BHANG: WHETHER A SUBSTANCE OF ABUSE OR A MIRACULOUS DRUG?

Abstract

Bhang (*Cannabis sativa* L., Family: Cannabaceae) holds a distinguished place in the classical foundations of *Ayurveda*, with references spanning from the *Vedas* and *Samhitas* to later compendia such as the *Nighantus*, *Anandakanda*, *Rasa Tarangini* and *Yoga Ratnakara*. Traditionally revered for its multifaceted therapeutic potential, *Bhang* is described as a *tridoshic*-balancing herb with *rasayana* properties, capable of addressing a wide range of conditions including neurological, dermatological, gastrointestinal, respiratory and reproductive disorders. Ayurvedic literature offers detailed insights into its origin, morphology, cultivation, purification techniques, pharmacodynamics and formulation strategies.

Despite its extensive documentation, a comprehensive and systematized compilation of *Bhang's* Ayurvedic applications remains lacking. This article seeks to consolidate scattered references into a unified framework, highlighting its clinical relevance and the diversity of its formulations. Special attention is givento the enhancement techniques described in *Anandakanda*, which present promising avenues for phytochemical research and integrative drug development.

As global interest in plant-based therapeutics intensifies, *Bhang* emerges as a valuable candidate for evidence-based exploration. Bridging traditional Ayurvedic wisdom with modern pharmacological inquiry can unlock its full potential in personalized medicine, provided ethical cultivation, standardization and interdisciplinary collaboration are prioritized. This study aims to honour the legacy of *Bhang* while advancing its role in contemporary healthcare and research.

Keywords

Bhang, Vijaya, Ayurveda, Anandkanda

Introduction

The classical foundations of *Ayurveda*, rooted in the *Vedas* (6000 BC), the *Samhitas* (1500 BC–500 AD) and later the *Nighantus* and compendia (800–1900 AD), provide a systematic account of natural medicinal substances. Among these, *Bhang* (*Cannabis sativa* L., Family: Cannabaceae) occupies a distinctive place, having been referenced since antiquity. Traditionally described as an annual, erect, dioecious herb reaching 1–4 meters in height, *Bhang* grows naturally in the sub-Himalayan regions and is widely distributed across wastelands from Punjab to Bengal, extending into South India.[1]

In the Ayurvedic view, *Bhanga*—a synonym for *Vijaya*—is classified as a poisonous plant with medicinal potential. References to its use appear in the *Rigveda*, where it is associated with *Soma*, and later in medieval texts such as *Gadnigrah*and the *Dhanvantri Nighantu*, which describe its therapeutic applications under *Medavishesh*. Initially cultivated for fiber and seed production (known as *Shana*), *Bhanga* gradually gained recognition for its narcotic properties and was popularly referred to as *Matulani*.[2]

Over centuries, diverse preparations of cannabis emerged in India and beyond. These include *Bhang* (a decoction of dried leaves and stems consumed during festivals such as *Holi* and *Shivratri*)[3], *Gaanja* (dried flowering tops smoked in pipes or cigarettes), *Hashish* and *Charas* (resinous exudates valued for their psychoactive and analgesic properties)[4], *Majun* (a sweetmeat prepared with plant extract), and *Sinsemilla* (seedless female plants)[5]. More concentrated forms such as hash oil, containing up to 25–60% THC, further highlight the plant's pharmacological potency.

Despite its long-standing cultural and medicinal significance, cannabis was classified under Schedule I of the Controlled Substances Act (1970) in the United States, deemed to have no medicinal value and a high potential for abuse.[6] This designation contrasts sharply with its historical role in Ayurveda and its re-emergence in modern medicine, exemplified by the approval of the first cannabis-based medication in Germany in 2011.[7] Given the wide range of therapeutic applications documented across traditions and contemporary pharmacology, there is renewed interest in re-evaluating cannabis formulations within regulated clinical practice.

Detailed accounts of *Bhang* are preserved in authoritative texts such as the *Anandakanda*, *Rasa Tarangini*, *Yoga Ratnakara* and *Dhanvantari Nighantu*. In keeping with the traditional Ayurvedic approach, this discussion begins with an examination of its origin and classical references. Building on these foundations, the present review seeks to trace the historical, cultural and pharmacological dimensions of *Bhang* (*Cannabis sativa*), situating its Ayurvedic legacy alongside modern scientific perspectives. By analysing its classification, diverse preparations and evolving therapeutic relevance, the article aims to bridge traditional wisdom with contemporary biomedical discourse. Ultimately, by integrating insights from classical texts and modern pharmacology, this work underscores the enduring significance of *Bhang* and highlights its potential role in regulated, integrative medical practice today.

Origin of *Bhang (Vijaya)*[8]

The origin of *Bhang* is elaborately described in the *Anandakanda*. According to this text, during the cosmic event of *Samudra Manthana* (the churning of the ocean), poison (*viṣha*) first emerged, followed by the divine nectar (*Amṛut*). This nectar was offered to Lord *Shiva* for consumption. While partaking of it, a few drops spilled onto the earth, from which *Bhang*, also revered as *Mahauṣadhi*, manifested.

Subsequently, Lord *Shiva* entrusted this sacred plant to *Bhairava*, who then offered it to the *Yoginis*. Delighted by this act, the *Yoginis* blessed their devotees with the plant, thereby ensuring its manifestation on the terrestrial plane (*Bhuloka*). Through this mythological lineage, *Bhang* was sanctified as a divine medicine and gradually became an integral part of human therapeutics.

In the sequential narrative of its origin, the *Anandakanda* further provides a detailed account of the various forms of *bhang*, which are compiled and presented subsequently.

Table 1: Typologies and Variations as mentioned in *Anandakanda*[9]

S.No.	Category	Description
1.	Variation according to Yugas	*Sata yuga* – White coloured flower *Treta Yuga* – Red coloured flower *Dwapara Yuga* – Yellow coloured flower *Kal Yuga* – Blue coloured flower
2.	Number of leaflets	1-leafed,3-leafed,5-leafed,7-leafed,9-leafed,10-leafed,11-leafed,13-leafed
3.	Gender distinction	Female plant – Creeper form (*Vallabhi rupa*) Male plant – Tree form (*Vruksha rupa*)

Description and Botanical Aspect[10]

Cannabis sativa L. is an annual, usually dioecious plant belonging to the *Cannabaceae* family. It is now considered as the only species of the botanical genus Cannabis but divided into several phenotypes that can be described as subspecies or varieties. *Cannabis sativa* has the particularity of being a fast-growing plant with a fluted stem that can reach 1 to 4 m with a diameter ranging between 1 and 3 cm (Figure 1a). The variation of height and diameter depends on the sub-species, environment, soil and climatic conditions. The seeds are smooth, greyish ovoid or spherical in shape, 2.5 to 3.5 mm long and 2.5 to 3 mm in diameter (Figure 1c). Each seed contains two cotyledons rich in reserves (protein and oil), with an albumen considered particularly small compared to other plant species.

Figure 1:*Cannabis sativa* L. General aspect (**a**); inflorescence (**b**); seed (**c**); leaf (**d**); stem (**e**).

This plant is also characterized by long, fine flowers (Figure 1b). It has glandular hairs that make it fragrant and sticky. At post-germination, young male and female plants cannot be distinguished. It is only during the last phase of growth, when flowers start appearing, that sex determination becomes possible. The female flowers have no petals and consist of two long white, yellow or pink stigmas. Their calyx (less than 3–6 mm) envelops the ovary containing a single ovule. The female flowers appear in pairs in the axils of small leaves named bracts, these bracts contain numerous glandular trichomes where cannabinoids, mainly THC, accumulate. On the other hand, the male flowers have five sepals of approximately 5 mm length, with yellow, white or green color. The male plants develop small pollen sacs that serve to fertilize the female plants with hairy, resinous stigmas. The Cannabis leaves are stipulate and opposite, with palmate (five to seven unequal), elongated and spiny segments with toothed margins (Figure 1d). Towards the top of the axis, the leaves become alternate and are inserted on the stem in an opposite arrangement every 10–30 cm. These plants have cystolithic, tectorial and resin-secreting hairs; the latter have a voluminous base ending in a cluster of several cells, with each one secreting resin. The root is taproot with a length of up to 30 cm, but the lateral roots reach 20 to 100 cm. In addition, in peaty soils, the lateral roots are more strongly developed, and the main root grows to a depth of 10–20 cm. The growth rate of the root system is quite slow in the

initial stages of vegetation, in contrast to the aerial part of the Cannabis plant, which grows intensively and rapidly.

Varieties of Cannabis

Professors William Emboden, Loran Anderson and Harvard botanist Richard E. Schultes and coworkers also conducted taxonomic studies of *Cannabis* in the 1970s, and concluded that stable morphological differences exist that support recognition of at least three species *C. sativa*, *C. indica*, and *C. ruderalis*.[11]

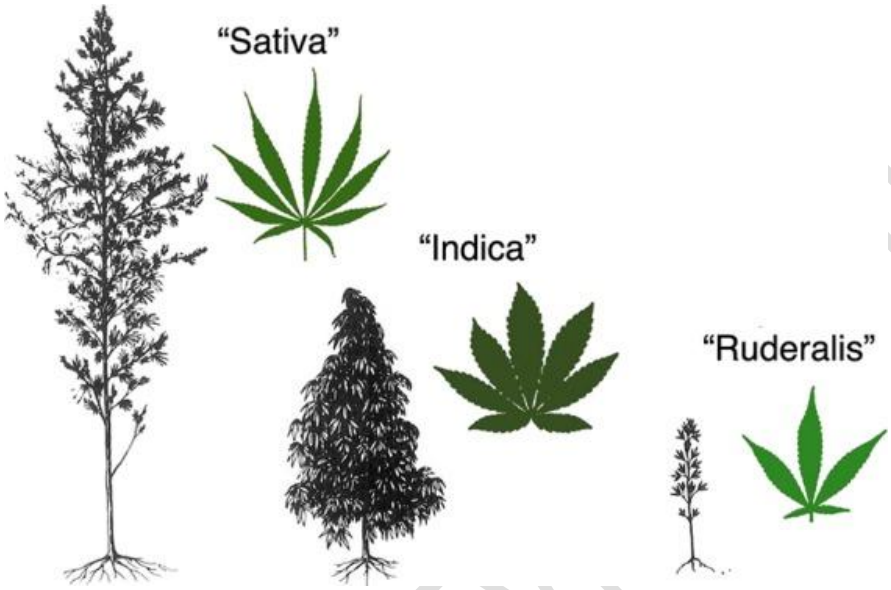

Figure 2:*Cannabis* vernacular taxonomy, image adapted from Anderson,[12] courtesy of the Harvard University Herbaria and Botany Libraries

Synonyms and Semantic Significance

Although various *Samhitas* mention multiple synonyms of *Vijaya*, the *Anandakanda* provides an elaborate exposition of these synonyms along with their specific meanings, as outlined below:

Table 2: Synonyms mentioned in *Anandakanda*[13]

S.No.	Sanskrit Name	Meaning	Contextual Significance
1.	*Sivamuli*	Auspicious and beneficial root	Considered sacred due to association with Lord Śiva
2.	*Vijaya*	That which grants victory over the six enemies (*ṣaḍ-satru*: desire, anger, greed, delusion, pride, envy)	Enhances self-mastery and inner strength
3.	*Bhangi*	Destroyer of the threefold miseries *(trividha-tapa: adhyatmika, adhibhautika, adhidaivika)*	Promotes relief from mental, physical, and spiritual afflictions
4.	*Ganja*	Inducer of intoxication	Reflects its psychoactive property
5.	*Vimardini*	Suitable for use after grinding/pounding	Indicates the method of preparation for medicinal use

6.	*Divya*	Bestower of joy and radiance	Provides bliss and enhances vitality
7.	*Siddha*	Self-accomplished, naturally potent	Recognized as inherently powerful without external processing
8.	*Manonmani*	Calms the disturbances of the mind	Acts as a tranquillizer, relieving anxiety and stress
9.	*Madhudrava*	Causes the nectar to flow at the cranial aperture (*brahmarandhra*)	Suggests a role in spiritual awakening/experiences
10.	*Pasupasavinasini*	Destroyer of animalistic tendencies and bondages	Promotes higher consciousness and detachment
11.	*Kalghni*	Conqueror of death	Symbolizes longevity and protection from untimely death
12.	*Rogaghni*	Destroyer of diseases	Therapeutically significant for treating disorders

Table 3: Synonyms mentioned in various classical texts

S.No.	Text	Synonyms
1.	*Rasatarangini*[14]	*Bhanga, Bhangi, Matulani, Madini, Matika, Matuli, Vijaya, Tandrakariṇi, Bahuvadini*
2.	*Madanapala Nighantu*[15]	*Bhanga, Bhangja, Mohini, Vijaya, Jaya*
3.	*Dhanvantari Nighantu*[16]	*Vijaya, Ranjika, Bhanga, Tandrakṛt, Bahuvadini, Madini, Madika, Matu, Ganja*
4.	*Raja Nighantu*[17]	*Vijaya, Ranjika, Bhangi, Tandrakrad, Bahuvadini, Madini, Madika, Madu*
5.	*Kaideva Nighantu*[18]	*Ganjayika, Matulani, Madini, Vijaya, Janya*
6.	*Priyavṛta Nighantu*[19]	*Bhanga, Matulani, Madini, Vijaya*
7.	*Bhavaprakasa*[20]	*Bhanga, Ganja, Matulani, Madini, Vijaya, Jaya*
8.	*Sarasvati Nighantu*[21]	*Bhanga, Vijaya, Jaya*

These diverse names reflect *Bhang*multifaceted nature—ranging from its intoxicating properties to its therapeutic and spiritual significance.

English names[58] **–** Pot, Grass, Weed, Rope, Mull, Dope, Hemp, Skunk, Mary jane, Reefer.

Five-Fold Pharmacological Profile (*Rasapanchak*) of *Vijaya*

A comparative matrix that organizes the properties and actions of *Bhāṅg (Vijaya*) across classical Ayurvedic texts.

Table 4: Five-fold pharmacological profile described in various source:

S.No.	Text	Rasa (Taste)	Veerya(Potency)	Guna (Qualities)	Karma (Actions)
1.	*Yogaratanakara*[22]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	*Tikṣṇa* (Sharp), *Laghu* (Light), *Karṣaṇi* (Reducing)	*Pitta*-inducing, *Grahi* (Absorbent), Digestive *Dipana*(fire stimulant), *Madakṛt*(Intoxicating), *Vata*-pacifying
2.	*Bṛhat Rasa Raja Sundara*[23]	*Katu* (Pungent), *Kashaya* (Astringent), *Tikta*(Bitter)	*Uṣṇa* (Hot)		*Vata-Kapha* pacifying, *Balya* (Strengthening), *Medhakara* (Intellect-promoting), *Vakprada* (Speech-enhancing), *Dipana* (Digestive fire stimulant),
3.	*Madanapala Nighantu*[24]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light, Sharp	*Kapha*-reducing, Digestive stimulant, A*nahakṛt* (Relieves bloating)
4.	*Dhanvantari Nighantu*[25]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light, Sharp	*Kapha*-reducing, Digestive, Intoxicating, Enhances speech and digestion
5.	*Rasa Tarangini*[26]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light, Sharp	*Kapha*-soothing, Digestive stimulant, Intoxicating
6.	*Raja Nighantu*[27]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light, Sharp	*Kapha*-reducing, *Moha* (induces delusion), Enhances speech and digestion
7.	*Kaideva Nighantu*[28]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Sharp, Light, Reducing	*Pitta*-enhancing, *Rucikara* (Appetite enhancer), Intoxicating, *Kapha-Vata* pacifying
8.	*Priyavṛta Nighantu*[29]	*Tikta* (Bitter)	*Uṣṇa* (Hot)		*Pitta*-enhancing, Memory-impairing, Constipating, Sleep-inducing, Aphrodisiac
9.	*Sodhala Nighantu*[30]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light	Digestive stimulant, Sleep-disturbing, Aphrodisiac, *Kapha-Vata* pacifying

10.	*Bhavaprakasa*[31]	*Tikta* (Bitter)	*Uṣṇa* (Hot)	Light, Sharp	*Kaph* pacifying, *Pitta*-enhancing, Intoxicating, Enhances speech and digestion, Absorbent
11.	*Rasendra Sambhava*[32]	*Katu* (Pungent), *Kashaya* (Astringent), *Tikta* (Bitter)	*Uṣṇa* (Hot)		*Vata-Kapha* pacifying, Strengthening, Intellect-promoting, Speech-enhancing
12.	*Sarasvati Nighantu*[33]				Delusion-inducing, Intoxicating

This matrix reveals how *Bhang* is consistently described as bitter, hot, sharp and light, with actions that span digestive stimulation, *Kapha-Vata* pacification, intoxication and cognitive modulation.

Only the *MadanapalaNighantu* provides information on the *vipaka* of *Bhanga*, identifying it as *katuvipaka*.[24]

Major chemical constituents

Bhanga has more than sixty chemical constituents. Some important constituents are Cannabinol, tetrahydro-cannabiol, Cannabidiol, Cannabichromene, 1-dehydro-tetrahydrocannabinol, eugenol, sesquiterpenes, cannabinoids etc.[34]

Active principle-It is not an alkaloid, but a fat-soluble oleoresin, cannabinol, the active form being δ-9-tetrahydrocannabinol (THC). It also contains benzopyrene, a known carcinogen which is also found in tobacco.[35]

***Bhanga Vardhana Vidhi* (Method of Cultivation and Potentiation of *Bhang*)**[36]

The *BhangaVardhanaVidhi* described in the *Anandakanda* represents a unique fusion of agricultural science, ritual practices and pharmaceutical processing. This integrative approach reflects the holistic vision of Ayurveda, where cultivation and preparation of medicinal plants are sanctified through spiritual practices, thereby enhancing both their potency and therapeutic efficacy.

The *Bhanga Vardhana Vidhi* is described as follows:

1. Selection of Soil

The text prescribes fertile soil conditions for the cultivation of *Bhang*. The most suitable soil is described as soft, black and dust-like, enriched with cow dung and organic residues, ensuring high fertility and potency of the plant.

2. Auspicious Time for Sowing

Seed sowing is recommended during *Puṣya Nakṣatra*, *Siddha Yoga* or *SravaṇaNakṣatra* (preferably in the bright fortnight). Ritual procedures involve bathing, applying sandal paste, reciting mantras and worship before sowing seeds. These practices highlight the ritual sanctity associated with *Vijaya* cultivation.

3. Irrigation and Plant Care

- Sprouting stage: irrigation with water mixed with ghee.
- Pest protection: use of seawater.
- Branch strengthening: branches filled with mercury and tied with silk threads.
- Flowering stage: irrigation with liquor, meat, honey and milk.

Additionally, *Jatamamsi* roots are tied to the plant to enhance its vigor.

4. Mantra Recitation

The cultivation process is accompanied by mantra chanting:

- During seed sowing: *Sthapana Mantra ("Oṁ Kṣāṁ Śrīṁ Ho…").*
- At the time of consumption: *Sevana Mantra ("Oṁ Śrīṁ Hrīṁ Klīṁ…").*

This demonstrates the integration of spiritual and therapeutic dimensions.

5. Special Ritual Observances

On *Phalguna Kṛiṣṇa Caturdasi*, special rituals are performed, including bathing, application of fragrance and flowers, adorning with ornaments and worship of *Bhairava* and *Nandisvara* with offerings of liquor and meat.

6. *MantraSadhana* (Seven-Day Ritual Practice)

The ritual aspect includes:

- Use of colored threads (red, yellow, white, black) for *TantubandhanaMantra*.
- Daily recitation of the *AghoraMantra* 1000 times.
- On the fifth day, chanting the *LavanaMantra* before Goddess *Amṛtesvari*.
- Wearing *Bhang* leaves as an amulet for empowerment.

7. Preparation of Powder

The harvested leaves are dried in sunlight for seven days, then subjected to the *puta* process (incineration) in an earthen pot. The powder is further potentiated (*bhavana*) seven times with the juices of *Gunja*, *Dhattura* and *Guḍuci*.

8. Formulation of Medicine

Equal proportions of *Bhang* powder, sugar (*mishri*) and *Bhang* extract are mixed. The blend is cooked in milk, honey is added and the preparation is stored in a glass vessel placed within heaps of grains, accompanied by chanting of the *Mahavaṭuka Bhairava Mantra*.

9. Mode of Administration

After one month of maturation, the medicine is consumed in the morning, in a dose equal to the size of an *amalaka* (Indian gooseberry), following purification rituals. Regular use for three years is claimed to bestow freedom from diseases, aging and death, with a lifespan of up to 300 years.

10. Solar Processing (*Suryapaka* Method)

A formulation is prepared using *Varahikanda, Triphala, Citraka, Asvagandha* and *Bhang* powder (10 parts), mixed with buttermilk in a glass vessel and exposed to sunlight for 15 days. Administered after body purification for eight months, it is said to confer radiance comparable to the sun.

11. Lunar Processing (*Candrapaka* Method)

Another preparation includes *Vijaya, Yastimadhu*, cardamom, *Citrakamula*, white sandalwood, sugar (*mishri*), *SuvarṇaBhasma* (gold ash), camphor and *ghee*. The mixture is exposed to moonlight from *Pancami* to *Purṇima*, followed by worship and purification and then administered as a *Leha* (electuary).

12. Processing Seasons

Agni-paka (fire processing): *Aṣaḍha–Asvina* and *Phalguna–Jyeṣṭha*.

Suryapaka (sun processing) and *Candrapaka* (moon processing): *Kartika–Magha*.

Sodhana (Purification/ Processing)

Sodhana is one of the unique concepts of Ayurveda where the plants possible toxic effects are passed through specific recommended process with certain *BhavanaDravya* (media) before clinical administration to reduce the toxic effect and make them therapeutically effective in prescribed *dosa*.[37]Different *shodhana* procedures of *Bhang* are mentioned in various texts which are enumerated in below table.

Table 5: Purification Methods as described in various classical Ayurvedic texts:

S.No.	Text	Purification steps
1.	*Rasatarangini*[38]	1. Soak dried *Bhang* leaves in water → squeeze → sun-dry → roast in cow's ghee over mild heat 2. Steam with *Babool* decoction for 25–30 min → sun-dry
2.	*Yogaratanakara*[39] */ Bṛhat Rasa Raja Sundara*[40]	Steam *Bhang* in *Babool* decoction → dry → triturate with cow's milk (*Godugdha bhavana*) → dry again
3.	*Rasa Chandamsu*[41]	Prepare *Babool* bark decoction → place *Bhang* in cloth pouch → suspend in *Dola Yantra* → steam for 1 p*rahar* (~3 hrs) → milk trituration
4.	*Rasendra Sambhava*[42]	1. Steam in *Babool* decoction → dry → milk trituration → dry again 2. Soak dried leaves in water → squeeze → sun-dry → roast in cow's *ghee*

This format highlights both the common elements (like *Babool* decoction, milk trituration, sun-drying) and the distinctive apparatuses like *Dola Yantra* used in traditional purification.

Vikaras of Bhang: Stages of Physiological and Psychological Transformation

In Ayurveda, *Bhang* (Cannabis sativa) is revered as a potent medicinal and spiritual herb. However, its effects unfold through a series of transformative stages known as *Vikaras*, which reflect both physiological responses and altered states of consciousness. These stages are described in a progressive sequence, each marked by distinct symptoms and experiences:

Table 6: The nine *Vikaras* (transformative or adverse stages)[43]

Stage	Name	Symptoms / Experiences
1	First *Vikara*	Dry nose, red eyes, dryness of tongue, lips and palate; heat and discomfort in breath and flanks

2	Second *Vikara*	Eyes close, face is covered—withdrawal from surroundings
3	Third *Vikara*	Burning in hands, feet and eyes; voice becomes tremulous or choked
4	Fourth *Vikara*	Intense hunger and thirst; eyes blink rapidly or remain closed
5	Fifth *Vikara*	Speech becomes unclear; forgetfulness of spoken words
6	Sixth *Vikara*	Mental distress; onset of epileptic-like state (*Apasmara*)
7	Seventh *Vikara*	Burning in hands; sensation of bodily attraction; repeated waves of bliss like immersion in a great ocean
8	Eighth *Vikara*	Disorientation (*Digbhrama*), furrowed brows (*Bhrubhanga*), excessive weeping
9	Ninth *Vikara*	Ear ringing, fainting, epilepsy-like symptoms, belching, incoherent murmuring, rolling on ground, profuse sweating, sorrowful and disjointed speech

Therapeutic Management of *Vikara's*[44]

The classical Ayurvedic texts prescribe a holistic and sensory-based approach to managing the adverse effects or transformative disturbances (*Vikaras*) caused by *Bhang*. These treatments aim to restore physiological balance, soothe the mind and harmonize the senses.

Primary Interventions

1. Purgation (*Virechana*) – To eliminate excess doshas and toxins.
2. Intake of Sour-Tasting Substances (*AmlaRasa*) – To counteract dryness and heat.
3. Cold Water Head Bath – To cool the system and relieve cranial heat.

Cooling and Mental Soothing Measures

4. Application of Paste – Made from sandalwood (*Chandan*), vetiver (*Ushir*), camphor (*Kapoor*) and cool water.
5. Garlands of Fragrant Cool Flowers – Jasmine (*Chameli*), Arabian jasmine (*Mallika*), Champa, Lotus (*Kamal*) and Blue Lotus (*Utpal*).
6. Lotus-Stalk Bracelet – Worn on the wrist for cooling and calming effect.
7. Banana Leaf Bedding – The patient is laid on a bed of banana leaves to absorb heat.
8. Betel Leaf Chew (*Tambula*) – Mixed with camphor, cardamom, clove, *Ankol* and areca nut (*Supari*).
9. Fan Made of Palm Leaf (*Taḍpatra*) – Used to gently fan the patient.

Clothing and Ornaments

10. Fine, Fragrant and Cool Garments – To comfort and regulate body temperature.
11. Moonlight Therapy – Patient is seated under moonlight for two *Muhurtas* (~96 minutes) wearing gemstone-studded bracelets.

Sensory and Emotional Balancing

12. Rest in the Embrace of a Beautiful Woman – To soothe emotional disturbances.

13. Sweetened Milk or Meat Broth – Mixed with sugar and ghee for nourishment and grounding.

14. Cooling Beverages – Sour drinks (*Panak*), mung soup (*Yuṣa*), herbal sherbets, honey, etc.

This integrative regimen reflects Ayurveda's sensitivity to both somatic and subtle energies, combining pharmacological, ritualistic and sensory therapies to restore equilibrium.

Signs and symptoms of Bhang toxicity (As per modern)

cannabis toxicity usually presents in two forms.

- Acute poisoning
- Chronic poisoning.

Acute poisoning- clinical features vary with dose consumed.[45]Inhalation is associated with more pronounced effects than ingestion-

With low dose changes perceived in the victim comprise of: Initial euphoria with: Over talkativeness, perceptual alterations. This may be followed by: Relaxation, drowsiness, hypertension, tachycardia, slurred speech, ataxia, motor incoordination, stimulation of appetite.

With higher dose change perceived in the victim comprise of: Conjunctival congestion and miosis, acute paranoid psychosis, depersonalization, large doses produce nausea, anxiety confusion, delusion and hallucinations, characteristic (burnt rope) odour, if the drug has been used for smoking, intravenous use can cause headache, diplopia, vertigo, dyspnea, hypotension, and renal failure.[46] Rarely the victim may go into paralysis of muscles, loss of reflexes, coma and death.

Chronic poisoning-chronic poisoning can present in two forms-Cannabis addiction, Hashish insanity.
Cannabis addiction- chronic poisoning is resulting from continued use of the drug in any form of and is characterized by –anorexia, loss of weight, weakness, tremors, impotence and moral deterioration. The victim might become lethargic, apathetic and disinterested to work, and suffer from poor concentration (Amotivational syndrome).[47]

Hashish insanity– chronic, heavy abuse of cannabis causes paranoid psychosis with violent behaviour, culminating in homicide or suicide[48] (run-amok-it is a psychic disturbance resulting from continued use or sudden consumption of cannabis and is characterized by a desire to commit murders. After intake, there is a period of a depression, followed by a violent attempt to kill people (impulse to murder). The addict first kills a person against whom he may have real or imaginary enmity and then kills anyone who comes in his way, until the homicidal tendency lasts. The person may then commit suicide or surrender himself.[49] Increased susceptibility to pharyngitis, bronchitis, asthma and gynaecomastia (in males) are also seen.

Treatment

Acute poisoning –Decontamination-stomach wash in case the drug has been ingested, haloperidol or other antipsychotic medication for psychosis, psychotherapy and symptomatic treatment.[50]

Chronic poisoning- Gradual withdrawal of the drug, diazepam for sedation, haloperidol for psychotic reaction,psychotherapy and symptomatic treatment as per patient requirement .[51]

***Prativisha*(Antidote)**

- *Shunthi churna* with cow's curd[52]

- Induce purgation then *shirsh snan* (bath) with *amlarasa* and cold water[53]
- Cow's milk with cow's clarified butter and sugar[54]
- *Pralepa* with *Chandan*, *ushir* etc[55]
- Take Lemon juice[56]

Therapeutic dose - 2 – 4 ratti[57]

Fatal dose[58] -

Bhang: 10g/kg body wt.

Charas: 2 g

Gaanja: 8 g

Fatal period[59] – about 12 hours

Classical Formulations of Bhang

Upon reviewing numerous classical Ayurvedic texts, a total of 210 Bhanga formulations were identified, of which 193 are intended for internal administration and 17 for external use.[89] In this article, special emphasis has been placed on the formulations described in *Anandakanda* and *Rasa Tarangini*, which provide extensive and detailed accounts of Bhanga-based preparations

Mentioned in *Anandakanda*[60]

1. Skin Diseases (*Kuṣṭha*) – *Gorakhamundi* powder + *Chitraka* powder + *Nirgundi* (1 part each) + *Bhang* (3 parts)
2. Epilepsy (*Apasmara*) – *Brahmi* + *Kumari* + *Bhang* powder (equal parts)
3. Tuberculosis (*Yakṣma*) – *Bhang* + *Triphala* + *Trikatu* (equal parts)
4. Pitta Disorders – *Bhang* + *Karpasa* root + *Matsyakshi* powder (equal parts)
5. Abdominal disorders and Pain (*Gulma*&*Sula*) – External application using alkaline extracts from *Snuhi* leaves / *Arka* leaves / *Bhang* leaves
6. Cognitive Enhancement – *Vacha* + *Durva* + *Bhang* (equal parts)
7. Skin Diseases (*Kuṣṭha*) – *Yashtimadhu* + Purified Sulphur + *Bhang*
8. Semen Enhancer (*ViryaVardhaka*) – *Shalmali* resin (*Mocharas*) + *Bhang* powder + *Mishri*
9. Kapha Disorders – *Patha* + *Katuki* + *Trikatu* + *Bhang* (equal parts)
10. Antidote for Major Poisons (*Mahaviṣa*) – White *Gunja* powder + *Bhang* powder
11. Skin Diseases (*Kuṣṭha*) – *Vyaghata* powder + *Bhang* powder
12. *Vata* Disorders – Forest Pepper (*Araṇyamarica*) powder + Castor root powder + *Bhang* powder (equal parts)

It is said that regular and sequential use of these formulations for 12 months orally may liberate a person from the cycle of birth and death.

Other Formulations of *Bhang* (Cannabis sativa)[61]

1. *Vatankura* and *Bhang* powder in equal parts, administered with honey, sugar and ghee — renders one influential across all realms *(sarvaloka-vashakara)*.
2. *Apamarga* powder and *Bhang* powder, taken with cow's *ghee* — promotes longevity and immortality.
3. A compound of *Triphala*, sugar, *Bhang*, *Chitraka*, *Trivrit*, *Trikatu*, *Vasa*, *Durva*, *Bhringaraja*, *Maricha*, *Yashtimadhu*, *Jiraka*, *SaindhavaLavana*, Camphor, *Kachura* — all in equal parts, combined with an equal quantity of *Bhang* powder and consumed with the trinity of sweeteners (honey, jaggery, sugar) — effective in treating circular dermatoses *(mandala kushtha)*.
4. *Ashwagandha*, *Vacha* and *Trikatu* powders in equal parts, blended with an equal portion of *Bhang* powder and taken with honey for three years — leads to divine-like vitality and cognition.
5. *Bhang* powder (1 part) + purified *Hartala* (1/16 part) — beneficial in gynecological disorders *(pradara)* and inflammatory conditions *(shotha)*.
6. *Bhang* powder (1 part) + purified *Manashila* (1/16 part) — alleviates pruritus *(kandu)*.
7. *Dhataki* flowers, nutmeg powder and dry ginger (1 part each) combined with *Bhang* powder (3 parts), cooked in cow's milk with half its volume of water and consumed with the trinity of sweeteners — enhances semen quality, longevity, and strength.
8. *Dhataki* flowers, nutmeg and dry ginger powders (1 part each) with *Bhang* powder (3 parts), mixed with either *Ajmoda* or turmeric powder, cooked in milk and consumed with the trinity of sweeteners — treats eczema *(pama)* and scaly skin disorders *(kitibha)*.
9. In *Shatadhauta Ghrita*, incorporate equal parts of *Nagakesara*, *Kapikacchu*, clove powder, cardamom, *Aguru*, camphor, white sandalwood, musk, *Kankola* powder and saffron, along with an equal quantity of *Bhang* seedpowder. After thorough trituration in cow's milk, form tablets and consume with betel leaf — cleanses the oral cavity and is beneficial in oral pathologies.
10. Equal parts of *Mandukaparni*, Vacha and *Bhang* powders — enhances vocal clarity and intellect.
11. A blend of *Trisugandhi(Cinnamomum zeylanicum, Elettaria cardamomum, Cinnamomum tamala)*, *Triphala* and *Trikatu* in equal parts, combined with an equal quantity of *Bhang* powder and taken with honey and ghee — acts as a rejuvenative, digestive stimulant, and is beneficial in diabetes *(prameha)* and respiratory disorders *(shwasa)*.

Beyond these therapeutic yogas, *Anandakanda* elaborates on a diverse array of compound formulations featuring *Bhang*, each tailored for specific physiological, neurological, or rejuvenative purposes. These include: Panchavaṇa Churṇa, Triphaladi Churṇa, Satavariyadi Churṇa, Markatbijadi Paka,Salmaliyadi Leha, Haṣṭikandadi Yoga, Muṇḍyadi Churṇa, Sveta Palasadi Yoga, Vijayabijadi Modaka, Vyanjaniyogratha, Sandhara Yoga, Varahi Yoga, Vijayadi Taila etc.[62]

Mentioned in *Rasa Tarangini*[63]

1. For Insomnia (Sleep Induction): Fresh or dried cannabis leaves are ground with goat's milk in a mortar and applied as a paste to the soles of the feet. This induces sleep quickly.

2. For Severe Pain in Haemorrhoids (*Arsa*): Cannabis leaves are ground with water on a stone slab (*sil*) and applied warm as a poultice to the anal region. This alleviates intense pain.

3. For Spasmodic Asthma and Infectious Cough (*Akṣepayukta Tamaka Svasa, Sankramaka Kasa*): Smoking cannabis provides relief in these respiratory conditions.

Therapeutic Properties of *Bhang* as per *Rasa Tarangini*[64]

1. Digestive and Sexual Health

- Stimulates appetite.
- Effective in treating *dhvajabhanga* (erectile dysfunction).
- Alleviates *svapna prameha* (night-time seminal discharge).
- Enhances seminal retention capacity (*virya sthambhana*).
- Acts as a sleep inducer and aphrodisiac.

2. Neurological and Mental Disorders

- Relieves excessive delirium (*pralapa*).
- Beneficial in *dhanustambha* (tetanus-like rigidity).
- Treats *unmada* (psychosis or insanity).
- Alleviates pain in *vṛkkasotha* (nephritis).
- Improves memory in cases of mental weakness and forgetfulness.
- In very small doses, it helps restore mental clarity.

3. Abdominal and Gastrointestinal Conditions

- Relieves intestinal colic (*antrasula*) and renal colic (*vṛkkasula*).
- Alleviates pain due to *pittasotha* (inflammatory conditions).
- Strengthens the stomach.
- Treats *atisara* (diarrhea) caused by indigestion.
- Useful in *ajirṇa* (dyspepsia), loss of appetite and food intolerance.

4. Urinary and Reproductive Health

- Increases urine flow (*mutra pravṛtti*).
- Stops bleeding in urine (*rakta mutra*).
- Beneficial in excessive menstrual bleeding, *rakta pradara*, and bleeding due to miscarriage or abortion.
- Relieves headache during menopause in women.

5. Respiratory Disorders

- Relieves *akṣepayukta tamaka svasa* (spasmodic asthma with convulsions).
- Effective in *sankramaka kasa* (infectious cough), especially whooping cough.
- Alleviates cough in *rajayakṣma* (pulmonary tuberculosis).
- Treats convulsions in the bladder region (*basti akshepa*).

6. Vascular and Sensory Effects

- Causes local vasoconstriction when used internally or externally.
- Enhances hearing and vision (auditory and visual acuity).

- Treats *kancha roga* (early cataract) associated with *ardhavabhedaka* (migraine).
- Alleviates *bhaskara roga* (possibly photophobia or sun-related disorder) and *timira roga* (early-stage eye disorders like night blindness).

7. General Wellness

- In healthy individuals, its use leads to a peculiar, blissful sleep.
- Relieves pain in *arsa* (haemorrhoids).
- Reduces fever (*jvara*).
- Quickly alleviates epidemic convulsive pain due to *naḍi daurbalya* (nervous weakness).

Discussion

The understanding of *Bhang* (Cannabis sativa L.) becomes richer when Ayurveda and modern science are viewed together rather than as separate worlds. One interesting point of convergence is leaf morphology. Classical Ayurvedic texts describe the characteristic multi-lobed leaves of *Bhang*[65-69] and modern botany also identifies Cannabis by its familiar 5, 7 or 11 serrated leaflets.[70-72]This shared recognition shows that ancient scholars relied on sharp empirical observation—long before modern taxonomy was formalized.

When we examine *Bhang* through the Ayurvedic lens of *rasa, guna, virya, vipaka,* and *karma*, a clear resonance with modern pharmacology begins to appear. The *tikta* and *kashaya* tastes relate to the presence of flavonoids, tannins and bitter phytochemicals.[73] The *laghu* and *ruksha* qualities reflect actions on metabolism and digestive stimulation.[74]*Ushnavirya* explains many stimulant, circulatory and metabolic effects described in both Ayurveda and modern research.[75]. Ayurvedic *karmas* such as *vedanasthapana, nidrajanana, krimighna* and *deepana–pachana* find strong parallels in pharmacological actions of cannabinoids, terpenes and other bioactive molecules.[76,77] This overlap suggests that Ayurvedic parameters function much like early forms of pharmacodynamics and pharmacokinetics.

A particularly fascinating area for future exploration is *VardhanaVidhi*, described in the classical texts of *Rasashastra.*[78,79] This method, which uses *Parada* (mercury) and other *rasadravyas* during cultivation to potentiate plant strength, shows striking similarity to modern concepts such as grafting, metabolic engineering and targeted phytochemical enhancement.[80-82] Just as modern scientists work to increase active constituents, antioxidant capacity or antimicrobial properties through biotechnological and horticultural techniques[81], Ayurvedic alchemists attempted similar potentiation through *rasa*-based methods. Scientific study of *VardhanaVidhi* could open a new interdisciplinary field connecting *Rasashastra* with plant biotechnology.

Equally significant is the Ayurvedic emphasis on *Shodhana*, especially for potent herbs like *Bhang*. Classical purification methods—washing, grinding, heating and processing with herbal media—reduce unwanted components and modify pharmacological behaviour.[83] Modern purification approaches, including extraction, standardization and cannabinoid ratio modulation, serve similar purposes.[84,85] Thus, *Shodhana* is not merely ritualistic; it functions as an early pharmaceutical purification technique designed to improve safety and therapeutic consistency.

Looking ahead, the potential of *Bhang* is far from fully realized. Its complex phytochemistry combined with rich traditional knowledge makes it a promising candidate in neuroprotection, pain management, integrative oncology, psychopharmacology and personalized herbal formulations.[86-88] Ayurveda offers unique avenues such as *rasa-aushadhi*-mediated potentiation[80], nano-herbal delivery approaches and refined extraction protocols that could enhance therapeutic value. Collaboration between Ayurveda,

pharmacognosy, phytochemistry, molecular biology and clinical sciences may help transform *Bhang* from a controversial plant into a precisely understood medicinal resource.

Yet, beyond purification and dosage, the decisive factor remains the user's intention—whether to seek healing or indulgence. Whatever *Shodhana* or purification we perform, it is ultimately the orientation of the mind that determines whether *Bhang* serves as medicine or becomes a substance of abuse.

Conclusion

Vijaya, extensively documented in classical Ayurvedic texts such as *Anandakanda* and the *Nighantus*, is recognized as a potent *tridoshic* herb with *rasayana* properties. Its therapeutic applications span neurological, dermatological, gastrointestinal, respiratory and reproductive domains. Ayurveda's emphasis on purification, dosage and formulation reflects a sophisticated approach to harnessing its medicinal benefits while minimizing psychoactive risks. In today's context, *Bhang* offers rich potential for integrative research, particularly in phytochemistry, drug development and personalized medicine. Systematic compilation and scientific validation of its traditional uses—especially those outlined in *Anandakanda*—could significantly advance evidence-based herbal therapeutics and global healthcare innovation.

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