



Exploring the Therapeutic Potential of Panchatikta Churna: An Ayurvedic Formulation

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Abstract

Panchatikta Churna is a traditional Ayurvedic formulation that has gained significant attention due to its therapeutic properties and versatile applications in managing various health conditions. Composed of five bitter herbs, namely Bhunimba, Patola, Rasna, Nimba, and saptaparna, Panchatikta Churna holds a rich historical background and has been used for centuries in Ayurvedic medicine. This article aims to explore Panchatikta Churna's composition, preparation, and multifaceted therapeutic potential. The bitter taste of the herbs in this formulation indicates its ability to balance the excess pitta dosha, making it particularly suitable for conditions characterized by inflammation and heat. Several studies have demonstrated the efficacy of Panchatikta Churna in various health disorders, including skin diseases, rheumatoid arthritis, digestive disorders, and immune system imbalances. Its anti-inflammatory, antimicrobial, and immunomodulatory properties have been attributed to the active compounds in the herbs, such as Nimbin, quercetin, and berberine.

Moreover, Panchatikta Churna's role as a potent detoxifying agent, capable of removing accumulated toxins from the body, is also explored. The formulation aids in purifying the blood, improving liver function, and enhancing overall well-being. Additionally, it supports the body's natural cleansing processes, promoting healthy metabolism and optimal functioning of various organ systems.

Keywords: Panchatikta Churna, Ayurvedic formulation, Bitter herbs, Therapeutic potential, Pitta dosha

Introduction

Herbal drugs have been an integral part of traditional systems of medicine, showcasing the triumph of widespread therapeutic diversity. Throughout history, plants have been utilized for their medicinal properties due to their accessibility, immediate personal need, and rich traditional or conceptual foundation¹. Ayurveda, a holistic system of medicine, emphasizes the integration of mind, body, and spirit in the pursuit of health and disease management. It promotes the use of herbal compounds, specialized diets, and unique health practices,

making it increasingly significant in addressing various ailments and contributing to the well-being of populations worldwide.

One unique Ayurvedic formulation gaining recognition for its therapeutic potential is Panchatikta Churna (PTKC). Panchatikta Churna is a polyherbal medicine composed of several medicinal plants, including the stem of Rasna (*Pluchea lanceolata*), Nimba (*Azadirachta indica*), Patola (*Tricosanthes dioica* Roxb.), Saptaparna (*Alstonia scholaris*), and Bhunimba (*Andrographis paniculata*). These herbs are carefully selected and combined to create a powerful synergistic blend with multifaceted medicinal properties.

Panchatikta Churna holds promise in treating various diseases, harnessing the collective potency of its constituent herbs. Each herb contributes unique bioactive compounds that exhibit anti-inflammatory, antimicrobial, and immunomodulatory effects. Panchatikta Churna aims to restore balance and promote healing within the body by addressing these underlying mechanisms.

The scientific investigation of Panchatikta Churna and its therapeutic applications is still evolving. While traditional knowledge and historical usage provide a strong foundation, further research is needed to validate its safety, efficacy, and potential interactions with other medications. As the field of Ayurveda gains recognition in modern medicine, the significance of Panchatikta Churna as a valuable herbal formulation warrants exploration and investigation.

Mentions in ayurveda²

Thirty-seven categories of medications are categorized in the Sushruta Samhita based on their effects and intended medical applications. Panchatikta is the plural of Tikta, which is bitter. In the Sushruta Samhita, Panchatikta Mishraka Gana is first stated. These five medications can be utilized as a Lepa, Dhupan, Snana, Churna, Kwath, Hima, Ghrita, etc., when taken internally and topically.

There are three types of Panchatikta mentioned in ayurveda. All three groups have different drugs in it. Description is as under:

1. Panchatikta (First) -

निम्बामृतावृषपटोलनिदिग्धिकानाम् शस्तो गणोऽयमुदितः खलु पञ्चतिक्तः ।

(प्रि.नि. हरी./ १८३)

- Nimba - *Azadirachta indica* (Meliaceae)
- Guduchi - *Tinospora cordifolia* (Menispermaceae)
- Vasa - *Adhatoda vasica* (Acanthaceae)
- Patol - *Trichosanthes dioica* (Cucurbitaceae)
- Kantkari - *Solanum vergiatum* (Solanaceae)

2. Panchatikta (Second) -

पञ्चतिक्तोऽमृतावासातिक्ताभूनिम्बनिम्बयुक् ।

(प्रि.नि.)

- Guduchi - *Tinospora cordifolia* (Menispermaceae)
- Vasa - *Adhatoda vasica* (Acanthaceae)
- Kutaki - *Picrorhiza kurroa* (Scrophulariaceae)
- Bhunimba - *Andrographis paniculata* (Acanthaceae)
- Nimba - *Azadirachta indica* (Mellaceae)

3. Panchatikta (Third) -

पटोलनिम्बभूनिम्बरास्नासप्तच्छदात्मकम् ॥

(प्रि.नि. हरी./ १८५)

- Patol - *Trichosanthes dioica* (Cucurbitaceae)
- Nimba - *Azadirachta indica* (Mellaceae)
- Bhunimba - *Andrographis paniculata* (Acanthaceae)
- Rasna - *Pluchea lanceolata* (Astraceae)
- Saptaparna - *Alstonia scholaris* (Apocynaceae)

In this article only third Panchatikta is briefly described.

Therapeutic application³

Bahya Prayoga (external uses)

Sr. No.	Disease	Application
1.	Sthoulya (Obesity)	Udhagarshana (dry powder massage)
2.	Dusta Vrana (Infected Wound)	Dusking powder
3.	Kita Nashak (Mosquito repellent)	Spray form
4.	Kaphaj Kandu (Wet Eczema)	Dusking powder

Amayika Prayoga (Internal uses)

Sr. No.	Disease	Given with
1.	Madhumeha (Diabetes)	Devdarvyadiarishta Chandraprabha Vati
2.	Sthoulya (Obesity)	Navaka Guggulu Amritadi Guggulu Tryushanadi Louha
3.	Kushtha (Skin diseases)	Panchanimbadi Choorna

		Arogyavardhini Rasa Khadirarishtha
4.	Aruchi (Anorexia)	Lashunadi Vati Sitopaladi Churna Lavana Bhaskara Choorna
5.	Jwara (Fever)	Jayamagal Rasa Mahamrityunjaya Rasa Tribhuvana Kirti Rasa
6.	Kasa (Cough)	Yavanishadava Sitopaladi Choorna Talisadi Choorna
7.	Shwasa (Bronchial asthma)	Shwasa Kuthara Rasa Shwasakasachintamani Rasa Talisadi Choorna Kanakasava
8.	Krimi (Worms)	Krumimudhgara Vidangarishta Krimikuthara Rasa
9.	Ajeerna (Indigestion)	Lashunadi Vati Kupiluhingwadi Vati
10.	Urakshat (Chronic bronchitis)	Vrinapahari Rasa Mrityunjaya Rasa Talisadi Choorna
11.	Parshvashool (Pneumonia)	Sheetamshu Rasa Talisadi Choorna Tribhuvan Kirthi Rasa
12.	Shishu Koshta Gata Krimi (Worm infestation in children)	Krimikuthara Rasa Araghvardha Kapila Vati Vidangarishta
13.	Vicharchika (Scabies)	Gandhaka Rasayana Gandhak Druti Gandhaka Malahara externally
14.	Kandu (Eczyma)	Mahamanjishtadi Kashaya Arogyavardhini Vati Rasamanikya Mahamarichyadi Taila Somaraji Taila (external application)

15.	Furunculosis	Arogyavardhini Vati Mahatiktaka Kashaya
16.	Sheetapitta (Urticaria)	Laghu Sootha Shekhara Vati Sarivadyasava
17.	Paronychia	Gandhaka Rasayana Karpooradi Malahara externally
18.	Dadru (Ringworm)	Gandhaka Rasayana Mahatiktaka Kashaya internally Nayapamaradi Taila externally
19.	Pratishyaya (Allergic rhinitis)	Naradiya Laxmivilasa Rasa
20.	Peenasa (Sinusitis)	Mrityunjaya Rasa Haridra Khanda Mahalaxmi Vilasa Rasa
21.	Kshavathu (sneezing)	Tribhuvan Kirthi Rasa
22.	Peripheral vascular disease	Mahamanjishtadi Kashaya Shiva Gutika
23.	Siragata Granthi (Deep vein thrombosis)	Trunapanchmool Paravatashakruta Shilajatwadi Lowha
24.	Pithajshotha (Cellulitis)	Mahamanjishtadi Kashaya Laghu Sootha Shekhara Vati
25.	Dusta Vrana (Chronic nonhealing ulcer)	Chandraprabha Vati Asanadi Kashaya and Pravala Panchamrita Rasa.
26.	Kitibha (Psoriasis)	Strikutaja Taila externally Dinamallika Taila
27.	Sheetapitta (Urticaria)	Laghu Sootha Shekhara Vati Haridra Khanda

Composition of Panchatikta churna⁴

Sr. No.	Name of Drug	Botanical Name	Part used	Quantity
1.	Rasna	Pluchea lanceolata	Leaf	1 part
2.	Nimba	Azhadirachta indica A. Juss.	Bark	1 part
3.	Patola	Tricosanthes dioica Roxb.	Leaf	1 part
4.	Saptaparna	Alstonia scholaris	Bark	1 part

5.	Bhunimba	Andrographis paniculata Nees.	Whole plant	1 part
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Properties and action according to Ayurveda (Ayurvedic Pharmacopeia of India, Part-1, 2004)

Sr. No.	Drug	Rasa (Taste)	Guna (Quality)	Virya (Potency)	Vipaka (Post-Digestive Effect)	Karma (Action)
1.	Rasna	Tikta (Bitter)	Guru (Heavy)	Ushna (Hot)	Katu (Pungent)	Aampachana (helps in digestion), Jwarahara (Antipyretic), Rasayana (Delays the process of aging)
2.	Nimba	Tikta (Bitter)	Laghu (Light), Ruksha (Dry)	Ushna (Hot)	Katu (Pungent)	Krimighna (Anthelmintic), Kandughna (Relieves itching), Raktashodhaka (Blood purifier)
3.	Patola	Tikta (Bitter), Katu (Pungent)	Laghu (Light), Ruksha (Dry)	Ushna (Hot)	Katu (Pungent)	Deepana (improves digestion), Varnya (good for skin), Rochana (useful in anorexia), Vrushya (natural aphrodisiac), Kandughna (useful in itching).

4.	Saptaparn a	Tikta (Bitter), Kashaya (Astringe nt)	Laghu (Light), Snigdha (Unctous)	Ushna (Hot)	Katu (Pungent)	Anulomana, Deepana (Improves digestion), Jvaraghna (Antipyretic), Kushthaghna, Raktashodhaka, Tridoshaghna
5.	Bhunimba	Tikta (Bitter)	Laghu (Light), Ruksha (Dry)	Ushna (Hot)	Katu (Pungent)	Jvaraghna (Antipyretic), Kandughna (Relieves itching), Krimighna (Anthelmintic)

Description of all Single Drugs

1. RASNA (*Pluchea lanceolata*)

Botanical Description^{5,6,7,8}

Rasna, scientifically known as *Pluchea lanceolata*, belongs to family Asteraceae. It is a perennial herb native to tropical and subtropical regions of Asia, including India, Sri Lanka, and Bangladesh. Rasna is commonly found in moist habitats such as marshes, wetlands, and riverbanks.

Morphology:

Height: Rasna typically grows up to 1-2 meters in height.

Stem: The stem of Rasna is erect, branched, and woody at the base.

Leaves: The leaves are simple, opposite, lanceolate (lance-shaped), and approximately 5-15 centimeters long. They have serrated edges and a smooth surface. The leaves are green in color and emit a characteristic odor when crushed.

Flowers: Rasna produces small, tubular, pale pink to lavender flowers arranged in dense, rounded clusters at the end of branches. The flowers are bisexual and have both male and female reproductive organs.

Fruits: After pollination, Rasna develops small, achene-type fruits with fine hairs attached to aid in wind dispersal.

Medicinal and Traditional Uses:

Rasna has a long history of traditional medicinal use in Ayurveda, the ancient Indian system of medicine. It is known for its anti-inflammatory, analgesic, and anti-arthritic properties.

The leaves and roots of Rasna are used in various herbal preparations and decoctions to treat rheumatism, arthritis, gout, and other joint-related ailments.

Rasna is also used in Ayurvedic formulations as a muscle relaxant, diuretic, and febrifuge (to reduce fever).

Additionally, as a general tonic, Rasna has been traditionally used to treat respiratory disorders, digestive issues, and skin diseases.



Fig. 1(a) Rasna Plant



Fig. 1(b) Rasna leaf

2. NIMBA (*Azadirachta indica*)

Botanical Description^{9,10,11}

Nimba (*Azadirachta indica*), known as Neem, is a versatile and highly valued medicinal plant in Ayurveda. It belongs to the family Meliaceae and is native to the Indian subcontinent. Here is a botanical description of *Azadirachta indica*:

Morphology:

Nimba is a medium to large-sized evergreen tree that can reach a height of up to 20-25 meters. It has a dense, rounded crown and a straight trunk with a grayish-brown bark that is deeply furrowed.

Leaves:

The leaves of Nimba are pinnate, meaning they are composed of multiple leaflets arranged on either side of a central axis. Each leaf consists of 8-15 leaflets that are lanceolate or ovate, with serrated margins. The leaflets are glossy, dark green and are arranged in an alternate pattern along the rachis.

Flowers:

Nimba produces small, fragrant, white to pale-yellow flowers grouped in axillary or terminal panicles. The flowers have a tubular structure with five petals and a prominent central stamen. They have a strong, sweet fragrance and bloom from February to May.

Fruits:

Following successful pollination, Nimba bears oval or ellipsoid-shaped fruits that are green when young and turn yellow as they ripen. The fruit is a drupe, about 1-2 centimeters long, with a fleshy outer layer and a hard seed inside. The pulp of the fruit is yellow and contains a bitter-tasting source.

Bark:

The bark of Nimba is grayish-brown and possesses a rough texture with vertical fissures. The inner bark is yellowish and bitter.

Roots:

Nimba has a robust taproot system that extends deep into the ground, providing stability to the tree.



Fig. 2(a) Nimba tree



Fig. 2(b) Nimba bark

3. Patola (*Tricosanthes dioica* Roxb)

Botanical Description^{12,13}

Tricosanthes dioica Roxb, commonly known as Patola or Pointed Gourd, is a vine belonging to the Cucurbitaceae family. It is native to the Indian subcontinent and is widely cultivated for its edible fruits and tender shoots. Here is a botanical description of Patola:

Plant Morphology:

Habit: Patola is a perennial vine growing up to 3-5 meters long. It has slender, cylindrical, and branched stems.

Leaves: The leaves of Patola are simple, alternate, and palmately lobed with 5-7 lobes. They have long petioles and are approximately 5-15 cm in diameter.

Flowers: The flowers are unisexual and appear in axillary racemes or clusters. The male flowers are more prominent and borne on long pedicels, while the female flowers are smaller and stalkless. The flowers are usually white or yellowish-white in color.

Fruits: The fruits of Patola are elongated, cylindrical, and pointed at both ends. They are green when young and turn yellow or orange when ripe. The fruit is about 8-12 cm long and contains numerous seeds.

Roots: The roots of Patola are fibrous and spread extensively to anchor the vine.

Distribution and Cultivation:

Patola is native to the Indian subcontinent, including India, Pakistan, Bangladesh, and Sri Lanka.

It is widely cultivated in these regions, Southeast Asia, and parts of China.

The vine prefers a warm and humid climate and can be grown in various soil types.

Uses and Benefits:

Culinary: Patola's fruits and tender shoots are used as a vegetable in various cuisines. They are cooked and consumed in curries, stir-fries, and soups.

Medicinal: Patola has been used in traditional medicine for its various therapeutic properties. It is believed to have diuretic, laxative, and anti-inflammatory effects.

Nutritional Value: Patola is a good source of dietary fiber, vitamins (A, C, and E), minerals (calcium, iron, and potassium), and antioxidants.



Fig. 3(a) patola plant



Fig. 3(b) patola dried plant

4. SAPTAPARNA (*Alstonia scholaris*)

Botanical Description^{14,15,16}

Alstonia scholaris, commonly known as Saptaparna or Devil's Tree, is a large evergreen tree belonging to the family Apocynaceae. Native to the Indian subcontinent, including India, Nepal, Sri Lanka, and Myanmar, it can also be found in other parts of Southeast Asia. Saptaparna is highly valued for its medicinal properties and is often used in traditional Ayurvedic and Unani medicine systems.

Morphology:

Size and Form: Saptaparna is a tall tree that can reach heights of up to 30 meters. It has a straight trunk with a diameter of about 1 meter. The crown is broad and spreading, forming a dense, rounded shape.

Bark: The bark of Saptaparna is smooth, grayish-white, and emits a bitter, milky latex when wounded. As the tree ages, the bark becomes rough and develops longitudinal fissures.

Leaves: The leaves are simple, opposite, and exstipulate. They are dark green, glossy, and leathery in texture. Each leaf is elliptical or lanceolate, measuring about 10-20 centimeters in length and 2-5 centimeters in width. The midrib is prominent, and the veins are parallel and closely spaced.

Flowers: The flowers of Saptaparna are small, white, and fragrant. They are arranged in terminal or axillary corymbose clusters. Each flower has a tubular corolla with five petals and a five-lobed calyx. The stamens are fused and form a central column.

Fruits: The fruits are slender, cylindrical follicles that are green when young and turn brown as they mature. They are about 15-30 centimeters long and contain numerous winged seeds.

Habitat and Distribution:

Saptaparna is commonly found in moist deciduous forests, evergreen forests, and along riverbanks. It prefers well-drained soils and can tolerate a wide range of soil types.

It is native to the Indian subcontinent, including India, Nepal, Sri Lanka, and Myanmar. It is also cultivated in other parts of Southeast Asia, such as Thailand, Indonesia, and Malaysia.

Medicinal Uses:

Various parts of Saptaparna, including the bark, leaves, and roots, are used in traditional medicine. It is believed to possess antimicrobial, anti-inflammatory, antimalarial, and antidiabetic properties.

The bark treats fever, dysentery, diarrhea, and skin diseases. It is also used as a bitter tonic and a remedy for respiratory ailments.

The leaves are used to treat asthma, bronchitis, and snakebites. They are also known for their anti-inflammatory and analgesic properties.

The latex from the bark is used externally to treat skin disorders like eczema, scabies, and itching.



Fig. 4(a) Saptaparna tree



Fig. 4(b) Saptaparna dried bark

5. BHUNIMBA (*Andrographis paniculata*)

Botanical Description^{17,18,19,20}

Bhunimba (*Andrographis paniculata*) is a medicinal plant highly valued in Ayurveda for its therapeutic properties. It belongs to the family Acanthaceae and is commonly known as the King of Bitters. Here is a botanical description of *Andrographis paniculata*:

Morphology:

Bhunimba is a small annual herb that grows up to a height of 30-110 centimeters. It has an erect and slender stem with multiple branches. The plant has a slightly woody base and becomes herbaceous towards the top.

Leaves:

The leaves of Bhunimba are simple, opposite, and lanceolate in shape. They have a smooth texture, dark green color, and distinct veins. The leaves are arranged in pairs along the stem, opposite each other. The leaf margins are serrated.

Flowers:

Bhunimba produces small, tubular, whitish-green flowers with a prominent bilabiate corolla. The flowers are arranged in dense axillary racemes. Each flower consists of a short tube with four or five lobes. The plant typically blooms during the rainy season.

Fruits:

Following successful pollination, Bhunimba forms small, slender, and capsule-like fruits. The fruits are elongated and cylindrical and contain numerous tiny seeds. When mature, the fruits split open to release the seeds.

Roots:

The roots of Bhunimba are shallow and fibrous. They spread extensively in the soil, providing stability to the plant.

Medicinal Properties:

Bhunimba is known for its bitter taste and possesses various medicinal properties. It contains bioactive compounds such as andrographolides that contribute to its therapeutic effects, including immune-stimulating, anti-inflammatory, and hepatoprotective properties.



Fig. 5(a) Bhunimba plant



Fig. 5(b) Bhunimba leaves

Panchtikta Formulation²¹

1. Panchtikta Ghrita
2. Panchtikta Ghrita Guggula
3. Panchtikta Kashaya
4. Panchtikta Ksheer Basti
5. Panchtikta Guggula etc.

Discussion

Panchatikta Churna, a combination of Nimba, Bhunimba, Rasna, Patol, and Saptaparna, brings together the individual benefits of these powerful herbs. This herbal formulation showcases a synergistic effect that can address various health conditions. From supporting liver function and boosting the immune system to alleviating joint pain and promoting wound healing, Panchatikta Churna holds promising therapeutic potential. However, further research and clinical studies are warranted to validate its efficacy and safety in different applications. As always, it is advisable to consult with a qualified healthcare practitioner before incorporating any herbal remedy into one's healthcare routine.

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