

## REVIEW ARTICLE

# Ethnomedical Perspectives on *Visha Dravyas* – A Review

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### ARTICLE INFO

#### Article history:

Received on: 11-05-2024

Accepted on: 17-06-2024

Published on: 30-06-2024

#### Key words:

Ethnomedicine,

Toxicity,

Traditional Use,

*Visha dravyas*

### ABSTRACT

**Introduction:** Ethnomedicine, the study of traditional medical practices used by various ethnic groups, often incorporates the use of “*Visha Dravyas*” in therapeutic contexts. This review delves into the ethnomedical perspectives on *Visha Dravyas*, highlighting their historical and contemporary applications, and therapeutic benefits within traditional medical systems such as Ayurveda and indigenous healing practices. *Visha Dravyas*, despite their inherent toxicity, have been meticulously utilized for their potent medicinal properties, offering treatments for a range of ailments. This dual nature — being both toxic and therapeutic — underscores the sophistication of traditional knowledge systems in balancing harm and healing.

**Materials and Methods:** The review examines key poisonous plants and their pharmacological uses in different regions of India and the world, supported by both traditional texts and modern scientific studies. In addition, the review addresses the cultural and ritualistic aspects of *Visha Dravyas*, emphasizing the holistic approach of ethnomedical practices that integrate physical, spiritual, and environmental health.

**Results:** This study aims to provide a comprehensive understanding of the role of *Visha Dravyas* in ethnomedicine. It underscores the importance of preserving traditional knowledge and promoting interdisciplinary research to unlock the full potential of these potent natural resources.

**Discussion:** The findings highlight the need for a nuanced approach to integrating traditional and modern medical practices, ensuring safety and efficacy in the use of *Visha Dravyas* for future health-care innovations.

**Conclusion:** Review concluded that the use of ethnomedicinal plants increased with elevation due to limited alternative options and market accessibility. Almost all plants contain active components that can be effective against diseases, but certain plants despite being poisonous possess valuable medicinal use.

## 1. INTRODUCTION

The term “*Visha*” originates from the root “*vis*” (meaning to encompass or permeate) with the suffix “*kt*”, indicating something that spreads throughout. Therefore, anything that quickly spreads throughout the body on ingestion is referred to as *visha* [Poison].<sup>[1]</sup> The earliest reference to the medicinal use of plants appears in the *Rig Veda* (4500–1600 BC), which provides information about utilizing plant parts for medicinal purposes in the South Asian sub-continent.<sup>[2]</sup> From the works of *Acharya Charaka* and *Acharya Sushruta*, we learn that the Indo-Aryans were familiar with numerous medicinal plants. The *Charaka* and *Sushruta* treatises documented the properties

of many of these plants, though not all were native to India. Some medicinal substances were imported. In ancient times, there was a trade in medicinal drugs between India and other nations. For instance, liquorice, which does not grow in India but is found in Asia Minor and Central Asia, was widely used in Indian medicine and is mentioned in the *Charaka* and *Sushruta* texts. However, most medicinal plants discussed in these works were indigenous to India. Their properties were learned empirically, with knowledge often obtained from hunters and shepherds. To gather this information, physicians were instructed to explore forests and mountains.<sup>[3]</sup>

It is estimated that of the 422,000 species of flowering plants, between 35,000 and 70,000 are utilized globally for herbal medicine.<sup>[4]</sup> The *Materia Medica* of India offers extensive information on folklore practices and the traditional use of therapeutically significant natural products.<sup>[5]</sup>

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Ethno-medicine involves the study of traditional medical practices that focus on the cultural interpretations of health, disease, and illness and also examines the processes of seeking healthcare and healing practices. It is a complex, multidisciplinary field that has utilized plants as a primary means of healthcare for people for thousands of years.<sup>[6]</sup> India is one of the eight primary centers of origin and diversification for domesticated species, attributed to its rich traditional medical systems and diverse plant usage. With its abundant biodiversity, India is recognized as one of the world's 12 mega-diverse countries.<sup>[7,8]</sup> Systematic and scientific studies of traditional medicinal plants have also led to the development of many valuable drugs in Western medicine.<sup>[9]</sup>

The World Health Organization (WHO) defines traditional medicine as the "Sum total of the knowledge, skills, and practices based on the theories, beliefs, and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health as well as in the prevention, diagnosis, improvement or treatment of physical and mental illness."<sup>[10]</sup> The discovery of plants' medicinal properties resulted from centuries of self-experimentation.<sup>[11]</sup> The knowledge of conserving medicinal plants and their use has established a connection between promoting environmental conservation and preserving indigenous knowledge.<sup>[12]</sup>

The WHO has reported that around 25% of modern medicines are derived from plants traditionally used for medicinal purposes. India is home to about 27% of the world's known medicinal plant species, making it one of the most significant collection centers. Traditional phyto-remedies are widely accepted socially, economically feasible, effective to a considerable extent, and often the only available treatment option. In India, traditional healers utilize over 2500 plant species. The Botanical Survey of India has undertaken efforts to record and document the ethnobotanical knowledge of tribes across various states, including Uttaranchal, Andhra Pradesh, Sikkim, Himachal Pradesh, West Bengal, Orissa, Rajasthan, Tripura, Nagaland, Assam, Bihar, Madhya Pradesh, Goa, Arunachal Pradesh, Chhattisgarh, Andaman and Nicobar Islands, and Jammu and Kashmir.<sup>[13,14]</sup>

Many rural inhabitants rely on subsistence agriculture for their livelihoods and possess extensive cultural knowledge about using forest resources to treat diseases.<sup>[15]</sup> Ethnobotanical studies offer valuable insights into crop domestication and traditional selection, enhancing the utilization of resources to address local needs.<sup>[16]</sup> In recent years, there has been a decline in the use of traditional herbal medicines in healthcare, especially among rural communities. This trend suggests a potential loss of valuable knowledge passed down through generations regarding plants and their traditional medicinal uses. The WHO reports that 65–80% of the global population, especially in developing nations, rely on plants for healing purposes, a practice deeply ingrained in traditional cultures.<sup>[17]</sup>

However, the absence of documentation of traditional practices by healers contributes to a lack of clarity regarding the effectiveness of herbal medicine among the current generation.<sup>[18]</sup> The practice of wild collection serves as a significant source of income for numerous rural households, offering incentives for conservation efforts and promoting sustainable utilization of resources.<sup>[19]</sup>

The present market for herbal drugs is valued at approximately 40 billion and is projected to grow by 16% over the next 3–4 years. However, the production of numerous herbs falls short of meeting market demand, leading to incentives for adulteration in Ayurvedic

drugs.<sup>[20]</sup> The diminishing use of herbal medicine is primarily influenced by shifts in people's attitudes towards allopathic medicine, which is widely accessible even in small towns, despite awareness of its potential side effects. This trend poses a risk of losing traditional and valuable knowledge about plants used in healthcare management in the future.<sup>[21]</sup>

Over the past five decades, pharmaceutical industries worldwide have invested heavily in pharmacological, clinical, and chemical research. Extensive efforts have been undertaken to discover more potent plant-based drugs, resulting in a few new drug plants successfully passing commercial screening tests. The benefits of these endeavors are expected to extend to the masses in the future, particularly if farmers engage in the commercial cultivation of medicinal plants. Agricultural studies focusing on medicinal plants inherently require significant investment and greater priority. India, in particular, holds significant potential for the development of pharmaceutical industries.<sup>[22]</sup>

In recent years, the utilization of emerging technological advancements in biological activity screening and chemical analysis has heightened researchers' interest in naturally derived compounds. There is a growing need to investigate numerous active constituents from both terrestrial and marine sources.<sup>[23]</sup>

The WHO has projected that 80% of the global population depends on traditional medicine, including ethnomedicine, for their primary healthcare needs. Over the last decade, the WHO's health assembly has passed resolutions in recognition of the growing interest in studying and utilizing traditional medicine in healthcare, especially in addressing the primary health-care needs of third-world countries.

Medicinal plants possess healing properties attributed to the presence of various complex chemical compounds found as secondary metabolites in one or more parts of these plants. These plant metabolites, categorized based on their composition, include alkaloids, glycosides, steroids, essential oils, and more. Alkaloids, constituting the largest group, encompass substances such as morphine and codeine (from Poppy), strychnine and brucine (from *Nux vomica*), quinine (from *Cinchona*), ergotamine (from *Ergot*), hypoxamine (from *Belladonna*), scopolamine (from *Datura*), emetine (from *Ipecac*), cocaine (from *Coca*), ephedrine (from *Ephedra*), reserpine (from *Rauwolfia*), caffeine (from *Tea dust*), aconitine (from *Aconite*), vasicine (from *Vasaca*), santonin (from *Artemisia*), lobelin (from *Lobelia*), and many others. Recognizing the significance of plant-based chemicals, research in this area has been vigorously pursued, particularly by Western scientists. Thousands of plants have undergone screening for their active ingredients, believed to be effective against certain diseases as claimed in traditional systems. The utilization of traditional knowledge has enhanced the efficiency of screening plants for medicinal properties. However, the primary objective of such research is not to validate traditional medicine systems but rather to capitalize on the findings for commercial gains. Consequently, traditional knowledge of several indigenous plant species in India has been exploited, with patents issued under Western patent regimes.<sup>[24]</sup>

### 1.1. Aim

A comprehensive review of ethnobotanical studies was undertaken to locate articles detailing the traditional medicinal uses of toxic plants.

## 2. MATERIALS AND METHODS

The paper involved searching databases like PubMed, Web of Science, and Google Scholar with appropriate keywords to gather

pertinent literature. The review focused on extracting essential information from the selected articles, including the plant species used, their traditional medicinal applications, methods of preparation, and the therapeutic purposes they serve. All the gathered data were then systematically tabulated and organized for clarity and ease of analysis.

### 3. RESULTS

In rural India, the root of *Vatsanabha* is used medicinally to treat a variety of conditions such as leprosy, cholera, rheumatism, neuralgia, inflammation, cold, throat inflammation, fever, indigestion, and to stimulate bile secretion. In addition, it serves as a local anodyne for sciatica and neuralgia, especially trigeminal neuralgia. In parts of India and Pakistan, it is utilized for cholera, intermittent fevers, toothache, snake bites, and rheumatism [Table 1].

Different parts of a *Gunja* are used medicinally like the root for ulcers and rheumatic pain in the Indian Himalayas; the whole plant, seed, and leaf for gonorrhea, asthma pain, and muscle contusion in North Orissa; seeds for several conditions including cellulitis, gangrene, gastritis, nephritis, ulcers, typhoid, and cholera in Madhya Pradesh; roots, leaves, and seeds for skin diseases, joint stiffness, paralysis, and as an abortifacient in Tamil Nadu; and seeds and leaves for tonsillitis and as an antidote for snake bites in Karnataka [Table 2].

In several regions, different parts of *Arka* are used medicinally such as in the Indian Himalayas for skin problems (root, latex), in Swabi, Pakistan, for depurative, expectorant, febrifuge, laxative, and anthelmintic uses (leaves), in North Orissa, India, for snake bites (leaf), and in Chhattisgarh, India, for cuts, wounds, leprosy, dropsy, rheumatic pain, asthma, and bronchitis (leaf, root). In addition, in Southeastern Bangladesh for joint ache and rheumatism (leaf), in Madhya Pradesh, India, for pus removal from gums, asthma, and bronchitis (root, leaf), in Panna district, India, for malaria and cholera (whole plant), in Ghaziabad, India, for hydrocele prevention (oil), in Tamil Nadu, India, for hemorrhoids and elephantiasis (roots, leaves, flowers), in Kalahandi, India, for various ailments including leprosy and stomach disorders (latex, leaves), in Southeastern Iran for sedation post-bite and gastric discomfort (leaves, roots, gum), and in Karnataka, India, for dermatitis, cough, and cold (latex, flower) [Table 3].

In various regions, *Bhanga* is used medicinally like in the Indian Himalayas for fever (leaf, seed), in Swabi, Pakistan for tumors and as analgesic, stomachic, narcotic, and sedative (roots), in Jammu and Kashmir, India, for jaundice, stomach heat, and menstrual cycle regulation (whole plant), in North Pakistan for wound healing, as anodyne, sedative, tonic, and narcotic (leaves), in Himachal Pradesh, India, for honey bee stings (leaves and flower seeds), in Mizoram, India, for stomach ache and diarrhea (leaf), and in Ghaziabad, India, for hemorrhoids (leaf) [Table 4].

*Jayaphala* is used medicinally in several places like in rural Northern India for carbuncles and cancerous sores (root), in parts of India for laxative, tumors, and cancerous sores (seed), in Harda District, India, for intestinal disorders (seed), in Assam and Manipur, India, for cancer, ringworm, wounds, and constipation (seed), in the Philippines for stimulant, eczema, ichthyosis, asthma (seed), and as an antidote for snake bites and insecticide (leaves), and in Guwahati, India, for severe headache (leaves) [Table 5].

Different parts of *Dhattura* have different medicinal uses – leaves, flowers, and roots in the Himalayas for bronchitis, asthma, and cough;

powdered flowers and leaves in Haripur District, Pakistan; flowers and seeds in Swabi, Pakistan; leaves, flowers, and seeds in Chhattisgarh, India; leaves, seeds, and flowers in North Pakistan for pain relief and as a narcotic; roots in Madhya Pradesh, India; and roots in Karnataka, India for respiratory issues, male fertility, and mental disorders, and leaves, flowers, and seeds) [Table 6].

Different portions of *Snuhi* are used medicinally in different parts of India: The stem is used for skin warts, chronic respiratory difficulties, hydrophobia, and as an aphrodisiac in Gujarat; the root is used for dropsy, snake bites, scorpion stings, and antispasmodic activities [Table 7].

Parts of *Langali* are used medicinally in different parts of India: roots are used for treating cancerous wounds in Chhattisgarh; seeds are used for treating wounds, inflammation, and abortion (tuber); gout and rheumatism (seeds and tubers) in Dindigul, Madurai, and Theni, Tamil Nadu; hemorrhoids and skin diseases (tuber) in Bidar, Karnataka; and conjunctivitis (tuber) in Biligiri Ranganata Betta, Karnataka [Table 8].

*Karaveera* roots are used to treat severe inflammation in Ghaziabad, India; elsewhere in India, they are used to treat wound healing, cancer, asthma, cardiac disease, corns, and epilepsy [Table 9].

Leaves of *Tambaku* are used medicinally in several places: In Ghaziabad, India, for asthma; in Kaski District, Nepal, for infected wounds and pediculosis; and in Kalahandi District, Orissa, for scabies [Table 10].

*Ahiphena* is used in various regions of Pakistan, different plant parts are used medicinally: in Haripur District for chest infections and cough, the tea from dried fruit is consumed; in Karamar valley, Swabi, the latex and seeds are used for their antispasmodic, narcotic, hypnotic, analgesic, anodyne, sedative properties; and in Swat, North Pakistan, capsules and seeds are used as a narcotic for cough and fever relief when dried [Table 11].

Various parts of *Chitraka* are used medicinally in various regions of India: in Dantewada, Chhattisgarh for tonic properties (root), in Hoshangabad District, Madhya Pradesh for wound healing (whole plant), in Ghaziabad for treating eczema and scabies (root), in Kalahandi District, Orissa for expelling retained placenta (root), and in Bidar District, Karnataka for diabetes and white patches (leaf, flower) [Table 12].

Across various regions, *Eranda* serves medicinal purposes like in Karamar valley, Swabi, Pakistan, leaves are used for lumbago; in Dantewada, Chhattisgarh, India, seeds are purgative and treat skin diseases, hemorrhoids, and rheumatism; in Swat, North Pakistan, seeds act as demulcent and aid in bowel evacuation for children; in Southeastern Nigeria, seeds are a purgative for skin infections; in Hoshangabad District, Madhya Pradesh, India, leaves and seeds are used for pneumonia, fever, and rheumatism; in Panna district, Madhya Pradesh, seeds, leaves, and bark treat boils, swelling, act as a laxative, and initiate labor pain; in Ghaziabad, India, leaves treat inflammation; in Southeastern Iran, seeds are used for abdominal pains, diarrhea, and as an emetic; and in Haladkeri village, Bidar District, Karnataka, India, leaves and roots address jaundice and joint pain [Table 13].

*Bhallataka*, in the Indian Himalayas, fruit treats skin allergies, cough, and diarrhea; in Mayurbhanj District, North Orissa, seeds address skeletal disorders and body pain in neurological disorders; in Dantewada, Chhattisgarh, fruits are used for their anti-cancer properties; in Hoshangabad District, Madhya Pradesh, seeds are

used for rheumatism; in Ghaziabad, India, fruit treats indigestion, hemorrhoids, and cough; in Kalahandi district, Orissa, seeds are employed for eczema, sprains, cuts, and asthma [Table 14].

In Tamil Nadu's Thanjavur District, *Kupeelu* stems and leaves are used for treating psoriasis and tumors. In Kerala and parts of Madhya Pradesh, India, the root bark, leaves, and seeds are utilized for treating cholera, chronic wounds, ulcers, acting as an appetizer, antiperiodic purgative, and addressing conditions like asthma, diabetes, and skin diseases [Table 15].

#### 4. DISCUSSION

The findings reveal a diverse array of medicinal uses across different regions of India and neighboring countries. Various plant parts such as roots, leaves, seeds, and fruits are employed for treating a wide spectrum of ailments ranging from common conditions like coughs, skin allergies, and rheumatism to more complex issues such as cancer, epilepsy, and snake bites. This underscores the rich traditional knowledge and ethnopharmacological practices embedded within these communities, highlighting the plants' versatility in addressing multiple health concerns.

Moreover, the geographical variation in medicinal uses reflects regional health challenges and environmental conditions. For instance, plants used for skin diseases and gastrointestinal disorders are prevalent in regions with tropical climates, while those used for respiratory ailments are prominent in areas with cooler temperatures. This diversity not only demonstrates the adaptive strategies of local populations but also suggests the potential for further exploration and validation of these traditional remedies in modern scientific contexts.

However, the reliance on certain plant species for medicinal purposes raises concerns about conservation and sustainable harvesting practices. As these plants play crucial roles in local ecosystems and cultural traditions, efforts must be made to ensure their conservation while respecting indigenous knowledge and community rights. Collaborative efforts involving ethnobotanists, pharmacologists, and local communities are essential for documenting, validating, and promoting these medicinal plants' sustainable use.

#### 5. CONCLUSION

In smaller doses, *Visha* functions as a medicine, whereas in larger doses, medicine can act as *Visha*. When *Visha* is administered in a small dose with appropriate care and expertise (*Yukti*), it can serve as an effective remedy, similar to *Amruta*. Nearly all plants contain active compounds that can be effective against diseases, but certain plants are particularly rich in these chemicals and are therefore preferred for medical treatments.

Ethnobotanical knowledge emerges from the intricate interplay between humans and their environment, influenced by factors such as local classification systems, language communication, human cognition, cultural history, beliefs and religion, social networks, and access to information.

This review found that the use of ethnomedicinal plants increased with elevation due to limited alternative options and market accessibility. Indigenous medicine provided by local healers in remote areas is in higher demand because it is more affordable compared to the high cost of modern medicine.

Herbal practices continue to play a crucial role in managing and curing various health issues, especially in India's remote and rural areas.

#### 6. ACKNOWLEDGMENTS

Nil.

#### 7. FUNDING

Nil.

#### 8. ETHICAL APPROVALS

This manuscript not required ethical approval as it is a review study.

#### 9. CONFLICTS OF INTEREST

Nil.

#### 10. DATA AVAILABILITY

This is an original manuscript and all data are available for only review purposes from principal investigators.

#### 11. PUBLISHERS NOTE

This journal remains neutral with regard to jurisdictional claims in published institutional affiliation.

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**How to cite this article:**

Soubhaghyalaxmi B. Ethnomedical Perspectives on *Visha Dravyas* – A Review. *IRJAY*. [online] 2024;7(6):51-60.

**Available from:** <https://irjay.com>

**DOI link-** <https://doi.org/10.48165/IRJAY.2024.70608>

**Table 1:** *Aconitum ferox*, *Aconitum napellus* – *Vatsanabha*

S. No.	Region	Medical use	Part used
1.	Rural India <sup>[25]</sup>	Leprosy, cholera, and rheumatism	Root
2.	Rural India <sup>[25]</sup>	Neuralgia, inflammation, and cold	Root
3.	Rural India <sup>[25]</sup>	Inflammatory condition of throat, fever, indigestion, leprosy, and stimulates secretion of bile	Root
4.	Rural India <sup>[26]</sup>	Local anodyne in sciatica and neuralgia, specially trigeminal neuralgia	Root
5.	Parts of India and Pakistan <sup>[27]</sup>	Cholera, intermittent fevers, toothache, snake bites and rheumatism	Root

**Table 2:** *Abrus precatorius* – *Gunja*

S. No.	Region	Medical use	Part used
1.	Indian Himalayas <sup>[28]</sup>	Ulcer and rheumatic pain	Root
2.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Gonorrhoea	Whole plant
3.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Subsides pain in asthma	Seed
4.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Muscle contusion	Leaf
5.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	Cellulitis, gangrene, gastritis, nephritis, ulcers, typhoid, and cholera	Seeds
6.	Thanjavur District, Tamil Nadu, India <sup>[31]</sup>	Externally applied to treat itching and other skin diseases. Stiffness of shoulder joint and paralysis. Abortifacient.	Roots, leaves and seeds
7.	Haladkeri village in Bidar District, Karnataka, India <sup>[32]</sup>	Tonsillitis. Antidote of snake bite	Seeds and leaf

**Table 3:** *Calotropis gigantea*, *Calotropis procera* – *Arka*

S. No.	Region	Medical use	Part used
1.	Indian Himalayas <sup>[28]</sup>	Skin problems	Root, latex (CP)
2.	Karamar valley Swabi, Pakistan <sup>[33]</sup>	Depurative, expectorant, febrifuge, laxative, and anthelmintic	Leaves (CP)
3.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Antidote for snake bite	Leaf (CG)
4.	Dantewada, Chhattisgarh India <sup>[34]</sup>	Cuts and wounds. Leprosy, dropsy, and rheumatic pain. Asthma and bronchitis.	Leaf, Root
5.	Southeastern rural areas of Bangladesh <sup>[2]</sup>	Joint ache and rheumatism	Leaf (CG)
6.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	To remove pus from the gums. Asthma and bronchitis	Root and leaf (CP)
7.	Remote villages of Panna district (Madhya Pradesh), India <sup>[35]</sup>	Malaria and cholera	Whole plant (CP)
8.	Ghaziabad India <sup>[36]</sup>	Prevention of hydrocele	Oil (CP)
9.	Thanjavur District, Tamil Nadu, India <sup>[31]</sup>	Hemorrhoids. Elephantiasis.	Roots, leaves and flowers (CG)
10.	Kalahandi district, Orissa India <sup>[37]</sup>	Leprosy, stomach disorders, rheumatism, headache, intestinal worms; flatulence, stomach ache. Migraine	Latex, leaves
11.	Rural areas of southeastern Bangladesh <sup>[2]</sup>	Joint ache, rheumatism	Leaf (CG)
12.	Southeastern Iran <sup>[38]</sup>	Sedative after snake, scorpion, and insect bite; Gastric discomfort and migraine	Leaves, roots, Gum
13.	Haladkeri village in Bidar District, Karnataka, India <sup>[32]</sup>	Dermatitis. Cough and cold	Latex flower (CG)

CG: *Calotropis gigantea*, CP: *Calotropis procera*

**Table 4:** *Cannabis sativa* – *Bhanga*

S. No.	Region	Medical use	Part used
1.	Indian Himalayas <sup>[28]</sup>	Fever	Leaf, Seed
2.	Karamar valley Swabi, Pakistan <sup>[33]</sup>	Tumor treatment. Analgesic, stomachic, narcotic, and sedative.	Roots
3.	Jammu and Kashmir, India <sup>[39]</sup>	Jaundice and stomach heat. Regulation of menstrual cycle	Whole plant
4.	Swat, North Pakistan <sup>[40]</sup>	Bandaging for wound healing; Anodyne, sedative, tonic, and narcotic.	Leaves
5.	Pangi Valley in District Chamba, Himachal Pradesh, India <sup>[16]</sup>	Honey bee sting	Leaves and flower seeds
6.	Champhai district of Mizoram, India <sup>[41]</sup>	Stomach ache and diarrhea	Leaf
7.	Ghaziabad India <sup>[36]</sup>	Hemorrhoids	Leaf

**Table 5:** *Croton tiglium* – *Jayaphala*

S. No.	Region	Medical use	Part used
1.	Rural parts of Northern India <sup>[42]</sup>	Carbuncles and cancerous sores	Root
2.	Parts of India <sup>[43]</sup>	Laxative	Seed
3.	Parts of India <sup>[44]</sup>	Tumors and cancerous sores	Seed
4.	Harda District of M.P., India <sup>[45]</sup>	Intestinal disorder	Seed
5.	Assam and Manipur, India <sup>[46]</sup>	Cancer, ringworm infection, wounds, and constipation	Seed
6.	Philippines <sup>[42]</sup>	Stimulant; Eczema, ichthyosis	Seed
7.	Philippines <sup>[42]</sup>	Asthma	Seed
8.	Assam. Part-I, Guwahati, India <sup>[47]</sup>	Severe headache	Leaves
9.	Philippines <sup>[42]</sup>	Antidote for snake bites; Insecticide	Leaves

**Table 6:** *Datura metel*, *Datura stramonium* – *Dhattura*

S. No.	Region	Medical use	Part used
1.	Himalayas <sup>[28]</sup>	Bronchitis, asthma and cough	Leaf, flower (DS)
2.	Haripur District, Khyber Pakhtunkhwa, Pakistan <sup>[48]</sup>	Bleeding haemorrhoids	Powdered flowers and leaves are used as an ointment (DS)
3.	Karamar valley Swabi, Pakistan <sup>[33]</sup>	Asthma, anticholinergic, spasmolytic, and nervous system sedative	Flowers and seeds (DS)
4.	Dantewada, Chhattisgarh, India <sup>[34]</sup>	Asthma and cough. Fever, skin diseases, and rheumatism	Leaf, seed (DM)
5.	Swat, North Pakistan <sup>[40]</sup>	To alleviate pain; narcotic	Leaves, seeds and flowers (DS)
6.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	To check abortion	Root (DM)
7.	Haladkeri village in Bidar District, Karnataka, India <sup>[32]</sup>	Asthma, cough, and male fertility disorders. Mental disorders and respiratory problems	Root and seeds (DS)

DS: *Datura stramonium*, DM: *Datura metel*



**Table 7:** *Euphorbia nerifolia* – *Snuhi*

S. No.	Region	Medical use	Part used
1.	Chhattisgarh region of India <sup>[49]</sup>	Aphrodisiac	Latex
2.	Gujarat, India <sup>[50]</sup>	Prevents the attack of red weevils (red beetle) in palms	Latex
3.	Rural India <sup>[51]</sup>	Skin warts	Stem
4.	Chhattisgarh, India <sup>[52]</sup>	Chronic respiratory problems	Stem
5.	Rural India <sup>[53]</sup>	Hydrophobia	Stem
6.	Rural India <sup>[50]</sup>	Antispasmodic activity	Root
7.	Rural India <sup>[54]</sup>	Snake bites, scorpion stings	Root
8.	Rural India <sup>[50]</sup>	Dropsy	Root

**Table 8:** *Gloriosa superba* – *Langali*

S. No.	Region	Medical use	Part used
1.	Chhattisgarh, India <sup>[55]</sup>	Cancerous wounds	Root
2.	Kolli hills of Eastern Ghats of Tamil Nadu, India <sup>[56]</sup>	Wound, inflammation, and abortion	Tuber
3.	Kolli hills of Eastern Ghats of Tamil Nadu, India <sup>[57]</sup>	Epilepsy	Seeds
4.	Dindigul, Madurai, Theni; Tamil Nadu, India <sup>[58]</sup>	Gout, rheumatism	Seeds and tubers
5.	Bidar District Karnataka, India <sup>[59]</sup>	Hemorrhoids and skin diseases	Tuber
6.	Biligiri Rangana Betta, Karnataka, India <sup>[60]</sup>	Conjunctivitis	Tuber

**Table 9:** *Nerium odorum*, *Nerium indicum* – *Karaveera*

S. No.	Region	Medical use	Part used
1.	Ghaziabad India <sup>[36]</sup>	Severe inflammation	Root (NO)
2.	Parts of India <sup>[61]</sup>	Cardiac disease, asthma, corns, cancer, epilepsy, wound healing, and inflammation	Root (NI)

NO: *Nerium odorum*, NI: *Nerium indicum*

**Table 10:** *Nicotiana tabacum* – *Tambaku*

S. No.	Region	Medical use	Part used
1.	Kaski District, Nepal <sup>[62]</sup>	Infected wounds, pediculosis	Leaf
2.	Ghaziabad India <sup>[36]</sup>	Asthma	Leaf
3.	Kalahandi District, Orissa, India <sup>[37]</sup>	Scabies	Leaf

**Table 11:** *Papaver somniferum* – *Ahiphena*

S. No.	Region	Medical use	Part used
1.	Haripur District, Pakistan <sup>[48]</sup>	Chest infection and cough	Tea of dried fruit is taken
2.	Karamar Valley Swabi, Pakistan <sup>[33]</sup>	Antispasmodic, narcotic, hypnotic, analgesic, anodyne, sedative, and pain relief	Latex and seeds
3.	Swat, North Pakistan <sup>[40]</sup>	Narcotic; dried cough and fever	Capsule, seeds

**Table 12:** *Plumbago zeylenica* – *Chitraka*

S. No.	Region	Medical use	Part used
1.	Dantewada, Chhattisgarh India <sup>[34]</sup>	Tonic	Root (PZ)
2.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	Wound and cuts	Whole plant (PZ)
3.	Ghaziabad India <sup>[36]</sup>	Eczema and scabies	Root (PZ)
4.	Kalahandi District, Orissa, India <sup>[37]</sup>	To expel retained placenta	Root
5.	Haladkeri Village in Bidar District, Karnataka, India <sup>[32]</sup>	Diabetes and white patches	Leaf Flower

PZ: *Plumbago zeylenica***Table 13:** *Ricinus communis* – *Eranda*

S. No.	Region	Medical use	Part used
1.	Karamar valley Swabi, Pakistan <sup>[33]</sup>	Lumbago	Leaves
2.	Dantewada, Chhattisgarh India <sup>[34]</sup>	Purgative, skin diseases, hemorrhoids, and rheumatism	Seed
3.	Swat, North Pakistan <sup>[40]</sup>	Demulcent and to evacuate bowels in children	Seeds
4.	Southeastern Nigeria <sup>[63]</sup>	Purgative skin infections	Seed
5.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	Pneumonia fever; Rheumatism	Leaf, seeds
6.	Panna district Madhya Pradesh, India <sup>[35]</sup>	Boils, swelling, laxative and to initiate labor pain	Seeds, leaves, bark
7.	Ghaziabad India <sup>[36]</sup>	Inflammation	Leaf
8.	Southeastern Iran <sup>[38]</sup>	Abdominal pains, diarrhea, and emetic	Seeds
9.	Haladkeri village in Bidar District, Karnataka, India <sup>[32]</sup>	Jaundice; Joint pain	Leaf and Root

**Table 14:** *Semecarpus anacardium* – *Bhallataka*

S. No.	Region	Medical use	Part used
1.	Indian Himalayas <sup>[28]</sup>	Skin allergy, cough, and diarrhea.	Fruit
2.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Skeletal disorders	Seed
3.	Mayurbhanj District of North Orissa, India <sup>[29]</sup>	Body pain in neurological disorders	seed
4.	Dantewada, Chhattisgarh India <sup>[34]</sup>	Anti-cancerous	Fruits
5.	Hoshangabad District, Madhya Pradesh, India <sup>[30]</sup>	Rheumatism	Seed
6.	Ghaziabad India <sup>[36]</sup>	Indigestion, hemorrhoids, and cough	Fruit
7.	Kalahandi district, Orissa, India <sup>[37]</sup>	Eczema, sprains and cuts, asthma	Seed

**Table 15:** *Strychnos nuxvomica* – *KUPEELU*

S. No.	Region	Medical use	Part used
1.	Thanjavur District, Tamil Nadu, India <sup>[31]</sup>	Psoriasis; Tumors.	Stems and leaves
2.	Parts of Kerala and Madhya Pradesh, India <sup>[64]</sup>	Cholera; Chronic wounds and ulcers; Appetizer, antiperiodic purgative, asthma, diabetes, and skin diseases	Root bark, leaves, and seeds