

Pharmacological evaluation of vachadi ointment an ayurvedic formulation: A drug review

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Abstract

Introduction: Skin diseases in Ayurveda are described as *Kushta Roga*. There are seven *Mahakushta* and eleven number of *Shudra Kushta Roga* are explained. All *Kushta Roga* are *Tridoshaja* in nature but according to dominancy of *Dosha* they can be classified according to *Dosha*. The drug- *Vachadi* Ointment that contain *Vacha*, *Daruharidra*, *Sarshap* and oil with wax base which having easily availability and also cost effective. *Vachadi* ointment is having strong action of all ingredients hence, quickly result giving formulation for paediatric age group. The combinations of medicines described in the textbooks of *Ayurveda* are the products of thorough analysis and clinical trials with time bound revalidation. Many of them indicated in the context of various disorders are able to work both in the curative as well as preventive perspective. The skin has several inbuilt mechanisms for interacting with the environmental agents and most of the times the skin is able to protect it from those agents. The protective ability however, may not always be able to deal with the environmental stimulus and this leads to the production of skin disease. **Material & Methods:** Information was collected from the world health organization, books, research papers, journals. *Ayurveda* literature from reference books, internet, and opinions of experts utilize as a review.

Conclusion: It suggests that external application of *Vachadi* ointment is quite suitable therapy. As in *Kushta Chikitsa* both internal and external therapy gives in text and efficacy treatment of skin diseases.

Keywords: *Vachadi* Ointment, *Shudra Kushta Roga*, skin diseases, *Ayurveda*

1. Introduction

According to *Ayurveda* a medical formulation with optimum potentials is a vital requisite for the treatment of any disease^[1]. Medicine is an imperative pillar among them. The drug should afford itself to varied forms of its delivery; have several desirable assets to counter diseases; be available abundantly; and be apposite for administration in line with time and location^[2]. Ample references are available in the classics regarding the wonders a good drug can produce, as well as the ill effects an improper drug can create^[3]. The combinations of medicines described in the textbooks of *Ayurveda* are the products of thorough analysis and clinical trials with time bound revalidation. Many of them indicated in the context of various disorders are able to work both in the curative as well as preventive perspective. The skin has several inbuilt mechanisms for interacting with the environmental agents and most of the times the skin is able to protect it from those agents. The protective ability however, may not always be able to deal with the environmental stimulus and this leads to the production of skin disease^[4]. Skin diseases in *Ayurveda* are described as *Kushta roga*. There are seven *Mahakushta* and eleven number of *Shudra kushta roga* are explained^[5]. All *Kushta Roga* are *Tridoshaja* in nature but according to dominancy of *Dosha* they can be classified according to *Dosha*. The trial drug- *Vachadi* Ointment that contain *Vacha*,

Daruharidra, *Sarshap* and oil with wax base which having easily availability and also cost effective. *Pama* is a common disease in Pediatric practice causes more irritability in children due to intense itching. *Vachadi* ointment is having strong action of all ingredients hence, quickly result giving formulation for paediatric age group, so effort has taken to study the effectiveness of *Vachadi* Ointment in the Management of *Pama* (Scabies)^[6].

2. Aim of study

To analysed the effectiveness of *Vachadi* Ointment

3. Material & Methods

Vachadi ointment research information was collected from the world health organization, books, research papers, journals. *Ayurveda* literature from reference books, internet, and opinions of experts utilize as a review.

Basis for selection of drugs

All *Kushta Roga* are *Tridoshaja* in nature but according to dominancy of *Dosha* the *Pama Kushta* is one of the *Shudra Roga* which in *Pitta-Kapha* predominating. *Piita* and *Kapha* are the two key pathological factors involved in the *Samprapti* of *Pama*. *Vachadi Lepa* (Ointment) is having *Pitta - Kaphahara* property hence this effort was made to access the internal act of trial drug in *Pama*. *Vachadi Lepa*

(Ointment) explained in *Sushruta-Samhita, Chikitsa Sathan*⁷.

Malahara (Ointment) Kalpana

Malahara Kalpana is the ointment preparation which has *Siktha Taila* (bee-wax and oil mixture) or *Ghrita*, as the basic constituent. The base of Malahara Kalpana is prepared by melting 1 part of bee-wax and 2-6 part of coconut/Tila Tail 2. If any physical impurities are seen in the wax it should be filtered through a cloth. To this, as per the formulation, add the fine powder of various ingredients and mix well & prepared ointment must be preserved in a wide mouthed container (glass/ plastic) having tight fitting corks [8].

Advantages of Malahara (Ointment) Kalpana

- Preparations are used in *Vranashodhan* and *Vranaropana, Kushtaroga, Varnaprasadana* etc.
- It should be melt or soften at body temperature and be easily applied.
- The ointment bases used should be easily applicable as well as easily removable from the skin.

Composition of the Drug

Table 1: showing the ingredients of *Vachadi Ointment*

Sr. No	Ingredients	Botanical Name	Part used	Quantity	1gm of Ointment contains
1	<i>Vacha</i>	<i>Acorus calamus</i> Linn.	Rhizome	150gm	0.033gm
2	<i>Daruharidra</i>	<i>Berberis aristata</i> DC.	Rhizome	150 gm	0.033gm
3	<i>Sarshap</i>	<i>Bressica nigra</i> Koch.	Seeds	150 gm	0.033gm
4	<i>Tila Tail</i>	<i>Sesamum indicum</i>	Oil	4,5 Lt	0.875 gm
5	Bee- wax	-----	----	200gm	0.117gm

Table 2: showing Properties of *Vachadi Ointment*

Sr. No	Dravya	Karma/Action	Guna	Rasa	Virya	Vipak
1	<i>Vacha</i>	<i>Kapha - Vathar dipan, Truptighna, Rasayn, Asthapanopag</i>	<i>Laghu, Tikshna</i>	<i>Katu, Tikta</i>	<i>Ushna</i>	<i>Katu</i>
2	<i>Daruharidra</i>	<i>Shotahara, Vranashodhan, Varnaropana</i>	<i>Laghu, Ruksha</i>	<i>Kashay, Tikta</i>	<i>Ushna</i>	<i>Katu</i>
3	<i>Sarshap</i>	<i>Shotahara, Lekhan, Vednasthapan</i>	<i>Tikshna</i>	<i>Katu</i>	<i>Ushna</i>	<i>Katu</i>

3. Observations and Results

1. VACHA

vcaeçgNxakqukaitae:[avaiNtviûk<t!, ivbNxaXmanzUIXnlzk<NmUÇivzæixnI. ApSmark) aeNma<dÉUtjNtvinlaNHret!.

(B.P.Nighantu *Haritakyadivarga*).

Vacha is the important medicinal plant used in Ayurveda traditional medicine to treat different ailments and maintain health condition. *Vacha* is a strongly aromatic gregarious perennial herb, with close set distichously arranged, erects narrowly uniform, glossy green leaves, arising from a partially underground creeping and branching rhizome [10].

Botanical name: *Acorus Calamus*, Linn

Family: Araceae.

Part used: Rhizome

Ayurvedic Properties

Rasa: *Katu, Tikta*

Guna: *Laghu, Tikshan*

Veerya: *Ushna*

Vipaka: *Katu*

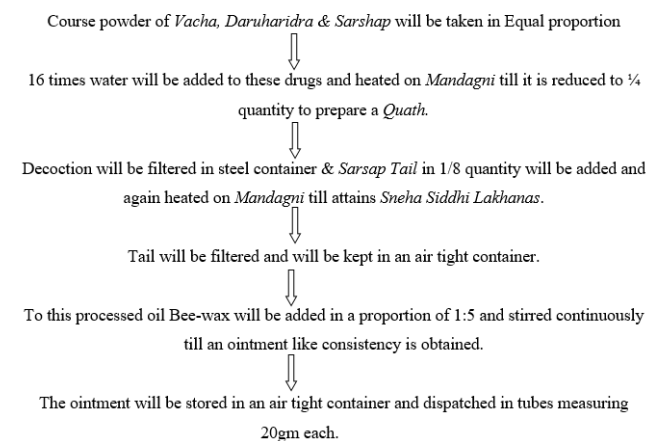
Doshaghnata: *Tridosha Shamaka* especially *Kapha – Vatahar*

- They are more economical when compared to other dosage forms.

Mode of preparation [9]

The drugs will be prepared as per standard procedure mentioned in *Rasatarangini, Vachadi Ointment* will be prepared as per Guidelines.

Flowchart Of preparation Vachadi Ointment



Rogaghanata: *Vranashodhan* and *Vranaropana, Kushtaroga, Varnaprasadana* etc.

Karma: *Dipana, Pachana, Doshanulomana, Rasayana, Shamaka, Kaphahara, Medhya, Vatahara, Vamak*

Chemical Constituents [11]

Asarone, calamenol, calamene, calamenone, eugenol, methyl eugenol, camphene, various fatty acids, calamol, calamine acoradin, azulene, two selinane type-sesquiterpens-acolamonc and isoacolamone, sugars, glycosides-acorin, calameon, calamusenone, a flavonoluteolin - 6, 8-c-diglucoside, new natural products acoramone, asarylaldehyde, carcinogen and epoxyisoacorager macrone are the main chemical constituents reported from this plant.

Actions & Uses

Stomachic, emetic, antispasmodic, used in colic, flatulence, dyspepsia

Pharmacological activities [12]

Spasmolytic, Antimicrobial, Anthelmic, Insectidal, CNS depressant

2. DARUHARIDRA ^[13]

It is useful in Skin & eye diseases and very effective in conjunctivitis. It is effective in uterine inflammation. It is also antipyretic and blood purifier. Its preparation *Rasanjana* is very effective in eye diseases. It is used as a coagulant in many haemorrhagic diseases like bleeding piles, menorrhagia etc. Its infusion is given in diseases like syphilis. It is very much beneficial in Diarrhoea, Dysentery, Jaundice and other liver diseases.

Latin Name: -Berberis aristata

Family: -Berberidaceae.

Synonyms: - *Darvi, Katamkateri, Pachmpacha.*

Gana: - *Arshoghan Kandughna, Lekhaniya (ch), Haridradi, Mustadi, Lakshadi (Su)*

Chemical Constituents: -The root contains Berberin *kshar* and fruit contain *chichamla* and *sevamla*.

Ayurvedic Properties:-

Guna: - *Laghu, Ruksha.*

Rasa: - *Tikta, Kashaya.*

Vipaka: - *Katu.*

Virya: - *Ushna*

Doshagnata: - *Kapha-Pittahara.*

Phytochemical profile

The root has 2-3% Berberine other- oxyberberine, berbamine, karachine, palmative, oxycanthine, taxilamine, are reported from various parts.

Pharmacological activities ^[14]

Hypoglycaemic, anti-cancer, anti-fatigue, anticoagulant, gastro irritant, antipyretic, local-anaesthetic, anti-protozoa, anti TB, anti-bacterial, anti-inflammatory, anti-trachoma, hypotensive, CNS depressant LD50 of berbarine in mice was found to be 25.3 mg/kg /i/p drug was found free from any serious toxicity in human beings.

External Uses: *Shothahara, Vendanasthapana, Vranashodhana, Vranaropana* and *Chakshushya, vedanasthapana, vrana shodhana, ropana kandughna & rakta shodhaka.*

Action: It is *deepana, Yakrit, uttejaka* (hepatostimulant) *pittasaraka, rochana* and *Trishna-nigrahana.*

3. SARSHAP ^[15]

Sarshap consists of dried seed of *Brassica Nigra* Linn. (Fam. Brassicaceae), an erect, stout, simple or branched, glaucous, annual herb, 50 to 60 cm tall with amplexicaul leaves, commonly cultivated in Bengal, Bihar, D.P. and Punjab, and also found occasionally as an escape in waste places and fields.

Latin Name: *Brassica Nigra* Linn

Family: Brassicaceae

Ayurvedic Properties

Rasa: *Katu*

Guna: *Tikshan*

Veerya: *Ushna*

Vipaka: *Katu*

Doshagnata: *Tridosha Shamaka* especially *Pitta-Kaphahar.*

Rogaghanata: *Vranashodhan* and *Vranaropana, Kushtaroga, Varnaprasadana* etc.

Karma: *Shotahara, Lekhan, Vednasthapan.*

Macroscopic: Seeds small, slightly oblong, pale or reddish-brown, bright, smooth, 1.2- 1.5 mm in Diameter under magnifying glass it is seen to be minutely reticulated; taste, bitter and sharp.

Properties and action ^{[16]:} It has *Katu, Tikta Rasa, Teekshna, Snigdha guna, Ushna virya, Katu vipaka. It is Kaphahara, Vatahara, Pittakara, Deepana, Hridya.*

Roghagnata: *Kusta* (skin disorders), *krimi roga* (worm infestations).

Matra: 0.5-1 g in paste form.

Anti-bacterial Property ^[17]

A study on the effect of mustard essential oil on the cell membrane of *Escherichia coli* O157:H7 and *Salmonella typhi* has shown that a significantly ($P \leq 0.05$) higher release of cell constituent was observed when both bacteria cells were treated with mustard EO. Intracellular pH and ATP concentration and the release of cell constituents were measured when mustard EO was in contact with *E. coli* and *S. typhi* at its minimal inhibitory concentration (MIC) and maximal tolerated concentration (MTC).

4. TILA TAILA ^[18]

Latin Name: *Sesamum indicum*

Natural Order: *Pedalicaceae*

Classical Name: *Tila*

Parts Used: *Root, leaf, seed, oil*

Ayurvedic Properties:

Rasa: *Madhura, Katu, Tikta, Kashaya*

Guna: *Guru, Snigdha*

Virya: *Ushna*

Vipaka: *Madhura*

Doshagnata: *Vatashamaka, Kapha-pittashamaka,*

Rogagnata: *Vatashula, Amavata, Indralupta, Vrana.*

Karma: *Snehana, Sandhaniya, Vranashodhana, Vranaropana, Keshya, Medhya, rasayana, Shulaprasamana, Balya, Vrishya.*

Actions & Uses: The seeds are astringent, emollient, demulcent, aphrodisiac, laxative, galactagogue, digestive, hair-restorer, emmenagogue and tonic. They are useful in haemorrhoids, ulcers, buns, dysentery, diarrhea, polyuria, amenorrhea, baldness, strangury, dermatopathy, migraine, alopecia and obesity. The oil is bitter, astringent and emollient.

Chemical Constituents ^{[19]:} Neutral lipids, glycolipids and phospholipids, arginine, cysteine, histidin, isoleucine, leucine, lysine, methionine, threonine, tryptophan, tyrosine, ualine, α & β -globulin, folic acid.

Pharmacological Activities: Cholesterolemic, antioxidant.

4. Discussion

The drugs used in *Vachadi* ointment are mainly *Tikta, Katu* and *Kashaya* rasa predominant, *Laghu, Tikshan* and *Ruksha Guna* predominant and *Kapha-Pitta Shamaka* properties in nature ^[20]. All the drugs of *Vachadi* ointment are having *Tikta* and *Katu Rasa* which are having *Aampachak, Raktaprasadaka, Kushtaghna, Daha Prasamaka* and *Kaphahara* properties so it is considered to be very much effective in the treatment of *Pama Kushta*. *Laghu, Tikshan* and *Ruksha Guna* subsides *Kapha* thereby increase *Agni* which help in the removing *Agnimadya* and clears minutes

Srotas by removing of *Aam. Laghu Guna* of the compound helps in *Lekhana* and *Poshana* which reduced the *Pidika* of *Pama* mainly. *Tikta Kashya Rasa* and *Laghu Guna* do the *Lekhana Karma* and *Kapha* alleviation too *Vachadi* ointment by virtue of its natural properties alleviates *Vata* and reduces *Kandu* which is one of the main symptoms of *Pama* [21]. *Vachadi* ointment has three drugs *Vacha*, *Daruharidra* and *Sarshap* which is indicated in *Pama Kushta*. All the drugs have Antibacterial, Antiviral, Anti-inflammatory, Anti-allergic and Antimicrobial Activities [22]. *Vacha* have wound healing and Anti-inflammatory properties. *Daruharidra* have properties of quickly heal wounds and has excellent drying quality which relieves moisture. Its paste applied externally can instantly relieve pain and inflammation. *Daruharidra* applied externally can relieve skin diseases and itching.

5. Conclusion

The drug had shown evidenced to be a safe preparation in paediatric practice without any adverse feedbacks. The drug was well accepted by children due to external application. Thus, it can be concluded that, highly significant results were found in all symptoms. It suggests that external application of *Vachadi* ointment is quite suitable therapy. As in *Kushta Chikitsa* both internal and external therapy gives in text and efficacy treatment of *Pama* should be carried out with external application of *Vachadi* ointment administration.

Conflicts of interest- No

Contributions from authors- Equal contribution of all authors for this manuscript

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