ROLE OF VIRECHAN FOLLOWED BY LODHRADI LEPA AND MUKHDOOSHIKAHAR VATI IN THE MANAGEMENT OF MUKHDOOSHIKA

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ABSTRACT
According to Ayurveda healthy skin is a result of overall health condition of individuals and prescribes numerous skin care treatment that needs to be pursued at every stage of life. Yuvanpidika is one of the major concerns of the youth which disfigures the face and hence influences the personality of the young generation. Acne Vulgaris is a disease of the pilosebaceous follicle characterized by non-inflammatory (open and closed comedones) and inflammatory lesions (papules, pustules, and nodules). It can be correlated with Mukhdooshika in Ayurveda. The diseases in which the pidika are developed especially on the face of young persons (adolescents) are known as Yuvanpidika (Tarunyapitika). Yuvanpidika is very commonly observed disease, which has been described as kshudra roga in classics. Various Systemic and local treatment are indicated in Ayurveda that help to cure Acne and also to regain the lost beauty and revive the personality.

Keywords: Yuvanpidika, Kshudra roga, Mukhdooshika, Yuvanpidika, Shodhana chikitsa, Shaman Chikitsa

INTRODUCTION
Although generally considered to be a benign, self-limiting condition, acne may cause severe psychological problems or disfiguring scars that can persist for a lifetime. Acne Vulgaris is a common skin disorder of pilosebaceous unit that primarily affects the face, chest and back which if not treated may lead to permanent scarring. It is a pleomorphic disorder and can manifest at any time during life but it most commonly presents between ages of 12-24, which estimates of 85% of population affected. In recent years multifactorial nature of acne has been elucidated.

In Ayurveda, it is termed as Mukhdooshika. In Ayurveda Mukhdooshika is described under the heading of Kshudra-roga. The Shalmali thorn like eruption on the face due to vitiation of Kapha, Vata and Rakta which are found on the face of adolescent are called as Mukhdooshika or Yuvanpidika. The Shalmali thorn like eruption on the face due to vitiation of Kapha, Vata and Rakta which are found on the face of adolescent are called as Mukhdooshika or Yuvanpidika. In Ayurveda for the treatment of Mukhdooshika (Kshudraroga) mainly two type of Chikitsa are described i.e. Shodhana Chikitsa and Shaman Chikitsa. As described by various
Acharya’s the Shodhana Chikitsa includes Vamana, Nasya and Shiravedha. The Shaman Chikitsa includes various types of Lepa and Pralep. Mukhdooshika is a Kshudraroga mainly affecting the face which occurs due to Vata, Kapha, Raktaprapaka.1 Pidika all over the face makes an individual unattractive particularly in adolescence where people are more cautious about their looks. This is common illness affecting 80% of adolescents. In 2010, acne was estimated to affect 650 million people globally making it the 8th most common disease worldwide2. Acne starts at the age of 10-17 years in females and 14-19 years in males3. Even though acne is not a life threatening situation but it can lead to permanent scarring. Scarring can occur at any age including as early as 9-10 years.4

DRUG REVIEW
WHO defines drug as, “Any substance or product that is used or intended to be used to modify or explore physiological systems or pathological states for the benefit of the recipient”. This definition appears more in compliance with the terms of Ayurveda, which aims at the preservation of good health apart from mitigation of diseases. The ultimate goal of Ayurveda i.e. Prakriti-sthapana; it can be achieved with the help of proper drug. Thus, considering all the above points the drugs selected for managing Mukhdooshika are

1. Virechan Karma
2. Mukhdooshika har vati

LODHRA LEPA5

<table>
<thead>
<tr>
<th>S.N.</th>
<th>CONTENTS</th>
<th>SCIENTIFIC NAME</th>
<th>PART USED</th>
<th>RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lodhra</td>
<td>Symplocos Racemosa</td>
<td>Bark</td>
<td>1 part</td>
</tr>
<tr>
<td>2</td>
<td>Dhanyak</td>
<td>Coriandrum Sativum</td>
<td>Seed</td>
<td>1 part</td>
</tr>
<tr>
<td>3</td>
<td>Vacha</td>
<td>Acorus Calamus</td>
<td>Root</td>
<td>1 part</td>
</tr>
</tbody>
</table>

3. Lodhradi lepa

VIRECHAN KARMA
Mukhdooshika is caused due to vitiation of Kapha, Vata and Rakta Dosha. Acharya Charaka has highlighted the role of Panchakarma therapy by stating that the disease treated by Shodhana will never recur in due course of time. These Shodhana probably may leads to certain endogenous changes in the body responsible for the alleviation of Acne pathological process. Hence SanShodhana (Virechan) therapy seems to be line of treatment. Among all the Shodhana karma first preference is given to Virechana by the physicians because of its broad spectrum applicability and simplicity with least possibility of complications; Virechan not only helps in eliminating Doshas from the body but it has also preventive as well as promotive aspects. The importance of SanShodhana along with Shaman therapy will be more helpful in the treatment of this ailment. Among Shodhana s, Virechana is best for the diseases of Pitta & Rakta Pradosaja and some extent of Kapha, which are main Dosha of Mukhdooshika.

According to these lines of treatment, Virechana was firstly administered to the patients as a Shodhana measure. Role of external application in Mukhdooshika is as important as internal medication. Acharya Charaka has described Lepana as Sadyah Siddhi Karaka. (च. चि. 7/53)
Table 2: PROPERTIES OF LODHRADI LEPA

<table>
<thead>
<tr>
<th>S.N.</th>
<th>DRUG</th>
<th>RASA</th>
<th>GUNA</th>
<th>VIRYA</th>
<th>VIPAKA</th>
<th>DOSHA KARMA</th>
<th>AUSHDHA KARMA</th>
<th>PHARMAC-OLOGICAL PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lodhra</td>
<td>Kashaya, Tikta</td>
<td>Laghu, Ruksa</td>
<td>Shita, Katu</td>
<td>Kapha-Pitta, Grahi</td>
<td>Anti-inflammatory properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Dhanyak</td>
<td>Kashay, Tikta</td>
<td>Laghu, Snigdha</td>
<td>Ushna Madhura Tridosha, Deepana Pachana, Grahi</td>
<td>Antioxidant Activity, Anti-microbial Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Vacha</td>
<td>Katu, Tikta</td>
<td>Laghu, Tikshana</td>
<td>Ushna Katu Kapha-Vata, Lekhaniya, Medha</td>
<td>Antimicrobial activity Anti-fungal activity</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MUKHDOOSHIKA HAR VATI

Table 3: CONTENTS OF MUKHDOOSHIKA HAR VATI

<table>
<thead>
<tr>
<th>S.N.</th>
<th>CONTENTS</th>
<th>SCIENTIFIC NAME</th>
<th>FAMILY</th>
<th>PART USED</th>
<th>RATIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manjistha</td>
<td>Rubia Cordifolia</td>
<td>Rubiaceae</td>
<td>Root</td>
<td>1 part</td>
</tr>
<tr>
<td>2</td>
<td>Nimb</td>
<td>Azadirecta Indica</td>
<td>Meliaceae</td>
<td>leaves</td>
<td>1 part</td>
</tr>
<tr>
<td>3</td>
<td>Chopchini</td>
<td>Smilax China</td>
<td>Lilliaceae</td>
<td>Root</td>
<td>1 part</td>
</tr>
<tr>
<td>4</td>
<td>Guduchi</td>
<td>Tinospora Cordifolia</td>
<td>Menispermacae</td>
<td>Stem</td>
<td>1 part</td>
</tr>
<tr>
<td>5</td>
<td>Haridra</td>
<td>Curcuma Longa</td>
<td>Zingiberaceae</td>
<td>Rhizome</td>
<td>1 part</td>
</tr>
<tr>
<td>6</td>
<td>Sariva</td>
<td>Hemidesmus Indicus</td>
<td>Asclepidaceae (periplocaceae)</td>
<td>Root</td>
<td>1 part</td>
</tr>
</tbody>
</table>

Table 4: PROPERTIES OF MUKHDOOSHIKA HAR VATI

<table>
<thead>
<tr>
<th>S.N.</th>
<th>DRUG</th>
<th>RASA</th>
<th>GUNA</th>
<th>VIRYA</th>
<th>VIPAKA</th>
<th>DOSHA KARMA</th>
<th>AUSHDHA KARMA</th>
<th>PHARMAC-OLOGICAL PROPERTIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Manjistha</td>
<td>Madhur, Tikta</td>
<td>Guru, Ruksa</td>
<td>Ushna Kau Kapha-Pitta, Kustha, Visharpa, Shotha,</td>
<td>Antibacterial activity, bloodpurifier</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Nimb</td>
<td>Tikta, Kashay</td>
<td>Guna, Laghu Ruksa</td>
<td>Shita Katu Kapha-Pitta, Deepan Krimigyna</td>
<td>Anti-Inflammatory Skin-Disorder, Antimicrobial, Immunostimulant Activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Chopchini</td>
<td>Tikta, Laghu Ruksa</td>
<td>Ushna Katu Tridosha-Har, Vata-Rog, Unmad,</td>
<td>Antimicrobial, Antioxidant, Anti-Inflammatory,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Guduchi</td>
<td>Tikta, Kashaya</td>
<td>Guru, Snigdha</td>
<td>Ushna Madhura Tridosha Shamak, Medhya, Rasyan, KandughaDahapraSha man</td>
<td>Anti-Inflammatory Analgesic, Hepato-protective Antioxidant Antiallergic Anti-stress</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Haridra</td>
<td>Katu, Tikta</td>
<td>Laghu, Ruksa, Teekshna</td>
<td>Ushna Katu Kapha-Vata, Kustha, Krimi, Kandu, Vrana,</td>
<td>Antimicrobial Anti-InflammatoryAntioxidant Hepato-protective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sariva</td>
<td>Madhur, Tikta, Guru, Snigdha</td>
<td>Shita Madhur</td>
<td>Tridosha-Shamak, Kusthaghn Rakta-Shodhak, Shotha-Har</td>
<td>Anti-inflammatory Anti-oxidant, Antileprotic</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

METHOD OF PREPARATION OF DRUGS
Preparation of Mukhadooshika har Vati:-
All six raw drugs obtained, from a renowned crude drug supplier from (Prem Nagar Ashram) Haridwar, were identified & authenticated by the department of Dravyaguna, Rishikul campus, Uttarakhand Ayurved University, Haridwar. All raw drugs (1kg each) were cleaned thoroughly with water and dried under sun to remove the moisture and later grinded to fine powder, and to increase the potency of vati;
Bhawana given by Swaras of Nimb, Haridra & Guduchi for 3 times (of each Swaras) to the above prepared fine powder. The whole mixture was compressed into tablet weighing 500mg each. The tablets (Vati) were packed in sterile polythene covers containing 150 tablets approximately each.

**Preparation of Lodhradi lepa (modified as gel):**

*Lodhradi lepa*[^1][^2] is described by different Acharya’s in their text; as reference for the base for preparing *Lodhradi Lepa* was not mentioned. Here *Lodhradi lepa* modified as gel formulation has been proposed as topical application; Topical gel formulation provides a suitable delivery system for drugs because they are less greasy and can be easily removed from the skin, percutaneous absorption of drugs from topical formulation and permeation through skin to reach the target tissue. Gel base formulation makes the drug molecules more easily removable from system than cream, ointment, or lepa. Gels for dermatological use have favorable properties such as being greaseless, easily spreadable, easily removable, emollient, non-staining, and compatible with several excipient and water soluble or miscible.

*Lodhradi gel* containing three ingredients (*Lodhra, Dhanyak, Vacha*) taken in equal proportion (3kg each) and all raw drugs collected from a renowned crude drug supplier from Haridwar, were identified & authenticated by the department of Dravyaguna, Rishikul campus, Uttarakhand Ayurved University, Haridwar. These raw drugs were cleaned thoroughly with water and dried under sun to remove the moisture and later grinded to fine powder. This powder was soaked in water (three times of raw material) for 24 hours and after 24 hours this soaked drug mixture was boiled till water gets evaporated and the mixture changed to dried form, then distill water was added to dilute this dried mixture. On the other side a gel base powder (Carbapol) was taken and mixed with distill water to transform from powder to gel base form then preservatives MPS & PPS added into it. After that this gel base mixed with diluted mixture of drugs to form *Lodhradi Gel*; then this self formulated gel packed to plastic sealed container (weighing 30 gm).

**RESULTS**[^3][^4]

20 Patients diagnosed with *Mukhdooshika* was selected from the O.P.D. / I.P.D. department of Kaya-chikitsa, Rishikul Campus, Haridwar, on the basis of inclusion and exclusion criteria. Assessment of the patients was done at the interval of 15 days i.e. two assessments were done and follow-up was done 30 day after completion of treatment to look for any recurrence. In the study it was observed that 15 out of 20 patients got excellent relief, 2 patients got marked improvement while only 3 patients got mild improvement in their symptoms. In follow up study only 2 patients came with recurrence of the picdika but less in their severity.

**DISCUSSION**

**LODHRADI LEPA[^5][^6]:**

This *Lepa* constitutes *Lodhra, Dhanyak* and *Vacha. Mukhdooshika* mainly occurs due to vitiation of *Kapha, Vata* and *Rakta*. It is understood that drugs should possess *Kaphavatahara* and *Raktashamaka* property. *Lodhra* has *Kaphapittashamka*, *Sravastambhaka*, *Raktashodhaka* and *Ropana* property. Ethanolic extracts of *Lodhra* has Anti-Acne activity. *Kaphavatashamaka* and *Lekhana* property of *Vacha* acts directly on the causative Dosha of *Mukhdooshika*. *Teekshnaguna* of *Vacha* clears the Srototavarodha.Madhura, Tikta, Kashayarasa and Tridoshahara property of Dhanyak helps in the Shamana of Prakupitadosha. Thus, these unique properties present in the ingredients of this yoga helps in Samprapti Vighatna of Mukhdooshika.
PROBABLE MODE OF ACTION OF DRUGS

Probable Mode of Action of Virechana Karma

All Acharya’s have common opinion regarding the importance of Shodhan in the management of different diseases.

<table>
<thead>
<tr>
<th>KARMA</th>
<th>MODE OF ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deepan.</td>
<td>Enhances appetite and it pacifies vitiated Vata dosha</td>
</tr>
<tr>
<td>Snehan, Abhyang &amp; Swedana</td>
<td>Expels vitiated Doshas from Shakha to Kostha. By virtue of its property Ghrita is Pitta-Shamak and Agni-Dipak.</td>
</tr>
<tr>
<td>Virechan Karma</td>
<td>It is targeted to expel increased Pitta Dosha out of the body i.e. Srotoshodhan. As we know that Rakta is said to be Pitta Sadharmi so it will pacify vitiated Pitta as well as vitiated Rakta</td>
</tr>
<tr>
<td>Sansarjana kram</td>
<td>Due to shodhan (Virechan) procedure Mandagni develops therefore Sansarjan kram maintain Agni balance or equilibrium.</td>
</tr>
</tbody>
</table>

2. Probable Mode of Action of Lodhradi Lepa:

First trial drug for the study was Lodhradi lepa; Lepa one among the Bahya Pradana Upakarm, which could be easily employed with effective results. Hence Lepa had been selected for external application along with Virechana. ‘Lodhradi Lepa’ as described in Astang Hridaya, Chakradatt, sharangdhar samhita; had been selected for this study. It contains 3 drugs namely Lodhra, Dhanyak, Vacha. Ingredients of Lodradi Lepa are having the predominance of Tikta, Katu and Kashaya Rasa, Laghu Guna, Katu Vipaka and Ushna Virya. These properties alleviate Kapha Dosha. Lodradi Lepa is capable of pacifying vitiated Vata Dosha by its Madhura Rasa, Snigdha Guna, Ushna Virya and Madhura Vipaka. Due to the presence of Madhura, Tikta, Kashaya Rasa, Snigdha Guna and Sheeta Virya it alleviates Pitta Dosha. Ruksha guna helps in drying up the Pidika. Tikshna guna assists the drug to act fast, spreading in to the deep and squeeze out the pus inside. As Tikta Rasa is having Rakta Shodhana property acts on vitiated Rakta Dhatu and purifies it. By cleansing the blood, it cures the skin diseases and enhances the skin complexion. The drug consists of Shothahara, Vrana ropana, Pachana and Krimighna properties. Hence helps to enhance the healing process of Mukhadooshika (Acne Vulgaris). Medoghna property of Vacha will be useful in the subsiding of Medogarbha pidika.

Ingredients of Lodradi Lepa are rich in flavonoides and tannins. Flavonoides are proven to possess good antioxidant property. Antioxidants protect the skin from the oxidative damage. Tannins promote the healing process by increasing capillary formation. All the ingredients are considered to possess anti-inflammatory, analgesic and anti bacterial actions. Due to the anti-inflammatory action the drug helps to improve the outcome at the site by reducing the inflammatory features such as Saruja (pain) and Saraktata (bleeding). The analgesic action of ingredients is beneficial in the management of pain (Saruja). Due to antibacterial action they avoid secondary infections.

Probable Mode of Action of Lepa:
The probable mode of action of Lepa can be described in two steps as follows:

I) Pilosebaceous Uptake:
When a Lepa is applied over the surface of skin opposite to the direction of hairs on it, through a proper base, the active principles of the ingredients of Lepa are released into that base. After that, this combination enters the Romkupa & further gets absorbed through the Swedavahi Srotas & Siramukh. However, it should be kept in mind that the pilosebaceous uptake i.e. absorption of Lepa differs as per the site variation, skin condition & more important is the base through which it is applied.
II) Cutaneous Biotransformation:
Thereafter it is subjected for Pachana by Bhrajakagni viz. the viable epidermis starts off the catabolic degradation of the absorbed material with the help of essential enzymes. In due course of the above transformation, some new metabolites might be forming which pacifies the provocated Doshas locally & thus breaks the pathogenesis cycle leading to the alleviation in the symptoms.

3. Probable Mode of Action of Mukhdooshika har Vati
All the 6 ingredients (Manjistha, Sariva, Chopchini, Nimb Haridra And Guduchi) of Mukhdooshika har vati (Anubhut/self formulated drug) has been shown their Anti-inflammatory, Anti-microbial, Anti-acne effect in Various studies & Acharya charaka has described Manjistha and Sariva in Varnya Mahakashaya, Haridra in kusthaghna, and Vishaghna Mahakashaya, Guduchi and Sariva in DahpraShaman Mahakashaya. This Vati basically contains Raktaprasadan Drayvas like Sariva, Manjistha, Chopchini which detoxifies blood, Shothahar, and krimihar Drayvas like Nimb, Guduchi, Haridra subsides shotha, excessive sebum production and reduces bacterial load; Almost all the drugs are having Tridosh-Shamak properties. Mukhdooshika har vati is Mainly Tikta Rasa, Pradhana, Laghu Ruksha Guna, Ushna Virya and Kattu Vipaka Pradhana through which it helps in management of Mukhdooshika by breaking the Samprapti.

Anti-inflammatory action of Sariva, Guduchi, Nimb, Chopchini & Haridra reduces Shotha (inflammation), Antibacterial action of Manjistha, Chopchini, Nimb & Haridra reduces bacterial load and its colonization thus reduces Paka / discharge heals lesions, Anti-oxidant property of Sariva, Guduchi., Chopchini & Haridra reduces accumulation of dead cells or reduces retentional hyperkeratosis thus removes scar or Vaivarnya, Analgesic property of Guduchi reduces pain (Vedana), Anti-allergic property of Guduchi reduces kandu by reducing stimulation of mast cell and Anti-stress activity of guduchi reduces stress which is a main causative factor for the development of Acne Vulgaris. Moreover it has an ingredients (Haridra & Guduchi), having hepato-protective property by means of which it protects liver & repair damaged liver cells. It also has property of detoxification. It detoxifies the body & assists excretion of accumulated toxic from the body by enhancing liver function. In Ayurveda it can be understood in relation with Shonita, Raktavaha Srotas, and Yakrit. In shonitaja rogas (disorders due to vitiated blood), Vaivarnya21 (skin discoloration) is mentioned Prasanna Varnendriyaartha (bright skin tone and texture etc) are the Lakshanas of Vishuddha Rakta Purusha22 (characteristics of a person having pure and detoxified blood) snigdha rakta Varna in rakta sara23 and liver is said to be the mula of Shonitavaha/ Raktavaha Srotas. This shows that liver is the Karana (cause) for Vaivarnya, Prasanna Varna and other disorders of skin. Therefore, Mukhdooshika har vati also has rejuvenative action for liver. Therefore multi factorial action of these contents of Mukhdooshika har Vati may be the possible reason for its better effect.

CONCLUSION
It can be concluded that Virechan followed by Lodhradi Lepa and Mukhdooshikahar Vati after, which is efficiently decreases the clinical symptoms, controls infection, hastens the healing process can be recommended in the management of Mukhdooshika (Acne vulgaris)

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