

CHAPTER 2

Phytotherapy for chicken pox : plants, preparations and care

Sethu R¹, Anu Sreedevi², Nibedita Jena³, Subhalakshmi Rout³, Bhagwati Prashad Sharma⁴ and Sanjeet Kumar^{3*}

¹Department of Dravyaguna Vijnana, Ahalia Ayurveda Medical College, Palakkad, Kerala, India

²Department of Dravyaguna Vijnana, Dr. Vasant Parikh Ayurvedic Medical College, Vadnagar, Gujarat, India

³Ambika Prasad Research Foundation, Odisha, India

⁴Department of Botany, Sidharth Government College, Nadaun, Himachal Pradesh, India

*Email-Id: sanjeetaprf@gmail.com



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Abstract

Present study explored the role of phytotherapy in managing chicken pox, highlighting several medicinal plants like, *Azadirachta indica*, *Calendula officinalis* and *Matricaria chamomilla*. These are traditionally used to ease symptoms, promote skin healing and support immune function. It outlined common herbal remedies along with their typical forms, including decoctions, infusions, poultices and soothing topical applications. The recent study emphasized essential care practices, plant-based treatments and secondary infections, which should be used with proper hygiene and supportive care. The current investigation underscored phytotherapy's potential as a complementary approach while reminding readers of the importance of safety, proper dosing and guidance.

Keywords: Immune function, plant-based treatments, secondary infections

Introduction

Phytotherapy, the use of plant-based remedies for healing has long been an integral part of traditional medicine systems across the world (Conway, 2011). In the context of chicken pox, a highly contagious viral infection characterized by fever and distinctive itchy rashes.

Plant-derived preparations have historically offered relief from discomfort and supported the body's natural healing processes (Saleh *et al.*, 2025). Many cultures rely on soothing herbal baths, antimicrobial and anti-inflammatory extracts to reduce itching, prevent secondary skin infections and accelerate the drying of lesions (Anand *et al.*, 2022). These natural treatments not only provide symptomatic relief but also align with a growing global interest in gentler, holistic therapeutic options that complement conventional care (Mortada, 2024). Beyond chicken pox, medicinal plants play a significant role in addressing contemporary health problems (Latif and Nawaz, 2025). With rising antibiotic resistance, chronic inflammatory conditions and stress-related illnesses, the bioactive compounds found in plants such as flavonoids, tannins, alkaloids and essential oils offer promising therapeutic benefits (El-Saadony *et al.*, 2025). Their antioxidant, antiviral and immunomodulatory properties can help combat modern ailments ranging from metabolic disorders to emerging infectious diseases (Adeosun and Loots, 2024). As researchers continue to uncover the molecular mechanisms behind these effects, phytotherapy is gaining renewed relevance as a source of accessible, sustainable and culturally familiar healthcare solutions (Ahmad *et al.*, 2025). In the broader context, exploring plant-based remedies for chicken pox provides a valuable example of how traditional botanical knowledge intersects with modern scientific understanding. The plants used to soothe rashes, strengthen immunity and support recovery reflect a much larger trend: the rediscovery of nature's pharmacological potential in addressing both long-standing and newly emerging health challenges.

Methodology

To explore plant-based therapies relevant to chickenpox, an extensive review of published literature was undertaken. This process involved examining traditional and scientific sources that describe medicinal plants commonly employed by local communities for chickenpox management and symptom relief. Major scholarly databases including PubMed, Scopus, Web of Science and NCBI were searched using targeted keywords such as “ethnomedicinal plants”, “herbal treatments”, “traditional healing practices”, “phytotherapeutic potential”, “medicinal applications” and “methods of preparation and administration”. Relevant books, ethnobotanical surveys and research articles were also consulted to compile information on plant species traditionally used in caring for chickenpox patients. All referenced plant species were verified and classified by the authors using standard botanical literature and floral manuals, ensuring accurate identification and documentation (Kumar, 2025; Rueankham *et al.*, 2025)

Results and discussion

The present findings revealed a diverse range of medicinal plants traditionally used for the management of chicken pox. These plants represent multiple botanical families, including Asteraceae, Fabaceae, Lamiaceae and Zingiberaceae, indicating the broad pharmacological potential of phytotherapeutic practices across taxonomic groups (Table 1; Figure 1). Most remedies involved topical applications, such as gels, pastes, decoctions and crushed leaf preparations, highlighting the importance of direct skin-soothing and antimicrobial actions in healing chicken pox lesions (Figure 2). Plants like *Aloe vera*, *Calendula officinalis*, *Matricaria chamomilla* and *Lantana camara* are particularly valued for their anti-inflammatory, cooling and wound-healing properties, which help reduce itching and

minimize secondary infections. Meanwhile, oral remedies such as *Phyllanthus emblica*, *Echinacea purpurea* and *Tinospora cordifolia* emphasized the complementary role of immune modulation in accelerating recovery. A notable observation is the presence of several plants with documented antiviral activities, such as *Azadirachta indica*, *Glycyrrhiza glabra* and *Sophora exigua* (Bachar *et al.*, 2021). Their integration into traditional healing systems, sometimes even alongside modern antiviral therapies, reflects a growing scientific interest in plant-derived compounds capable of inhibiting viral replication or reducing viral load. Additionally, immune-boosting herbs like *Ocimum tenuiflorum* and *Curcuma longa* demonstrated the dual therapeutic strategy employed in traditional medicine (Fuloria *et al.*, 2022): supporting the body's natural defenses while alleviating visible symptoms. These findings align with contemporary research, which increasingly supports the relevance of phytochemicals such as flavonoids, terpenoids and alkaloids in managing viral infections and inflammation.

Table 1: List of plants used against chicken pox

Botanical name	Common name	Family	Mode of uses	Sources
<i>Aloe vera</i> (L.) Burm.f.	Ghritkumari (S)	Asphodelaceae	The cooling gel from the leaves is applied directly to the affected areas to reduce itching and soothe irritated skin.	Espano <i>et al.</i> , (2022)
<i>Azadirachta indica</i> A.Juss.	Neem (E)	Meliaceae	The leaves are crushed into a paste and applied topically to the skin or added to bath water.	Ali <i>et al.</i> , (2021)
<i>Bacopa monnieri</i> (L.) Wettst.	Brahmi (H)	Plantaginaceae	The whole plant is ground and the juice is applied topically to treat rashes and fever.	Present study (Collected information from Cuttack, Odisha)
<i>Calendula officinalis</i> L.	Pot marigold (E)	Asteraceae	Applied externally in various forms	Singh <i>et al.</i> , (2025)

			to soothe itching, reduce inflammation , promote healing and minimize scarring.	
<i>Coriandrum sativum</i> L.	Coriander (E)	Apiaceae	Valued for its high vitamin c content, it's used as a natural tonic.	Present study (Collected information from Cuttack, Odisha)
<i>Curcuma longa</i> L.	Turmeric (E)	Zingiberaceae	A paste made from turmeric powder (often combined with neem or honey) may be applied to rashes or consumed orally (mixed with water).	Aderemi and Alabi, (2023)
<i>Dichrostachys cinerea</i> (L.) Wight & Arn.	Sickle bush (E)	Fabaceae	The leaves paste is topically used.	Acharya and Chalannavar , (2021)
<i>Echinacea purpurea</i> (L.) Moench	Purple coneflower (E)	Asteraceae	The aerial parts are oral consumed as a tea or juice.	Weishaupt <i>et al.</i> , (2020)
<i>Glycyrrhiza glabra</i> L.	Licorice (E)	Fabaceae	Liquorice has been integrated with conventional antiviral therapy.	Zuo <i>et al.</i> , (2023)
<i>Hellenia speciosa</i> (J.Koenig) S.R.Dutta	Crepe ginger (E)	Costaceae	Decoction used for treating high fever and symptoms associated	Present study (Collected information from

			with chicken pox.	Cuttack, Odisha)
<i>Lantana camara</i> L.	Wild sage (E)	Verbenaceae	The leaf decoction is used as a wash for the skin.	Present study (Collected information from Cuttack, Odisha)
<i>Mammea siamensis</i> (Miq.) T. Anderson	Saraphi (Thai)	Calophyllaceae	The flower paste is applied topically.	Sukkasem <i>et al.</i> , (2016)
<i>Matricaria chamomilla</i> L.	Chamomile (E)	Asteraceae	Has been specifically used externally to treat chicken pox.	Srivastava <i>et al.</i> , (2010)
<i>Moringa oleifera</i> Lam.	Drumstick (E)	Moringaceae	A paste made from its leaves is applied topically to the rashes.	Present study (Collected information from Cuttack, Odisha)
<i>Momordica charantia</i> L.	Bitter gourd (E)	Cucurbitaceae	The leaves and stems are often plunged in water to create a decoction is consumed orally as a drink.	Present study (Collected information from Cuttack, Odisha)
<i>Ocimum tenuiflorum</i> L.	Tulsi (H)	Lamiaceae	The leaves are often chewed or made into a tea to help boost immunity.	Ghoke <i>et al.</i> , (2018)
<i>Oroxylum indicum</i> (L.) Kurz (Figure 1)	Indian trumpet flower (E)	Bignoniaceae	The root bark is used for its blood- purifying and tonic properties.	Present study (Collected information from

				Cuttack, Odisha)
<i>Phyllanthus emblica</i> L.	Indian gooseberry (E)	Phyllanthaceae	The fruit juice is consumed orally.	Present study (Collected information from Cuttack, Odisha)
<i>Rauvolfia serpentina</i> (L.) Benth. ex Kurz	Indian snakeroot (E)	Apocynaceae	The root decoction is useful for the ailment.	Acharya and Chalannavar , (2021)
<i>Scleropyrum pentandrum</i> (Den nst.) Mabb.	Thorny castor (E)	Santalaceae	The stem bark and leaves are crushed together to form a paste-like consistency, often with water as a medium.	Acharya and Chalannavar , (2021)
<i>Scrophularia dentata</i> Royle ex Benth.	Figwort (E)	Scrophulariaceae	The seed extract is applied topically to address the ailment.	Acharya and Chalannavar , (2021)
<i>Sophora exigua</i> Craib	Phit-sanat (Thai)	Fabaceae	The leaves decoction is used for antiviral and anti-inflammatory symptoms in chicken pox.	Rueankham <i>et al.</i> , (2025)
<i>Strychnos nux-vomica</i> L.	Poison nut tree (E)	Loganiaceae	The bark yellow powder is useful against chicken pox.	Acharya and Chalannavar , (2021)
<i>Tinospora cordifolia</i> (Willd.) Hook.f. & Thomson	Guduchi (H)	Menispermaceae	The herb is used for chicken pox is part of traditional	Present study (Collected information from

			medicinal practices.	Cuttack, Odisha)
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(E: English; H: Hindi; S: Sanskrit)

The results demonstrated that traditional phytotherapeutic practices for chicken pox are both multifaceted and scientifically plausible, combining topical care with systemic support. The diversity of preparations from decoctions and juices to poultices and herbal washes highlighted a deep understanding of plant properties within indigenous knowledge systems. While these remedies could not replace clinically approved antiviral treatments for severe cases, they offered valuable complementary support, potentially reducing discomfort, preventing complications and enhancing overall healing. Further scientific validation, including pharmacological and clinical studies, would provide evidence base data for these traditional practices and promote their safe, standardized use in contemporary healthcare.

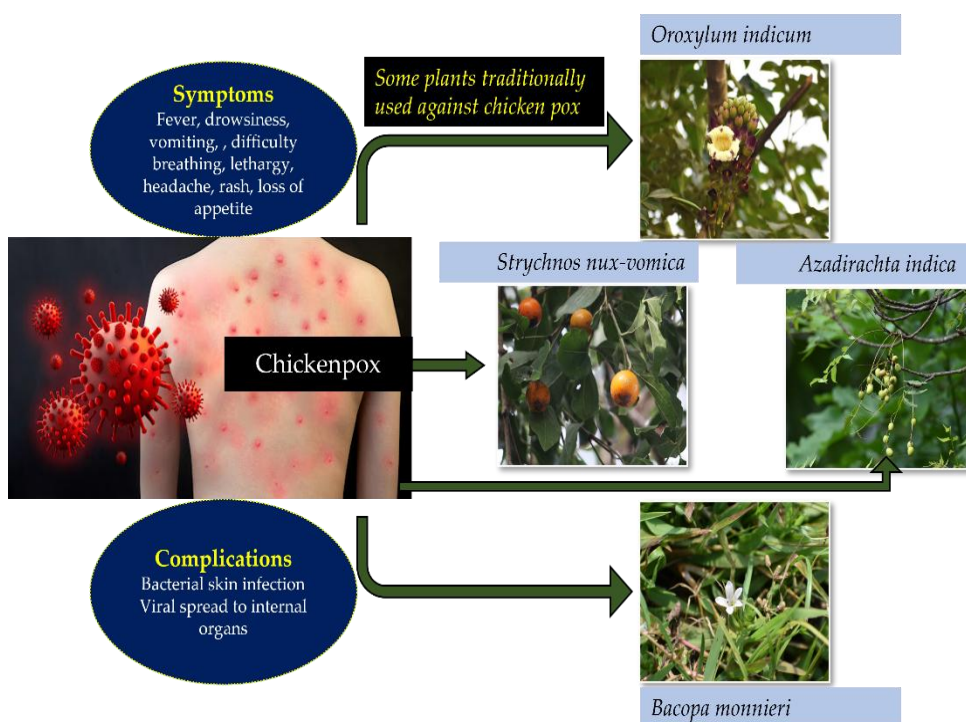


Figure 1: Some common medicinal plants used to combat chicken pox and its symptoms

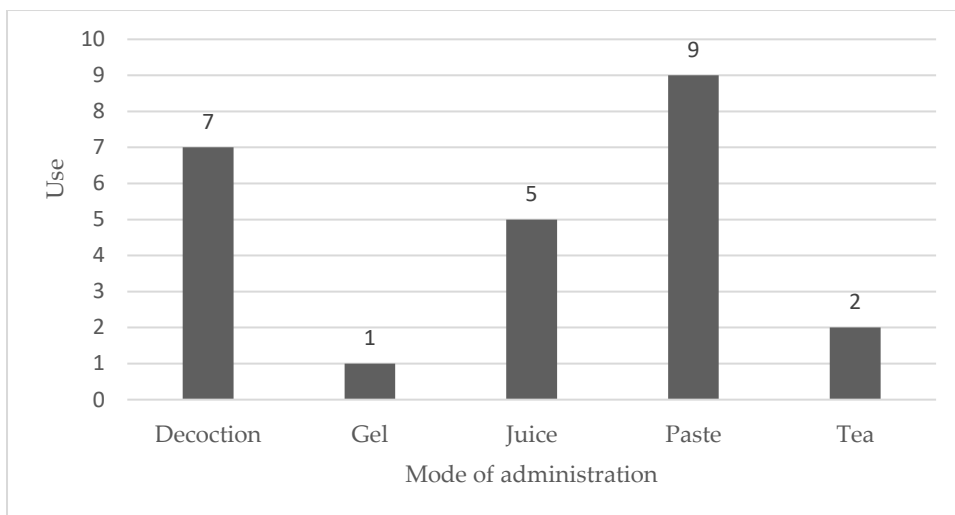


Figure 2: Ethnomedicinal plants used in different mode with number of repeated uses

Biotechnological approaches

Modern omics technologies, including genomics, transcriptomics, proteomics and metabolomics, play an essential role in identifying and characterizing compound profiles in medicinal plants. Nanotechnology-based formulations, such as nanoemulsions, hydrogels and encapsulated extracts, enhance the stability, penetration and bioavailability of topical agents used to soothe chicken pox lesions. Plant-derived polymers and biocompatible nanoparticles can be incorporated into skin-friendly gels or sprays containing extracts of *Aloe vera*, *Calendula officinalis* and *Ocimum tenuiflorum*, potentially improving their therapeutic effectiveness while preserving safety (Ghoke *et al.*, 2018; Spano *et al.*, 2022; Singh *et al.*, 2025).

Conclusion

The present study provides a remarkable diversity of plant parts and preparation methods used for managing chicken pox, despite all remedies targeting the same illness. This co-existence of contrasting therapeutic routes within one traditional healing system underscored the adaptability and depth of ethnobotanical knowledge, making it a unique feature of phytotherapy for chicken pox.

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