

BRIEF REVIEW ON BAHYA LEPA CHIKITSTYA W.S.R. MUKHADUSHIKA**¹Dr. Nalini Ramesh Hedao, ²Dr. Mamta Ramgopal Biyani and ³Dr. Mukund Baburao Bandale**¹Assistant Professor, Dept. of Rasashastra & B.K., GAC Vajirabad, Nanded, Maharashtra.²Professor, Dept. of Rasashastra & B. K., Yashavantrao Chavan Ayurvedic Medical College, Aurangabad (M. S.), Aurangabad, Maharashtra.³Associate Professor, Dept. of Rachana Sharir, Dr. Vedprakash Patil Ayurved College, Jalna, Aurangabad, Jalna.***Corresponding Author: Dr. Nalini Ramesh Hedao**

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ABSTRACT

Introduction Vitiated vata, kapha and rakta accumulated at mukha pradesha give released to shalmalikantak like pidika called Mukhadushika. It is an inflammatory disorder due to local application of gram-positive bacteria P. acne. It is an eight most common disease worldwide commonly occurs in teenagers. Aims and Objective: -To study detailed about Mukhadushika, To collect bahya chikitsya lepa from different Ayurvedic classical grantha. To review on pharmacological action of single drug containing kalpa. Material & Method: -Local treatment called as Lepa kalpa collected from Yogratnakara, Chakradatta, Sharangdhar Samhita and Bhaishajya Ratnavali, Collection of pharmaceutical action of lepa containing single drug according to Ayurveda and modern science. Discussion- Mukhadushika caused by kapha, vata and rakta dushti, mostly drugs used for local treatment of mukhadushika are tikta katu rasatmaka, katu vipaki shothahar, vedanasthapan, vranaropak, varnya and rarely raktastambhak and having anti-inflammatory, anti-oxidant, analgesic and antibacterial activity against P. acne and S. Epidermidis. Lodhradi lepa prescribe in all classics for mukhadushika and highly effective in the management of mukhdushika. Conclusion- There is requirement of different studies have to be design, to evaluate antimicrobial effect of all mukhadushikahar lepa for P. acne and S. Epidermidis.

KEYWORDS: Mukhadushika, Lepa, P. acne.**INTRODUCTION**

In Ayurveda classics Acharya Sushruta define Mukhadushika or Yuvanpidika as a boil like spine of shalmali appears on the face of youthfull person caused by kapha, vata and rakta. It can correlate with Acne Vulgaris explained in modern science.^[1] Acne is a long-term skin disease that occurs when dead skin cells and oil from the skin clog hair follicles. Typical features of the condition include blackheads or whiteheads, pimples, oily skin and possible scarring.

More than 90 percent of world population is affected by acne at some point of their life. In 2015, acne affected approximately 633 million people globally, making it the eight most common disease worldwide.^[2] Acne commonly occurs in adolescence and affects an estimated 80 – 90 % of teenagers in the western world.^[3] In India, change in annual years of healthy life lost since 1990 to 2013 due to acne is – 0.2 percent.

Dermatologic problems can result in psychosocial effects that drastically affects patient's lives. More than a cosmetic nuisance, skin disease can produce anxiety, depression and other psychological problems that affect patient's lives in ways comparable to arthritis or other

disabling illness.^[4] Some studies confirmed that acne can affect a person's quality of life, self -esteem and mood in an adverse manner. Although acne is a skin disease, it can lead to prominent emotional and psychological issues.

In Ayurveda, Shodhana and Shamana therapies are advised for Mukhadushika. Vamana, Virechana, Nasya, Raktamokshana etc are involved as a Shodhana therapy. Internal medicine and external application of drugs prescribed as a Shamana therapy. External application of drugs played an important role in mukhadushika. In Ayurveda classical books such like Sushruta Samhita, Ashtang Hridaya, Bhavprakash, Yoga Ratnakar, Sharangdhar Samhita prescribed Lepa or Pralepa as an essential therapy in Shamana therapy and explained many different drugs formulations for local application.

The facial skin of patients with Acne Vulgaris differ from normal skin of people without acne vulgaris in several ways. Although exceptions may exist, sebum production is higher and size of the sebaceous glands are larger in people with acne prone facial skin who are already known to have acne vulgaris as compared with the facial skin of people without acne vulgaris.^[5] Local

application of drugs, clean the skin surface, reduces inflammatory lesions such as papules and pustules. Due to their anti-inflammatory, antioxidant and antimicrobial effects, it inhibits bacterial growth on skin surface.

AIMS AND OBJECTIVES

- To study detailed about Mukhadushika
- To collect bahya lepa chikitsya from different Ayurvedic classical grantha on Mukhadushika.
- To review on pharmacological action of single drug containing Lepa kalpa

Material AND Method

Local treatment called as Lepa kalpa collected from Yogratnakara, Chakradatta, Sharangdhar Samhita and Bhaishajya Ratnavali, Collection of pharmaceutical action of lepa containing single drug according to Ayurveda and modern science.

DETAILS ABOUT ACNE VULGARIS

According to Acharya Sushruta boils like spine of salmali appears on the face of youthful person caused by kapha, vata and rakta called as Yuvanpikida. It can be correlate with Acne Vulgaris in modern science.

Pathogenesis as per Ayurveda

Purvarupa

In Ayurveda classics purvarupa not mentioned about mukhadushika.

Rupa-

Acharya Vagbhata had mentioned the sign and symptom in more detailed than Acharya Sushruta.^[6]

Pidika – Pidika means eruption.

Sa ruja – Painful eruption present.

Ghana – Thick, hard and indurate eruption present.

Medogarbha – The eruptions are accumulated (impregnated) with meda called as comedone.

Yuna Mukha- Generally, mukhadushika occurs on the face of adult.

Along with the pidika, the main associated Symptoms are Vedana, kandu, Daha and Strava.

PATHOPHYSIOLOGY ACCORDING TO MODERN SCIENCE^[7]

Acne is an inflammatory disease of the pilosebaceous units in the skin of the face, neck, chest and upper back. It first appears during early puberty when androgenic stimulation triggers excessive production of sebum and abnormal follicular keratinization, colonization by a gram- positive bacteria and local inflammation. P. acnes produces inflammation through the production of extracellular products such as lipases, proteases, hyaluronidases and chemotactic factors.

Clinically, the diseases vary in intensity from a minor condition, in which there are a few comedones (dilated pilosebaceous cysts containing sebum, cornified epithelium, bacteria and saprophytic yeast) which heal without scarring, to a severe disfiguring disease in which nodules and sinuses form in areas of intense inflammatory reaction.

MANAGEMENT OF ACNE VULGARIS

In Ayurveda two types of treatment are advised for the disease mukhadushika

- 1) Shodhan Therapy- Vaman, Virechana, Nasya, Raktamokshana etc
- 2) Shaman Therapy- Internal medicine and external application of drugs.

Table 1: List of treatment prescribed by different Acharya.

Sr. No.	Granthadhar	Treatment given in grantha
1	Sushruta Samhita ^[8]	Vaman, Lepana
2	Ashtang Hridaya ^[9]	Lepana, Vamana, Nasya, Shiravyadh
3	Bhavaprakash ^[10]	Lepa, Vamana, Abhyanga
4	Yoga Ratnakar ^[11]	Shiravedha, Pralepa, Abhyanga
5	Sharagadhar Samhita ^[12]	Lepa
6	Bhaishajya Ratnavali ^[13]	Shiravedha, Pralepa, Abhyanga

In present study local treatment called as bahya lepa for Mukhdushika collected form Ayurveda classics those are Chakradatta, Yogratnakar, Sharangdhar Samhita and Bhaishajya Ratnavali.

Table 2: Bahya Lepa according to Chakradatta.^[14]

Sr. No	Reference name	Drug	Form	Remark
1	Lodhradi Lepa Chakradatta 55/42	Lodhra, Dhanyak, Vacha Or Gorochana, Maricha	Lepa	Tarunyapidakahar
2	Sidhardhakadi Lepa Chakradatta 55/ 43	Sidharthak(Saraso), Vacha, Lodhra, Saindhava kalka	Pralepa	Pidaka yauvanodbhava

Table 3: Bahya lepa according to Yogaratnakar.^[15]

Sr. No	Reference name	Drug	Form	Remark
1	Jatiphaladi Lepa Y.R. Kshudraroga Chikitsa 2	Jayaphala,Raktachandan, Kalimarich	Lepa	Hantiyashu pitika Yauvanodbhava
2	Lodhradi Lepa Y.R. Kshudraroga Chikitsa 3	Lodhra, Dhanyak, Vacha Or Gorochana, Maricha	Lepa	Tarunya pitikapaha
3	Sidharthakadi Lepa Y.R. Kshudraroga Chikitsa 4	Sidharthak (Shwet Saraso), Vacha, Lodhra, Saindhav Or Arjuntvak gavyadugdhen pishten Or Manjishta with madhu pishten	Pralepa	Pitika kshyaya
4	Shalmali kantik Lepa Y.R. Kshudraroga Chikitsa 5	Shalmali kantik kshir pishten	Pralep	Pitika sankshaya
5	Vata pandu patradi Lepa Y.R. uttarardha, Khudraroga chikitsya 10	Varunasya kashayen mukha prakshalana After that Application of Vata pandu patra, Malati patra, Raktachandana, Kushta, Kaliyak (Agaru), Lodhra	Lepa	Yauvanpitikanam vyanganam vinashanam
6	Matulungadi lepa Y.R. uttarardha, Khudraroga chikitsya 11	Matulunga Jata, Goghrit,Manasheela, Goshakrit (gobar rasa)	Lepa	Mukhakantikarak Pitika vyangajit

Table 4: shows bahya lepa according to Sharangdhar samhita.^[16]

Sr. No	Reference name	Drug	Form	Remark
1	Matulungadi lepa Shrngdhar Samhita Uttarkhand 11 /10 Lepavidhi	Matulunga jata, Sarpi, Manashila, Goshakrit	Lepa	Pitikavyangakaljit
2	Lodhradi Lepa Shrngdhar Samhita Uttarkhand 11/ 11 Lepavidhi	Lodhra, Dhanyak, Vacha	Lepa	Tarunyapitikapaha
3	Vata Pandupatradi Lepa Sharangdhar Samhita Uttarkhand 11/ 15Lepavidhi	Vata pandupatra, Malati, Raktachandana, Kushta, kalyak, Lodhra	Lepa	Tarunyapitika vyanga nilikadi vinashanam

Table 5: shows Bahya lepa according to Bhaishajya Ratnavali.^[17]

Sr. No	Reference name	Drug	Form	Remark
1	Lodhradi Lepa Bhaishajya Ratnavali 60/38	Lodhra, Dhanyak, Vacha	Lepa	Tarunyapidakahar
2	Gorochnadi Lepa Bhaishajya Ratnavali 60/38	Gorochna, Maricha	Lepa	Nihantiyashu pidaka yauvanodbhav

Table 6: Single drug Pharmacological properties according to Ayurveda.

Dravya	Latin name & Family	Rasa	Guna	Virya	Vipaka	Karma	Prayoga
Lodhra	Symplocos recemosa Symplocaceae	Kashaya	Laghu Ruksha	Katu	Sheet	Shothahar, kushtaghna, Raktastambhan, Vranropak sankochak, astringent, anti-inflammatory, antimicrobial	Shoth, Charmaroga, Raktastrav, Vrana
Dhanyak	Coriandrum Sativum Umbelliferae	Kashaya Tikta Madhur Katu	Laghu Snigdha	Madhur	Ushna	Shothahar, Shulahar absorb excess oil on skin	Shotha, Visarpa, Gandamala, Mukhapaka, Raktastrava
Vacha	Acorus Calamus Araceae	Katu Tikta	Laghu, Tikshna	Katu	Ushna	Vedanasthapana Shothahar antiinflammatory	
Gorochan	Bezoar	Tikta	Ruksha		Hima	Improve skin complexion, Remove black spot and improve skin quality	Kushta
Marich	Piper Nigram Piperaceae	Katu	Laghu	Katu	Ushna	Raktokleshkar, Lekhan Anti- inflammatory, Anti - microbial	Charmaroga, Shotha vedana,
Saraso	Brassica Campestris Cruciferae	Katu Tikta	Tikshna Snigdha	Katu	Ushna	Bija-Lekhana, Kushtaghna, Varnya, Shonitokleshak Taila- Jantughna, Vedanasthapan, Snehana Anti bacterial	Kushta, Vrana
Saindhav	Sodium Chloride	Lavana, Madhur	Snigdha, Tikshna, Sukshma	Madhur	Sheet		
Jayaphal	Myristica Fragrans Myristicaceae	Tikta Katu	Laghu Tikshna	Katu	Ushna	Sthothahar, Vedanasthapana, Uttejak, Kushtaghna, Durgandhanashak, Kitanashaka	Charmaroga, Jirna vrana
Raktachandan	Pterocarpus Santalinus Papilionatae	Tikta, Madhur	Guru Ruksha	Katu	Sheeta	Dahshamak, Stambhan, Shothahar, Tvagdoshahar	Daha, Kshata, Shotha, Charmaroga
Arjuntvak	Terminalia Arjuna Combretaceae	Kashay	Laghu Ruksha	Katu	Sheeta	Rartastambhana, Sandhaniya, Vranaropana	Raktastrava
Manjishta	Rubia Cordifolia Rubiaceae	Tikta Kashaya Madhur	Guru Ruksha	Katu	Ushna	Shothahar Vranaropana Kushtaghna	Shotha, Vrana, Charmaroga
Shalmali kantik	Salmalia Malabarica Bombacaceae	Madhura	Laghu Snigdha Pichhil	Madhura	Sheeta	Kantik- Lekhana, Varnya	Vyanga, Nyachha
Varun	Crataeva Nurvala Capparidaceae	Tikta Kashaya	Laghu Ruksha	Katu	Ushna	Raktokleshak	Vranashotha
Kushta	Saussuria Lappa Compositae	Tikta, Katu, Madhur	Laghu, Ruksha, Tikshna	Katu	Ushna	Durgandhanashak Jantughna, Vedanasthapana, Varnya, Kushtaghna	Vrana, Charmaroga
Agaru	Aquilaria Agallocha	Katu, Tikta	Laghu, Ruksha,	Katu	Ushna	Uttejaka, Shitprashaman, Durgandhahar,	Vrana, Shotha, Vedana

	Thymelaeaceae		Tikshna			Kushtaghna, Shithhar, Vedanasthapan	
Manasheela	Realgar/ Red Orpiment	Tikta	Guru, Snigdha, Sara	Katu	Ushna	Antibacterial, anti-inflammatory Anti-leprotic (Kusthaghna)	

Table 7: Herbs & Chemical constituent and action.

Sr. No.	Drugs	Action
1.	Lodhra ^[18,19] Symplocos racemosa P.U-Bark	Anti-oxidant – Salireposide benzoyl salireposide Antibacterial- Harmine Antibacterial activity Propionibacterium acnes.
2	Dhanyaka ^[20,21,22,23] Coriandrum sativum P.U-Fruit, Leaf	Anti-inflammatory, Analgesic, Antibacterial – Linalool Antioxidant - Terpenoid, Phenolic compound Antibacterial activity against P. acne
3	Vacha ^[24,25,26] Acorus calamus P.U-Rhizome	Antibacterial – Alpha and Beta-asarones Anti-inflammatory, Analgesic – Essential oil Antimicrobial activity against Propionibacterium acne
5	Maricha ^[27,28,29,30] Piper nigrum P.U-Fruit	Antibacterial, Anti-inflammatory Analgesic – Piperine Antioxidant - Phenolic acids, Flavonoids Antibacterial activity against Propionibacterium acne, S. Epidermidis,
6	Sarshapa ^[31] Brassica campestris P.U-Seed	Anti-oxidant - Phenolic compound
7	Jaatiphala ^[32,33,34] Myristica fragrans P.U-Fruit	Antibacterial – Trimyristin Myristic Antioxidant - Isoeugenol, lignans, eugenol, beta-caryophyllene Anti-inflammatory – Myristicin Antibacterial activity against P. acne, S. Epidermidis,
8	Raktachandana ^[35] Pterocarpus santalinus P.U – Heartwood	Anti-Inflammatory, Antioxidant-Pterostilbene Anti-Bacterial-Lignans
9	Arjuna ^[36,37] Terminalia arjuna P.U – Bark	Antibacterial – Luteolin, Anti-inflammatory – Terminoside Antioxidant – Arjunic acid Antimicrobial activity against P. acne and S, Epidermidis
10	Manjishta ^[38]	Antimicrobial activity against P. acne, antioxidant activity
11	Shalmali ^[39,40] Salmalia malabarica Part Used- Thorn	Anti-oxidant, anti-inflammation, anti-androgen and anti-bacterial activities Antibacterial activity against P. acne
13	Kushta ^[41,42] Saussurea lappa P.U-Rhizome	Anti-inflammatory – Cynaropicrin Antioxidant/Immunomodulatory – Costunolidedehydro costus Antibacterial against S. epidermidis, P acne
15	Matulunga ^[43] Citrus medica P.U-Fruit	Antioxidant, Analgesic - Flavonoid and phenolic compounds. Anti-inflammatory - Citroflavonoids.

Table 8: Clinical Study done on Bahya Lepa.

Sr. No.	Article on Lepa	Work done and conclusion
1	Matulungadi Lepa and Jatiphaladi Lepa ^[44]	Matulungadi Lepa showed over all 81.16% of relief and Jatiphaladi Lepa showed 75.27% of relief. Matulungadi Lepa i.e. Group A showed statistically and clinically good results compared to Jatiphaladi Lepa i.e. Group B, both groups have shown approximately same results.
2	Jatiphaladi Lepa ^[45]	The Jatiphaladi lepa prayoga has got its own relevance in the symptoms relief of Tarunya-pidika lepa are generally varnya and twakprasadaka in nature; this lepa mainly made for the patients of acne vul- garis, it reduces the Acne of face as well as this lepa suppresses the "Black Spots" and the various types of "Vyang" and "Nilika" of the face also
3	Sidharthakadi Lepa ^[46]	Sidharthakadi Lepa shown that complete remission of symptoms 40 % of patient, marked improvement in 30 % of patient, Moderate improvement in 30 % of patient. Sidharthakadi lepa which contain sidharthaka, vacha, lodhra and saindhav lavan showed; complete, marked and moderate improvement that led to the patient satisfaction.
4	Lodhradi Lepa ^[47]	Shodhan Karma (Virechan) followed by oral medication (Mukhdooshikahar vati) and local medication (Lodhradi lepa) is highly effective in the management of Mukhdooshika and gives significant relief to the patient.
5	Lodhradi Lepa ^[48]	Lodhradi Lepa and Varnya Churna are considered as very useful and effective treatment in the management of Yuvanapidaka.
6	Lodhradi Lepa and Arjun Lepa ^[49]	Both the groups showed statistically significant on all assessment criteria. On comparison between 2 groups, there is no significant difference in assessment criteria except in the size of pidaka in which Group-A (Arjun tvak lepa) was more effective than Group B (Lodhradi Lepa)

DISCUSSION

Mukhadushika also known as Acne vulgaris, is a common chronic inflammatory disease of the glands that produce sebum (sebaceous follicles). This disease result in the formation of inflamed elevations (papules, pustules, nodules and cysts, comedones blackheads and whiteheads) and scar on the skin. Pathophysiology of Mukhadushika according to Yogratnakar and other Ayurveda classics Vitilated kapha, vata and rakta accumulate at mukha pradesha and give released to shalmali kantik like pidika called as Yauvanpidika. It is an inflammatory disorder due to local inflammation of gram-positive bacteria *P. acne*.

Purvarupa lakshana not mentioned in Ayurveda classics for mukhadushika. Acne, explained as Pidika or eruption which may be painful, thick, hard, accumulated with meda (comedone), generally occurs on face on adults. Shodhana and Shamana are two therapies used to treat mukhadushika. As a shaman therapy every acharya advised to give local application called Lepana or Pralepa. Vamana, Nasya and shiravyadha also advised as a systemic therapy.

In the present study effort has been taken for collection of Lepana kalpa from Chakradutta, Yogratnakara, Sharangdhar Samhita and Bhaishajya Ratnavali. Lodhradi lepa contained Lodhra, dhanyak and Vacha repeated in every classic. Sidharthkadi lepa repeated in Chakradatta, Yogratnakar. Jatiphaladi Lepa and Shalmali Kantik Lepa only prescribed in Yogratnakara. Vatapandupatradi Lepa & Matulungadi Lepa both repeated in Yogaratnakara and Sharangdhara Samhita. Bhaishajya Ratnavali only explained Gorochnadi Lepa contained Gorochna and Maricha.

Mostly drug used in mukhdushikahar lepa are katu and tikta in rasa. Only Lodhra, dhanyaka and raktachandana are kashay rasatmak and Shalmali kantik is Madhur rasatmaka. All drugs have katu vipaka except dhanyak which is Madhur vipaka. Both Ushna and Sheet viryatmaka dravya in mukhadushika. Mostly drugs used in mukhdushika are shothhar, Vedana sthapan, vranaropaka, kushtaghna, varnya, durgandhanashak. Arjuntvaka, Raktachandan and Lodhra raktastambhak in nature.

Most of the studies have been taken out all over about single drug used in mukhadushikahar lepa which shows that antioxidant, antibacterial, Anti-inflammatory & Analgesic activity of drug and antibacterial activity against *Propionibacterium acne* and *S. epidermidis*.

As shown above the comparative study of Matulungadi Lepa and Jatiphaladi Lepa both shows clinically good result approx. more than 75 percentage. Jatiphaladi Lepa which is prescribe in Mukhadushika, also suppresses black spot, can be used in Vyanga and Nilika. Sidharthakadi Lepa also showed complete, marked and Moderate improvement. Lodhradi lepa shows highly effective in the management of Mukhadushika.

CONCLUSION

- Mukhadushika caused by kapha, vata and rakta dushti, mostly drugs used for local treatment of mukhadushika are tikta katu rasatmaka, katu vipaki and ushna or sheet viryatmaka, shothahar, vedanasthapan, vranaropak, varnya and rarely raktastambhak.
- Lodhradi lepa prescribe in all classics for mukhadushika and highly effective in the management of mukhdushika.
- Generally, drugs used in mukhadushikahar lepa are anti-inflammatory, anti-oxidant, analgesic and antibacterial activity against *P. acne* and *S. Epidermidis*.
- There is real requirement of different studies have to be design to evaluate antimicrobial effect of all mukhadushikahar lepa for *P. acne* and *S. Epidermidis*.
- There have to be design studies for development of different forms of the bahya lepa kalpa like cream, lotion etc to improve palatability and conveniency.

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