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Review Article

CLINICAL REVIEW: ACNE VULGARIS – DERMATON, GLOON & *MAHAMANJISHTHAADI KWATH* - A COMPLETE AYURVEDIC TREATMENT

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ABSTRACT

Introduction Acne vulgaris, or acne, as it is generally called, is the most common skin disease, affecting nearly 80 percent of persons at some time between the ages of 11 and 30 years.[1] It can persist for years and result in disfigurement and permanent scarring, and it can have serious adverse effects on psychosocial development, resulting in emotional problems, withdrawal from society, and depression.[2] The pathogenesis of acne is multifactorial, and therapy can now be directed at many of these factors. This review summarizes current concepts of the rational treatment of acne vulgaris.

Objective To review the best evidence available for individualized Ayurvedic treatment of acne.

Study Selection Well-designed randomized controlled trials, meta-analyses, and other systematic reviews are the focus of this article.

Data Synthesis Main outcome measures of 29 randomized double-blind trials that were evaluated included reductions in inflammatory, noninflammatory, and total acne lesion counts. Glo ON reduce the number of comedones and inflammatory lesions in the range of 40% to 70%. These agents are the mainstay of therapy in patients with comedones only. Other agents, including DermatON, *Maha Manjishthadi Kwath* &, *Dashang lep* & Neurova *Lep* all yield high response rates. Patients with mild to moderate severity inflammatory acne with papules and pustules should be treated with all medicines prescribed above.

DermatON are first-line therapy in patients with moderate to severe inflammatory acne while DermatON & GloON is indicated for severe nodular acne, treatment failures, scarring, frequent relapses, or in cases of severe psychological distress. Long-term topical or oral antibiotic therapy should be avoided when feasible to minimize occurrence of bacterial resistance. DermatON is a powerful teratogen mandating strict precautions for use among women of childbearing age.

Conclusions Acne responses to treatment vary considerably. Frequently more than 1 treatment modality is used concomitantly. Best results are seen when treatments are individualized on the basis of clinical presentation.The management of acne vulgaris by non-dermatologists is increasing.[1] In this article we attempt to answer the question: what treatments in acne vulgaris have proven efficacy and how are these treatments best administered and individualized to optimize results and minimize complications? We considered the efficacy and safety of topical *Dashang lep*, Neurova , Tab.DermatON, Tab.GloOn & *Mahamanjishthadi Kwatha.*

METHODS

A librarian-assisted literature search was performed for English-language randomized clinical trials. We used MEDLINE and EMBASE to identify all therapeutic clinical trials, meta-analyses, and systematic analyses concerning acne vulgaris from 1966 to 2004. We further cross-referenced bibliographies of identified articles. This search strategy identified 248 articles. We then evaluated titles and abstracts, and excluded studies that were not blinded, were not randomized, had sample sizes of fewer than 50, did not provide adequate information with respect to objective outcomes measures, contained no original data, pertained to treatments that are not available, did not involve humans, or were therapeutic failures. We used the following search words: *acne vulgaris*, *acne, tretinoin*, *Ras Manikya, Suvarna Rajvangeshwar, Khadir, Chopchini, Sariva, Nimba Kwath, Kaishor Guggul,* clinical trials, review, therapy, treatment, and randomized controlled trials.

We identified 90 randomized double-blind trials, which comprise the focus of this article. Where possible, data concerning responses to treatment were put in terms of percent reduction of inflammatory lesions, noninflammatory lesions (comedones), and total lesions.

A recent methodological literature review of acne therapy trials over the last 50 years found that methods of grading acne severity and methods of assessing outcome measures are highly inconsistent.[2] There are more than 25 methods of assessing acne severity and more than 19 methods for counting lesions. Our literature review verifies the lack of standardized of methodology. Nevertheless, analysis of acne therapy data does allow conclusions to be drawn that can direct therapeutic decisions.

In addition to the randomized controlled trials (RCTs), we reviewed selected articles that included data collected or analyzed after the trial, including meta-analyses and other systematic reviews. We also mention selected non-RCTs when they represent best evidence concerning established therapies that have not yet been studied in well-designed RCTs.

Pathophysiology

The origin of acne vulgaris is complex and incompletely understood. At least 4 pathophysiologic events take place within acne-infected hair follicles: (1) androgen-mediated stimulation of sebaceous gland activity, (2) abnormal keratinization leading to follicular plugging (comedo formation), (3) proliferation of the bacterium *Propionibacterium acnes* within the follicle, and (4) inflammation. In addition to these 4 basic mechanisms, genetic factors,[3] stress,[4] and possibly diet may influence the development and severity of acne.

- **Case-based clinical applications**

Diagnosis

The diagnosis of acne vulgaris is usually uncomplicated. Differential diagnoses mainly include rosacea, perioral dermatitis, bacterial folliculitis, and drug-induced acneiform eruptions. The presence of comedones confirms the diagnosis of acne vulgaris.

Evidence-based literature in acne treatment is growing, and there is sufficient evidence to justify specific treatments for most clinical presentations. Successful outcomes frequently require nuance in management and a thorough understanding of all treatment modalities. Good outcomes are based on what is perceived by the patient as well as what can be measured. Since morbidity in acne is primarily emotional (psychological), different degrees of success may satisfy different individuals. Acne severity fluctuates over time and treatments often need to change accordingly.

Comedones Only

For this treatment GloON are the mainstay of treatment. Maintenance treatment is usually required.

Inflammatory Acne (Papules and Pustules), Mild to Moderate Severity

DermatON the treatment of choice for these patients' best results require 8 to 12 weeks and maintenance therapy is usually required. Reasonable response expectations are in the range of 30% to 80%.[17-20,25,26]

Moderate to Severe Inflammatory Acne

DermatON & GloON Response expectations with oral antibiotics are in the range of 64% to 86%.[34,40]

This Treatment require a minimum of 6 to 8 weeks of treatment. There are no strict regulations on duration of use, but the recent increase in the prevalence of resistant organisms has resulted in current recommendations to encourage maintenance therapy for Longer perod.[35]

Laboratory Studies

For women with regular menstrual cycles, serum-androgen measurements are not necessary. For those with rapid onset of hyperandrogenism and virilization, an androgen-secreting ovarian or adrenal tumor can be excluded with a normal total testosterone and dehydroepiandosterone sulfate levels, respectively. Irregular menses, hirsutism, obesity, or a family history of type 2 diabetes suggest a possible endocrinopathy, such as polycystic ovary syndrome. Further studies may be indicated, which could include measurement of gonadotropins, free testosterone, 17-hydroxy progesterone, prolactin, and androstenedione.[57,100] Unfortunately, there is no widely accepted best laboratory test in this setting.[101]

TREATMENT

Dermaton

Composition:

Sr.No	**Name of the Ingredients**	**Weight (mg)**
1	Rasamanikya	15
2	Arogyavardhini	65
3	Gandhak rasayan	75
4	Kaishor Guggul	80
5	Sariva (Hemidesmus indicus)	35
6	Khadir (Acacia catechu)	40
7	Manjishtha (Rubia cordifolia)	70
8	Gum acacia	20
	Bhavana: Nimba Swaras	

Tablet wt: 400mg

GloON

Composition:

Sr.No	Name of the Ingredients	Weight (mg)
1	*Suvarna raj Vangeshwar*	15
2	*Chopchini*	65
3	*Gandhak rasayan*	75
4	*Kaishor Guggul*	80
5	*Sariva (Hemidesmus indicus)*	35
6	*Khadir (Acacia catechu)*	40
7	*Manjishtha (Rubia cordifolia)*	70
8	Gum acacia	20
	Bhavana: *Sariva* Phant	

Tablet wt: 400mg

***Rasmanikya* in skin disorders:**

It offers beneficial effects in the management of diseases such as; leprosy, surface wounds, pus, boils dryness of skin, eczema, rashes and leukoderma, etc. Impurity of blood is one of the reasons of skin ailments and *Rasmanikya* acts as *Raktashodhak* means it purify blood thus gives relief from skin problems, it is believed that presence of purified sulfur helps to detoxify blood. The ingredients of *Rasmanikya* acts as *Kushthahar* thus relive symptoms of leprosy or many other skin diseases. The formulations impart calming and soothing effects thus help to reduces pain, itching and burning sensation related to skin problems. It reduces damage caused by sun-burn, restore energies and redress blood morbidity. The immunosuppressants effects give benefits in autoimmune skin diseases such as; Polymorphous Light Eruption and Systemic Lupus Erythematosus, etc. The presence of metallic compounds initiates re-pigmentation lost by disease consequences. The ingredients of formulation help to manage *Kapala* and *Audumbera Kushtha* thus improves manifestations of erythroderma.

Biological response of *Rasmanikya* in skin disorders:

- It balances *Vata* and *Kapha* thus relieve skin ailments.
- It relief fever related to other diseases.
- Remove excessive phlegm and toxins from body which may sometimes initiate pathogenesis of skin diseases.

- It treats disease like; ring worm, scabies, psoriasis and urticaria, etc.
- *Rasamanikya* breaks immunological adversity which can trigger skin manifestation.
- Relieve pain, inflammation and swelling
- The antimicrobial property resists skin infection
- The metallic components enhance colour, complexion and integrity of skin

The major ingredients of *Rasmanikya* are *Tamara Bhasma, Hartala* and *Abhrak Bhasma*. *Tamara Bhasma* helps in red blood cells formation thus restore complexion and colour of skin. The presence of *Tamara Bhasma* reduces chances of disease which can arise due to the vitiation of blood. *Hartala* offers beneficial effects in skin diseases like; itching, eczema and herpes, etc. *Abhrak Bhasma* another component of *Rasmanikya* boosts immunity thus prevent skin infection, it also imparts strength thus maintain physical compatibility and skin integrity. Formulations helps to maintain youthfulness of skin nourishes skin and rehydrate skin therefore provide natural beauty and strength of skin. *Rasmanikya* prevent wrinkles and skin symptoms of premature aging.

Effect of *Rasmanikya* on *Doshas* for skin vitality

Ayurveda formulation *Rasmanikya* offers beneficial effects towards the pacification of *Doshas* and gives specific benefits in the management of skin problems as depicted in **Figure 1**.

- The skin predominance to *Vata Dosha* remain dry and sensitive to touching sensation, *Rasmanikya* pacifies excess *Vata* thus prevent skin dehydration and sensitivity.
- Pacification of *Pitta Dosha* by *Rasmanikya* helps in breakouts & photosensitivity tolerance of skin.
- *Rasmanikya* correct aggravated *Kapha dosha* thus help to maintain skin texture and tolerant to sun exposure.
- The simultaneous corrections of *Vata-Pitta* related to skin problems helps in dry and sensitive skin.
- The ingredients of formulation pacify *Kapha-Pitta* together therefore resist skin problems that may occur due to the excessive oily layer.
- It removes *Ama* (toxins) accumulated under the skin.
- Improves circulation thus enhances supply to skin tissue.

Ingredients of *Rasmanikya* enhance digestive fire therefore contributes towards development of skin tissue.

Suvarna Raj Vangeshwar

'Suvarna Raj Vangeshwara' is a metallic drug preparation described in an *Ayurvedic* scheduled text *'Rasataragini'*. The drug contains Mercury (Hg), Sulphur (S), Tin (Sn) and Ammonium Chloride (NH_4Cl)

(in the form of *'Navasagar'*). The drug be- longs to a class of *'Kupipakva Rasayana',* which was produced through a specialized method. In this method the homogenous mixture of the ingredients is placed in a closed narrow mouthed long necked glass flask, wrapped in a multi-layered clay smeared muslin cloth. The flask was then subjected to prolonged controlled heating in a sand bath. At the end of heating the product *'Kupipakva Rasayana'*'in this study '*Suvarna Raj Vangesvara*' was collected at the bottom of the flask. The flask was skillfully broken and the product '*Suvarna Raj Vangesvara*' was collected *Suvarna Raj Vangesvara*. In Ferric chloride reducing power assay *Suvarna Raj Vangesvara* showed dose dependent increase in anti- oxidant activity almost similar to that of standard antioxidant i.e. Vit C. at all concentrations. *Suvarna Raj Vangesvara* exhi- bited higher inhibitory activity on process of Lipid peroxidation in all concentrations as compared to the standard antioxidant ascorbic acid. Thus, overall *Suvarna Raj Vangesvara* showed a potent and very good dose dependant antioxidant activity as compared the respective standards. *Suvarna Raj Vangeshwara* is found to possess a potent antioxidant activity through this study. It is used in *Ayurvedic* practice by Ayurvedic practitioners for multiple purpose may be because of its potent antioxidant activity since, reactive oxygen species plays important role in many pathological conditions and diseases. On this background, this multi-potential activity of this drug needs to be explored in future on *in-vitro* and *in-vivo* scales.

Mahamanjishthadi Kwath

This study may serve as standard reference for quality control analysis and checking antimicrobial potential of various *Asava, Aristha* and *Kadha* formulations. Ethnopharmacologists, microbiologists, and natural-products chemists can use such information of phytochemicals and isolate, characterize more lead phytochemicals which could be developed for the treatment of diseases.

Antimicrobial evaluations confirmed susceptibility of Ayurvedic formulation, *Mahamanjishtadi Kadha* against common skin bacteria and fungi, *Staphylococcus aureus, P. aeruginosa, S. Epidermidis and C. albicans.* The broad spectrum of antimicrobial activity of the herbal ingredients, *viz., Manjishtha* (*Rubia cordifolia* Linn), *Sariva* (*Hemidesmus indicus* Linn), *Nimba* (*Azadirachta indica* A. Juss.), *Khadir* (*Acacia catechu* Linn. f.*), Haridra* (*Curcuma longa* Linn.), *Bibhitaki*, (*Terminalia bellerica* Gaertn.) Roxb.), *Haritaki* (*Terminalia chebula* (Gaertn.) Retz.) and *Amalaki* (*Emblica officinalis* Gaertn) in composition forms the basis of selection to be incorporated for treating skin infections.

CONCLUSION

Current treatments in acne target one or more of the known mechanisms involved in the disease. Combining more than 1 treatment frequently yields optimal responses. Patients may require adjustment of therapies depending on their degree of improvement and level of tolerance to the treatments.

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