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THE SCOPE OF MANJISTHA IN VARNYA MAHAKASHAYA: A COSMECEUTICAL APPROACH TO SKIN HEALTH AND AESTHETIC WELL BEING: A REVIEW ARTICLE

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ABSTRACT

Medicinal plants are essential to maintaining a healthy, disease-free human life. The food and lifestyle of the common person have changed drastically in recent years which leads to various diseases formation in human body. According to Ayurveda, a person can only be in excellent health when their three life energies or doshas which make up each person's constitution are properly balanced. Since the early age, human life has a great impact on the external appearance of an individual and skin is the basic element of the external appearance. Beauty is generally dependent on the type and texture of the skin one has. The concept of using herbs for beautification is well defined in Ayurveda. In Ayurveda, the skin colour is called Varna and it has a variety of physiological and pathological effects. Varnya on the other hand is a classical term for restoring and maintaining the natural texture and tone of the skin. To maintain the Varna of the skin Acharya Charaka had mentioned a group of ten drugs (Shweta Chandan, Padmak, Nagkesar, Ushir, Manjistha, Sariva, Shweta Durva, Harita Durva, Yashtimadhu, Kshirvidari) called the Varnya Mahakashaya. According to Acharya Charaka the dravyas of Varnya Mahakashaya are tikta madhura rasatmaka, rakta prasadak and kaphapitta shamak. The mechanism of action of the herbs mentioned in Varnya Mahakashaya is maintaining skin colour i.e Varna Vruddhi of twak or rupa prasadan. These drugs are used either internally or externally or in combination in a variety of ways. The pharmacological properties of these herbs show a complexion promoting effect and has the potential to preserve and restore the lost beauty of many people around the world without side effects. Amongst these 10 mentioned drugs Manjistha, Shweta Chandan and Sariva are most widely used drugs. Manjishtha (Rubia cordifolia Linn.) commonly known as Indian Madder. The herb has been classified by the Acharya Charaka in Varnya Mahakashaya (for the enhancement of skin complexion), Jwarahara Mahakashaya(anti-pyretic), and Vishaghna Mahakashaya(a detoxifier). Acharya Sushruta has mentioned Manjishtha as Pittasamshamana. Manjistha also stimulates collagen production, promoting skin regeneration and overall skin health. Beyond its dermatological uses, Manjistha plays a significant role in treating free radical-related diseases such as arthritis and cancer, as it exhibits strong antioxidant, of anti-cancer, and immunomodulatory activities. Its roots are a known source anthraquinones, providing further therapeutic benefits such as hepatoprotective and anticancer effects. The phytochemical constituents like anthraquinones, glycosides, saponins, flavonoids, alkaloids, tannins etc. were found as a major constituent in this plant. The amazing benefits of Rubia cordifolia to treat a number of diseases, such as acne, enterocolitis, cancer, diabetes, bacterial infection, Alzheimer's, inflammation are described in the literature. The information on synonyms, microscopic and macroscopic, applications, pharmacological activities, and the chemical constituents of Manjishtha is presented in this article.

KEYWORDS: Varna, Varnya Mahakashaya, Manjistha, Beauty, Purpurin.

INTRODUCTION

Medicinal herbs are the central part in all systems of medicine especially traditional systems like Ayurveda, Siddha, Unani, Chinese, Folk etc. These systems consider medicinal plants as their backbone. In Ayurvedic medicine, Manjistha is a well known herb with a number of therapeutic uses.[7,11,12,14] It is used in cosmeceuticals for wound healing, anti-aging and skin whitening.[8,9,10,11,13,14] For generations people have utilised the ancient Ayurvedic herb Manjistha (Rubia cordifolia) to enhance the health and appearance of their skin.[7.11.12.14] Its ability to whiten skin is one of its most sought after advantages. In present era, consumer's desire for a safer and more ecofriendly goods have led to an increase in the demand for natural and sustainable components in cosmeceuticals.[8,9,10,14] Particularly plants are great source of bioactive substances that may find use in dermatology and cosmetics.[8,9,10,14] Ayurvedic cosmetics have been used since Indus Valley civilization and are becoming more and more popular for its ability to treat skin conditions and enhance appearance. A traditional Ayurvedic herb that has been used for ages to cure a variety of skin disorders is Manjistha.[7,11,12,14] The phytochemical constituents of Rubia cordifolia (Manjishtha) are associated with wide range of therapeutic properties.[4,7,11,12] Its anti-inflammatory, antibacterial and galacto-purifying properties have made it common ingredient in numerous polyherbal remedies for a range of cosmetic products.[6,13,14] The aim of present study was to focus on the use of this plant in cosmeceutical purpose.[8,910,14]

Review Of Literature

Concept of Varna and Varnya Mahakashaya.[1,2,13,14]

In Ayurveda, process of formation of skin in foetus is contributed by paka of rakta dhatu.[1,2,13,14] Agni mahabhuta is said to be as the root of varna utpatti. prabha or maintenance of body complexion is one of the functions of pitta and bhrajaka pitta seated in the skins radiates the glow of one's natural complexion that is expressed through varna.[1,2,13,14] Hence the herbs which elevate pitta, rakta in general either acting through their rasa, vipaka or prabhava are considered as varnya.[1,2,13,14]

Concept of Beauty in Ayurveda is determined by prakriti (Body constitution), sara (structural predominance), sanhanan (compactness of body), twak (skin complexion), praman (Measurement) and dirghayu lakshyana (symptom of long life). Ayurveda cosmetology starts from mother wombs, dinacharya, ratricharya, ritu charya with the practice of medicinal herbs and minerals.

Manjistha (Rubia cordifolia) in ayurvedic lexicons.[7,11,12,14]

Acharya Charaka categorized this medicinal herb as Varnya (for the enhancement of skin complexion), Jvarahara (anti-pyretic), Visaghna (a detoxifier) and a Rasayana (rejuvenator)[1,2,13,14] Manjishtha has potential to pacifiy the pitta dosha.[1,2,13,14] Acharya Sushruta has included Manjishtha in Priyangwadi Gana, Pittasanshamana Varga.[2] Vagbhatacharya included the Manjishtha in Priyangvaddi and Ambashthadi ganas for its Pittashamaka, Vranaropaka, Pakvatisaranashana property.[7,11,12,14]

Fig.1 Ayurvedic classification as per different texts.

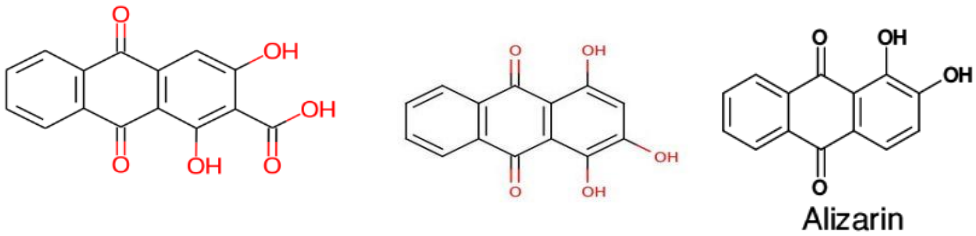
Sr. No	Samhita/Nighantu	Gana/Varga
1	Charak Samhita	Varnya,Vishaghna, Jwarahara
2	Sushruta Samhita	Priyangvadi Pittasanshamana
3	Ashtanga Hrudaya	Priyagvadi Ambashthadi
4	Ashtana Sangraha	PrayogicDhum Vamanopaga, Pittaghna, Varnya, Vishagna, Jwarahar, Sandhaniya, Mahakashyaya
5	Bhavaprakash Nighantu	Haritakyadi Varga
6	Dhanvantari Nihantu	Guduchyadi varga
7	Raj Nighantu	Pippalyadi Varga
8	Kaiyadeva Nighantu	Aushadi varga
9	Madanpala Nighantu	Haritakyadi Varga

General Features and Morphology of Manjistha.[7,11,12,14]

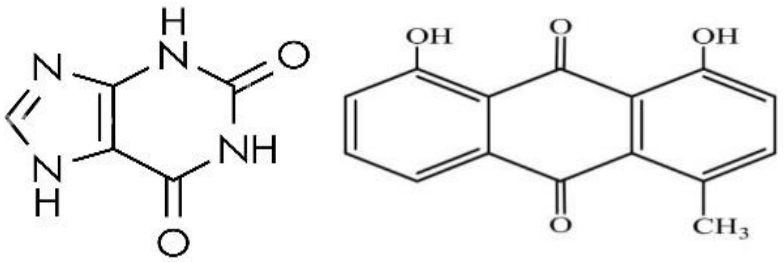
Rubia cordifolia (Manjishtha) also called as common Madder or Indian Madder, is a member of Rubiaceae family which is coffee family.[7.11.12.14] It is distributed in the Himalayas from Kashmir eastwards and Nilgiris and other hilly districts of India. It is a deciduous climber with a 25inch diameter and a fragile, flexible stem that can reach heights of upto 10 feet. The base of the stem is woody and persistent. Branches might be glabrous or quadrangular. Tall, oval, sharp, base cordate, smooth, strong basal nerves; leaves in a whorl of 4 inches, two of which are frequently larger and longer petioles.

Chemical Composition of Manjistha.[7.11.12.14]

Different classes of bioactive compounds such as anthraquinones and their glycosides, naphthoquinones, terpenes, hexapeptides, carboxylic acids, iridoids, and saccharides are reported from various parts of Manjishtha,[4,7,11,12] It's root mainly contains purpurin, munjistin (coloring agent), xanthin(yellow) xanthopurpurin, pseudopurpurin, alizarin (orange red), mollugin, garancin, rubimallin, rubicoumaric acid, rubifolic acid, and β-sitosterol naphthohydroquinone, di-β-D-glucoside, daucosterol.[4,7,11,12]



Purpurin Munjistin[4,7,11,12]



Xanthin anthraquinone[4,7,11,12]

fig.2. structures of chemical compunds found in Manjistha.[7,11,12,14]

1. Cosmeceutical Activity of Manjistha.[8,9,10,14]
Modern phytochemical investigations have revealed that Manjistha is rich in anthraquinones (e.g., purpurin, munjistin, and alizarin), glycosides, tannins, and triterpenoids, which contribute to its broad spectrum of bioactivities.[4,7,11,12] The skin-lightening properties may be attributed to its inhibitory action on tyrosinase, a rate-limiting enzyme in melanin biosynthesis.[5,8,9,10,11,14] This aligns well with the Ayurvedic concept of varna prasadana (enhancing glow and clarity of the skin).[1,2,13,14]

For generations, people have utilized the ancient Ayurvedic herb Manjistha (Rubia cordifolia) to enhance the health and appearance of their skin.[7,11,12,14] Its ability to whiten skin is one of its most sought-after advantages. The act of lowering melanin synthesis or eliminating melanin from the skin in order to attain a lighter skin tone is known as skin whitening.[8,9,10,11,14]

Mechanism of Action
1.Inhibit tyrosinase activity: The enzyme that turns the amino acid tyrosine into melanin, the pigment that gives skin its colour is thought to be the cause of its skin-whitening properties.[8,9,10,11,14] It has been demonstrated that the bioactive substances in Manjistha, including as glycosides and anthraquinones, block tyrosinase activity, which moderates the synthesis of melanin.[4,7,8,9,10,11,12,14]

2. Diminish the synthesis of melanin: It has been demonstrated that the flavonoids and phenolic acids in Manjistha regulate melanin formation by preventing the expression of melanogenic genes.[4,7,8,9,10,11,12,14]

3. Antioxidant activity: The antioxidant qualities of Manjistha aid in shielding the skin from inflammation and oxidative stress, both of which can exacerbate hyperpigmentation.[3,4,5,8,9,10,11,13,14]

Research backing the potential for skin whitening Manjistha's ability to whiten skin has been shown in numerous studies.[8,9,10,11,14]

1. In vitro research According to studies: tyrosinase activity is inhibited and melanin formation in melanoma cells is decreased by Manjistha extracts.[8,910,11,14]
2. In vivo research: Manjistha extracts have been shown in animal experiments to improve skin brightness and lessen skin pigmentation.[7,11,12,14]
3. Clinical trials: Human clinical trials have shown that Manjistha-based creams and serums improve skin whitening and reduce hyperpigmentation,[8,9,10,11,14]

Efficacy and Safety: Topical application of Manjistha is generally regarded as safe,[7,11,12,14] However, further studies are needed to assess its long-term safety and efficacy.

In addition, its antioxidant profile—confirmed by DPPH and ABTS radical scavenging assays in several studies—supports its role in combating oxidative stress-induced skin aging, a key concern in modern dermatology.[3,4,5,8,9,10,13,14] These antioxidant effects resonate with the classical Rasayana attributes of Manjistha, believed to delay the signs of aging and promote longevity of Twak (skin tissue).[3,4,5,13,14]

Anti- aging benefits of Manjistha.[7,11,12,14]
In the context of cosmeceuticals, anti-aging refers to the application of topical products or chemicals that are intended to lessen, stop or reverse the skin's obvious indications of aging, including,[8,9,10,13,14]
1. Wrinkles and fine lines,[9,13,14]
2. Discoloration of the skin (hyperpigmentation, aging spots),[8,9,10,11,14]
3. Loss of firmness and flexibility of the skin
4. Uneven skin tone and dullness
5. Bigger pores.

Activity of Antioxidants,[3,4,5,13,14]
The antioxidants in Manjistha help shield the skin from inflammation and oxidative stress, which lessens the obvious symptoms of aging,[3,4,5,13,14]

Anti-Inflammatory Effects: The anti-inflammatory properties of Manjistha lessen inflammation, which is a factor in skin aging and damage,[6,13,14]

Synthesis of Collagen: The bioactive ingredients in Manjistha promote the production of collagen, which increases the firmness and elasticity of the skin.[9.13.14]

Hydration of the Skin: The humectant qualities of Manjistha aid in preserving skin hydration, which lessens the visibility of wrinkles and fine lines.[9.13.14]

Renewing Cells: The bioactive ingredients in Manjistha encourage cell renewal, eliminating dead skin cells to produce softer, more radiant skin.[7,11,12,14]

Wound healing property[9,13,14]
In the context of cosmeceuticals, wound healing refers to the application of topical formulations or solutions that aid in the promotion and healing of cuts, wounds, and other skin injuries.[8,9,10,13,14]

Bioactive substances that promote collagen formation, strengthen tissues, lower inflammation and have antibacterial properties are commonly found in these products.[9,13,14]

Manjistha's capacity to heal wounds can be explained by its capacity to:[7,11,12,14]
1. Promote collagen synthesis: The bioactive components in Manjistha encourage the production of collagen, which aids in tissue repair and wound closure.[9,13,14]
2. Increase tissue strength: The phenolic acids and flavonoids in Manjistha increase tissue strength, which lowers the chance of wound dehiscence.[4,7,11,12]
3. Reduce inflammation: The anti-inflammatory properties of Manjistha help to create an atmosphere that is favorable for the healing of wounds.[6,13,14]
4.Antibacterial activity: The bioactive substances in Manjistha have antibacterial properties that help to heal wounds and stop infections.[7,11,12,14] Research on the Healing Properties of Wounds Manjistha's ability to heal wounds has been shown in numerous studies.[7,11,12,14]

CHEMICAL COMPOSITION OF MANJISTHA

Anthraquinones[4,7,11,12]
1.Rubiadin: A significant anthraquinone glycoside with anti-inflammatory and antioxidant properties in Manjistha.[3,4,5,6,7,11,12,13,14]
2. Lucidin: The anthraquinone aglycone lucidin has antibacterial and anti-cancer properties.[4,7,11,12]
3. Purpurin: An anthraquinone glycoside that has anti-inflammatory and antioxidant properties.[3,4,5,6,7,11,12,13,14]

Glycosides[4,7,11,12]
1. Rubianin: A glycoside of rubiadin with anti-inflammatory and antioxidant properties.[3,4,5,6,7,11,12,13,14]
2. Lucidin-3-O-β-D-glucoside: An antibacterial and anti-cancer glycoside of lucidin.[4,7,11,12]
3. Rubiaflavin: An anti-inflammatory and antioxidant glycoside.[3,4,5,6,7,11,12,13,14]

Dermatological Relevance and Anti-inflammatory Potential[6,8,9,10,13,14]
In Ayurveda, skin disorders like kustha and raktapradoshaja vikara are often attributed to blood vitiation (rakta dushti), for which Manjistha is a prime therapeutic agent.[1,2,13,14] This corresponds to its demonstrated anti-inflammatory and immunomodulatory effects in modern studies.[6,13,14] For instance, in vivo models have shown Manjistha extract to significantly reduce carrageenan-induced paw edema and inhibit pro-inflammatory cytokines like TNF-α and IL-6.[6,13,14] These findings substantiate its application in chronic inflammatory dermatoses such as eczema, psoriasis, and acne.

Furthermore, its hepatoprotective and lymphatic detoxification properties indirectly support cutaneous health, reflecting the Ayurvedic doctrine of systemic detoxification as the foundation of aesthetic well-being (shuddha rakta – shuddha twacha).[1,2,13,14]

3. Clinical and Cosmeceutical Applications[8,9,10,14]
Clinical trials exploring Manjistha in combination with other Varnya herbs—such as Sariva and Chandana—have shown promising outcomes in improving skin tone, reducing hyperpigmentation, and managing post-inflammatory changes.[1,2,8,9,10,11,13,14] Cosmeceutical formulations like Manjisthadi lepa, Twak prakashini taila and herbal serums fortified with Manjistha extract are increasingly gaining traction in integrative dermatology.[8,9,10,14]

The emergence of herbal skincare products, driven by consumer preference for natural ingredients, positions Manjistha as a versatile bioactive.[7,11,12,14] Its compatibility with both traditional lepa kalpana (topical pastes) and modern delivery systems (e.g., liposomes, nanoemulsions) further enhances its scope in the dermaceutical industry.

4. Challenges and Research Gaps

Despite encouraging results, the cosmeceutical utility of Manjistha faces several challenges.[8,9,10,14] Firstly, there is limited standardization of extraction methods, bioactive marker profiling, and dose-response validation. Secondly, long-term safety profiles, allergenicity potential, and comparative efficacy with synthetic agents remain underexplored.

Furthermore, bioavailability concerns of anthraquinones necessitate advanced drug delivery platforms for topical use.[4,7,11,12] Future work should focus on developing standardized phytosomal or nanoparticulate systems for enhanced transdermal penetration. Additionally, well-designed randomized controlled trials (RCTs) are required to establish therapeutic efficacy and safety in diverse populations.

5. Ayurvedic-Molecular Integration

The integration of Ayurvedic ethnomedicine with modern molecular science creates an evidence-based framework for the development of holistic cosmeceuticals.[8,9,10,14] Manjistha, being a quintessential example of this synergy, offers therapeutic, aesthetic, and preventive benefits.[7,11,12,14] Its inclusion in Varnya Mahakashaya is thus not merely traditional, but scientifically plausible and clinically significant.[1,2,13,14]

MATERIALS AND METHODS

Information extracted from various Ayurvedic treaties, text books and modern pharmaceutics and available dissertations/thesis were also investigated. A search was undertaken in Google scholar, pubmed and other relevant databases, using keywords like Manjistha, Rubia cordifolia, its cosmetic effect in ayurveda, etc.[7,11,12,14]

DISCUSSION

Manjishtha is a quintessential herb that bridges traditional wisdom with modern therapeutic potential.[7,11,12,14] Its versatile applications, ranging from skin care to systemic detoxification, make it a cornerstone of Ayurvedic practice. As ongoing research continues to unveil its pharmacological virtues, Manjishtha remains an invaluableally in promoting holistic health and well-being.[4,6,13,14] Incorporating this powerful herb into contemporary medicine can provide natural, effective solutions to a wide array of health concerns, furthering the relevance of Ayurveda in modern healthcare.

The present integrative review aligns these classical attributes with modern pharmacological evidence, highlighting Manjistha's multifaceted cosmeceutical potential.[4,6,8,9,10,13,14]

In contemporary phytopharmacology, Manjistha has been shown to possess anti-inflammatory, antioxidant, anti-microbial, and melanin-inhibitory properties, which make it particularly promising for managing hyperpigmentation, acne, and signs of aging.[3,4,5,6,8,9,10,11,13,14] Furthermore, its bioactive constituents such as alizarin, purpurin, rubiadin and mollugin have been studied for dermatological efficacy, aligning ancient wisdom with modern cosmeceutical trends.[4,7,8,9,10,11,12,14]

This paper seeks to explore the cosmeceutical potential of Manjistha within the framework of Varnya Mahakashaya, integrating classical Ayurvedic insights with modern scientific evidence.[1,2,8,9,10,13,14] It also investigates its formulation viability in topical applications and its relevance in the evolving field of integrative dermatology.[8,9,10,14] The scope encompasses both the traditional rationale behind its inclusion in Varnya Mahakashaya and the mechanistic pathways by which it exerts skin-protective effects, providing a holistic perspective on its aesthetic and therapeutic contributions.[1,2,13,14]

Recent pharmacological research validates many traditional claims and highlights Manjistha's cosmeceutical potential.[4,6,8,9,10,13,14] Its constituents exert potent anti-inflammatory and anti-melanogenic effects, key to soothing irritated skin and reducing pigmentation.[6,13,14]

CONCLUSION

To sum up, Manjistha is a useful herb in cosmeceuticals that provides a number of advantages for the health and appearance of skin.[8,9,10,14] It is a promising substance for skin whitening, anti-aging, and wound healing applications because of its natural bioactive chemicals, which include anti-inflammatory, antioxidant, and melanin-inhibiting qualities.[3,4,5,6,8,9,10,11,13,14] To thoroughly investigate Manjistha's potential in cosmeceuticals and to determine its long-term safety and effectiveness, more research is required.[8,9,10,14]

REFERENCES

1. Charaka Samhita, Sutrasthana 4/9. In: Acharya YT, editor. Varanasi: Chaukhamba Sanskrit Sansthan; 2015.
2. Sushruta Samhita, Sutrasthana 38/10. In: Kaviraj K, editor. Varanasi: Chaukhamba Orientalia; 2014.
3. Pandey R, Singh S. Antimicrobial and antioxidant properties of Rubia cordifolia. Int J Pharm Sci Res. 2020.
4. Nema NK, Maity N, Sarkar BK, Mukherjee PK. Matrix metalloproteinase inhibitory and antioxidant activity of Rubia cordifolia. Nat Prod Res. 2013.
5. Gupta D, Dubey DK. Comparative antioxidant activity of Ayurvedic herbs used in skin-lightening. AYU. 2016.
6. Dhanjal JK, et al. Evaluation of anti-inflammatory activity of Rubia cordifolia root extract. J Ethnopharmacol. 2021.
7. Khare CP. Indian Medicinal Plants: An Illustrated Dictionary. Springer; 2007.

8. Singh R, et al. Clinical efficacy of a herbal cream containing Rubia cordifolia in melasma. J Cosmet Dermatol. 2018.
9. 1K. Sornalatha, 2K. Malarvizhi, Manjista in Cosmeceuticals: A Review of its Potential in Skin Whitening' Anti -Aging and Wound Healing, December 2024.
10. Sharvari Kakad1, Nibha Bajpai2, Manjistha (Rubia Cordifolia): A Herbal Treasure of India, July-August 2024.
11. Isha Kumari, Hemlata Kaurav, Gitika Chaudhary, Rubia cordifolia (Manjishtha): A review based upon its Ayurvedic and Medicinal uses, 2021.
12. Laxman Hemade1, Pravin Madhukar Jawanjal2, Critical Review of Manjishtha (Rubia Cordifolia Linn.), 2023.
13. Dr. Rahul Shelar and Dr. Vidya Yadav, A REVIEW ON CHARAKOKTA VARNYA MAHAKASHAYA, 2022
14. Tanmay Ramchandra Chavan, Sunayana, Ghodgaonkar, Harshada Dhangar, Devesh Chavare, Pharmacological activity of manjistha (rubia cordifolia), 2024.