin is indicated [28]. Common side effects include dryness of skin and mucous membranes, photosensitivity, myalgias, night blindness and depression [25]. *Mukhadushika* is a *kshudraroga* so its *chikitsa sutra* is same as that for *kshudraroga*. *Chikitsa* in Ayurveda can be divided into two forms. The one being *shodhan chikitsa* and the other *shaman chikitsa*. The *shodhan chikitsa* includes the *panchakarma* procedures and the *shaman chikitsa* has internal medication and external application of drugs. Line of treatment prescribed by different acharya's is as follows:

- *Sushruta samhita – Vamana, Lepana* [29]
- *Ashtang Hridaya – Lepana, Vamana, Nasya, Siravyadh* [30]
- *Bhavaprakasha- Lepana, Vamana, Abhyanga* [31]
- *Yoga Ratanakara- Shiravedha, Pralepa, Abhyanga* [32]
- *Sarangadhara samhita- Lepana* [33]
- *Bhaishajya Ratnavali- Siravedha, Pralepa, Abhyanga* [34]
- *Chakrapani: Siravedha, Vamana, Abhyang, Lepana*

Reason behind selection of various *shodhan* procedure

- **Vamana:** Both *Acharya Sushruta* and *Vagbhata* have mentioned *Vamana Karma* to cure the disease. As *Vamana* is the main therapy for *Kaphaja* abnormalities, *Kapha* is one of the main *Dosha* involved the pathogenesis.
- **Nasya:** *Vagbhata* has indicated *Nasya Karma* for the treatment of *Mukhadushika*. *Acharya Charaka* has also advocated the *Nasya Karma* in *UrdhvaJatrugata Vikara*. *Mukhadushika* usually affects *mukha* which is in *urdhavajatru* part of body.
- **Raktamokshan:** *Raktmokšana* (bloodletting) is the preferred way of treatment in *Raktaj* disorders as per *Ayurvedic* texts. *Raktamokšana* removes the vitiated blood and clears the *Srotāvarodha* (blockage in channels), thus breaking the *samprapti*.

For management of any disease, careful observation on *vyadhiavastha* should be done. For *yuvanpidika*, it can be understood by knowing the involved skin layer. To understand this hypothetical classification was made.

- *Avabhasini* and *lohita* have *pitta pradhanta*, as for *avabhasini acharya* have said *sarva varna avabhasini panchavidhachhaya prakashayati* [35]. In *lohita* the disorders like *tilkalaka*, *nyaccha*, *vyanga* are seen and *pitta* is the common *dosha* among them [35].
- *Shweta*, *tamra*, *vedini* and *rohini* have disease like *ajagallika*, *mashak*, *kilaskustha*, *alaji*, *granthi* etc. which possess *vata-kaphaj samprapti*.

- *Mamsadhara* has disease like *vidradhi*, *arsha*, *bhagandar* which are *tridoshaj* in nature. So this layer can be considered as *tridosha bhuyistha*.

So while treating acne vulgaris, following points should remain in mind [36].

- If the lesions show *pitta* dominant *lakshanas* like small *pidika*, pain, burning sensation etc, and are associated with *kapha* and *rakta*, it means *avabhasini* or *lohita* are involved then *pittahara* and *raktaprasadan chikitsa* should be done. *Virechana* and *raktamokshan* will be beneficial in these cases. *Rasapachak* and *raktaprasadana dravyas* should be given for internal use.
- If the lesion show *kapha* dominancy *lakshan* like big, deep rooted *pidika*, *Ghana*, *puyaprachiti*, *medogarbhata*, and is associated with *vata* and *rakta*, then *kledohara kaphahara* and *rakta prasadana* should be done. In these types of cases, *vaman*, *nasya* and *raktamokshana* will be beneficial.

According to *Doṣha* and symptoms of *Mukhadushika* drugs having *KaphaVatahara* properties, *Strotoshodhaka* and which purifies the blood can be used internally. Some herbal drugs useful in the treatment of *Mukhadushika* are *Shalmali*, *Haridra*, *Sariva*, *Vacha*, *Dhanyaka*, *Lodhra*, *Daruharidra*, *Manjistha*, *Nimba*, *Khadira*, *Guduchi*, *Methika*, *Jatiphala*, *Kakamachi* etc. Other than these, many *lepa* are mentioned for *mukhadushika*. These include *Yashtimadhvadi lepa*, *Kaliyakadi Lepa*, *Sharapunkhadi lepa*, *Masuradi lepa*, *Lodhradi lepa*, *Shalmali kantakadi lepa*, *Arjunadi lepa*, *Jatiphala lepa*, *Siddharthadi lepa*, *Marichyadi lepa*.

Conclusion

Acne vulgaris is a chronic inflammatory disorder which is seen commonly. The description is not vivid in *Ayurveda* texts, with *yukti*, *samprapti* can be understood and the line of treatment varies accordingly.

References

1. Knutsen-Larson S, Dawson AL, Dunnick CA, Dellavalle RP (2012) Acne vulgaris: Pathogenesis treatment and needs assessment. *Dermatol Clin* 30(1): 99-106.
2. Bergler-Czop B, Brzezinska-Wcislo L (2013) Dermatological problems of the puberty. *Postepy Dermatol Alergol* 30(3): 178-187.
3. Kubba R, Bajaj AK, Thappa DM, Sharma R, Vedamurthy M, et al. (2009) Acne and quality of life. *Indian J Dermatol Venereol Leprol* 75(S7): 4-5.
4. Koblentz CS (1997) *Psychodermatology of women*. Clin

- Dermatol 15(1): 127-141.
5. Acharya YT, Acharya NR (2005) Suśruta, SuśrutaSamhitā with "Nibandha Sangraha" commentary by Dalhanacharya, and the Nyayacandrika Pañjika of Sri Gayadāsa Acharya, edited from the beginning to the 9th Adhyāya of Cikitsāsthāna, "Kavyateertha", 8th (Edn.), Published by Chaukhamba Orientalia, Varanasi, Nidānasthāna 13/39, pp: 323.
 6. Tahir CM (2010) Pathogenesis of acne vulgaris: Simplified. J Pak Assoc Dermatol 20(2): 93-97.
 7. Sharma A, Sharma PV (2012) Sushruta Samhita. Volume-I, Varanasi: Chaukhambha Surbharati Prakashan, pp: 559.
 8. Gupta A, Upadhyaya Y (2012) Ashtanga Hrudaya of Vagbhata. Varanasi: Chaukhambha Prakashan, pp: 765.
 9. Gupta A, Upadhyaya Y (2012) Ashtanga Hrudaya of Vagbhata. Varanasi: Chaukhambha Prakashan, pp: 769.
 10. Shastri B (2012) Yogaratnakara of Lakshmiapati Shastri. Uttarardha. Varanasi: Chaukhambha Prakashan, pp: 272- 273.
 11. Kumar S, Palbag S, Maurya SK, Kumar D (2013) Skin care in Ayurveda: A literature review. International Research Journal of Pharmacy 4(3): 1-3.
 12. Bedi MK, Shenefelt PD (2002) Herbal therapy in dermatology. Arch Dermatol 138(2): 232-242.
 13. Sharma A, Sharma PV (2012) Sushruta Samhita. Volume-I, Varanasi: Chaukhambha Surbharati Prakashan, pp: 559.
 14. Sharma H, Bhishgacharya S (2012) Kashyapa Samhita of Vruddhajivaka. Varanasi: Chaukhambha Sanskrit Sansthan, pp: 79.
 15. Kartikey, Niranjana R, Shreekanth U (2012) A clinical study showing the effect of an Ayurvedic regimen on acne vulgaris. Anaplastology 1(3): 1.
 16. Kumar S, Palbag S, Maurya SK, Kumar D (2013) Skin care in Ayurveda: A literature review. International Research Journal of Pharmacy 4(3): 1-3.
 17. Bedi MK, Shenefelt PD (2002) Herbal therapy in dermatology. Arch Dermatol 138(2): 232-242.
 18. Solanki R, Kolhapure SA (2004) Evaluation of efficacy and safety of Clarina cream in newly diagnosed and previously treated cases of acne vulgaris. Antiseptic 101(7): 285-290.
 19. Rathod M, Kamath S (2012) A clinical study to evaluate the efficacy of Jalaukavacharana and Sarivadyasava in Yuvanpidaka (acne vulgaris). Int Res J Pharm 3(7): 215-217.
 20. Makrantonaki E, Ganceviciene R, Zouboulis C (2011) An update on the role of the sebaceous gland in the pathogenesis of acne. Dermatoendocrinol 3(1): 41-49.
 21. Gupta A, Upadhyaya Y (2012) Ashtanga Hrudaya of Vagbhata. Varanasi: Chaukhambha Prakashan, pp: 14-15
 22. Bhatted S, Shukla VD, Thakar A, Bhatt NN (2011) A study on Vasantika Vamana (therapeutic emesis in spring season)-A preventive measure for diseases of Kapha origin. Ayu 32(2): 181-186.
 23. Sharma A, Sharma PV (2012) Sushruta Samhita. Volume-I, Varanasi: Chaukhambha Surbharati Prakashan, pp: 559.
 24. Gupta A, Upadhyaya Y (2012) Ashtanga Hrudaya of Vagbhata. Varanasi: Chaukhambha Prakashan, pp: 769.
 25. Krafchik BR (1999) Acne. Paediatr Child Health 4(6): 385-386.
 26. Cross R, Ling C, Nicholas PJ, McGready R, Paris DH (2016) Revisiting doxycycline in pregnancy and early childhood -time to rebuild its reputation? Expert Opin Drug Saf 15(3): 367-382.
 27. Garrido-Mesa N, Zarzuelo A, Galvez J (2013) Minocycline: far beyond an antibiotic. Br J Pharmacol 169(2): 337-352.
 28. Leyden JJ, James Q, Rosso D, Baum EW (2014) The Use of Isotretinoin in the Treatment of Acne Vulgaris -Clinical Considerations and Future Directions. J Clin Aesthet Dermatol 7(2 Suppl): S3-S21.
 29. Sharma A (2010) Susruta Samhita Chikitsa sthan, Varanasi: Chaukhamba Surbharti Prakashan; shlok 20/36-37, pp: 332.
 30. Tripathi B (2009) Astanga Hrudayam, Uttarakhand, Delhi: Chaukhamba Sanskrit Pratishtan; shlok 32/3, pp: 11-19.
 31. Pandit B, Mishra SBS (2003) Bhavaprakasha-Madhyakhanda; Varanasi: Chaukhamba Sanskrit Sansthan; shlok 61/35, pp: 587.
 32. Shastri BB (2012) Vaidya lakshmiapati Shastri, Yoga Ratnakar-kshudra roga dhikar shlok no.1; Chaukhambha Prakashan Varanasi, pp: 282.
 33. Tripathi B (2008) Sharangdhar Samhita, Uttarakhand; Varanasi: Chaukhamba Surbharti Prakashan; Shlok No.11/11; pp: 392.

34. Shatri KA (2001) Bhasajya Ratnawali Ksudrarogchikitsa; Varanasi: Chaukhamba Sanskrit Sansthana; Shlok No.60/37-38; pp: 663.
35. Sharma AR (2017) Sushrut samhita, part 1, sharir sthana, chapter 4, verse 4. Varanasi: chaukhambha surbharti

prakashan.

36. Ravalani BC, Purohit HJ, Mishra B (2019) Panchakarma procedures according to vyadhi awastha in mukhdushika w.s.r. to acne vulgaris. J ayurveda integr med sci 4(6): 157-161.

