REVIEW ARTICLE

THE THERAPEUTIC POTENTIAL OF TEN SACRED PLANTS (DASHAPUSHPA) OF KERALA STATE OF SOUTHERN INDIA

ARUN RAJ GR,1 SHAILAJA U,2 RAO PRASANNA N,3 AJAYAN S4

1Postgraduate Scholar; 2Professor and Head, Department of Kaumarabhritya; 3Professor and Principal, Department of Shalya Tantra, Sri Dharmasthala Manjunatheshwara College of Ayurveda & Hospital, BM Road, Thanniruhallia, Hassan-573 201 (India); 4Reader, Department of Dravyaguna, Ayurveda College Coimbatore, RVS campus, Sulur – 641402, Coimbatore (India).

*Corresponding author email address: drdrarunraj26@gmail.com

Access this article online: www.jahm.in

Published by Atreya Ayurveda Publications, Ilkal-587125 (India) All rights reserved.

Received on: 22/04/2013, Revised on: 23/04/2013, Accepted on: 23/04/2013

Abstract:

Kerala state is famous for its medicinal plant wealth and the tradition of indigenous system of therapy, specifically the Ayurveda. Dashapushpam constitute a group of ten potential herbs which are culturally and medicinally significant to the people of Kerala state. They are a group of ten herbs with which the ladies decorate their hairs and dance the thiruvathira kali on the day of thiruvathira in the Malayalam month of dhanu (December to January). Dashapushpam are also been eaten in the form of karkkadaka kanji in karkkidaka masam (during mid-July to mid August) to get better health in the upcoming monsoon season. Also these plants are used in folklore practice in lithiasis, gonorrhea, vomiting, indigestion, skin diseases, intermittent fever, flatulence, urogenital diseases etc. Most of them are scientifically validated for various bioactivities. Still there are lots of possibilities for potential pharmacological activities from these herbs, yet to be explored. This article would throw light on the therapeutic potential of these ten sacred plants aiding to further propagation of these plants.

Keywords: therapeutic potential, dashapushpam, karkkadaka kanji, sacred plants

Introduction:

The Western Ghats region, wherein the Kerala state is situated, is one of the 34 biodiversity hotspots in the whole world. A fairly good collection of plants over 200 taxa used in Ayurveda include dashapushpam, ten sacred plants of Kerala tradition and culture. The state contains more than 4,500 species of flowering plants of which above 1,500 taxa are endemic in nature. Kerala state is famous for its medicinal plant wealth and the tradition of indigenous system of therapy, specifically the Ayurveda. Herbs play a significant role in pharmaceutical industries as natural sources of life saving drugs. Healthcare sectors around the world, more frequently than ever are facing the problems of combating the entry of novel, mutant pathogenic strains of microorganisms and their resistance against synthetic drugs. This calls for the discovery of new compounds with diverse chemical structures and novel mechanisms of action. Natural products either as pure compounds or as standardized plant extracts are the right solutions because of their unmatched display of chemical diversity. Dashapushpam have been consumed in the form of karkkadaka kanji in karkkidaka masam (during mid-July to mid August) to prevent the aggravation of vata dosha in upcoming varsha ritu (monsoon season). These plants have been used in folklore practice for wide variety of conditions such as lithiasis, gonorrhea, vomiting, indigestion, skin diseases, intermittent fever, flatulence, urogenital diseases etc. Most of them are scientifically validated for various bioactivities. But a comprehensive exploratory studies needs to be carried out for evaluating the pharmacological activities of these herbs.

Review of Ten Sacred Plants (Dashapushpa):
Dashapushpam literally means ‘ten flowers’ (‘dasham’ refers to ten and ‘pushpam’ refers to ‘flowers’). In the present context, the word “dashapushpam” refers to ‘ten species of plants’.
Table 1: List of dashapushpa drugs

<table>
<thead>
<tr>
<th>No.</th>
<th>Sanskrit name</th>
<th>Latin name</th>
<th>English name</th>
<th>Family name</th>
<th>Parts used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>bhadra</td>
<td>Aerva lanata (L) A. L. Juss. ex Schultes</td>
<td>Indian water lily</td>
<td>Amaranthaceae</td>
<td>whole plant</td>
</tr>
<tr>
<td>2</td>
<td>viparitha lajjalu</td>
<td>Biophyton sensitivum (L) DC</td>
<td>sensitive wood-sorrel</td>
<td>Oxalidaceae</td>
<td>whole plant</td>
</tr>
<tr>
<td>3</td>
<td>indravalli</td>
<td>Cardiospermum halicacabum Linn.</td>
<td>balloon vine</td>
<td>Menispermacae</td>
<td>shoots, leaves</td>
</tr>
<tr>
<td>4</td>
<td>musali</td>
<td>Curculigo orchioides Gaetn.</td>
<td>black musali</td>
<td>Amaryllidaceae</td>
<td>tuber</td>
</tr>
<tr>
<td>5</td>
<td>murva</td>
<td>Cynodon dactylon (Linn.) Pers.</td>
<td>Bermuda grass</td>
<td>Poaceae</td>
<td>leaves</td>
</tr>
<tr>
<td>6</td>
<td>bhringaraja</td>
<td>Eclipta alba Hassk.</td>
<td>-</td>
<td>Asteraceae</td>
<td>shoots, leaves</td>
</tr>
<tr>
<td>7</td>
<td>akhukarni</td>
<td>Emilia sonchifolia (L.) DC.</td>
<td>Canada Flea-bane</td>
<td>Convolvulaceae</td>
<td>shoots, leaves</td>
</tr>
<tr>
<td>8</td>
<td>harikrantha</td>
<td>Evolvulus alsinoides Linn.</td>
<td>slender dwarf morning glory</td>
<td>Convolvulaceae</td>
<td>whole plant</td>
</tr>
<tr>
<td>9</td>
<td>lakshmana</td>
<td>Ipomoea sepiaria koen. Ex Roxb.</td>
<td>ipomea</td>
<td>Convolvulaceae</td>
<td>whole plant</td>
</tr>
<tr>
<td>10</td>
<td>sahadevi</td>
<td>Vernonio cinerea (Linn.) Less.</td>
<td>ash coloured Fleabane</td>
<td>Asteraceae</td>
<td>whole plant</td>
</tr>
</tbody>
</table>

Table 2: Dashapushpa and their Hindu deity

<table>
<thead>
<tr>
<th>No.</th>
<th>Sanskrit name</th>
<th>Deity in Hindu religion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>bhadra</td>
<td>yama dev</td>
</tr>
<tr>
<td>2</td>
<td>viparitha lajjalu</td>
<td>shree parvathy</td>
</tr>
<tr>
<td>3</td>
<td>indravalli</td>
<td>lord indra</td>
</tr>
<tr>
<td>4</td>
<td>musali</td>
<td>bhumi dev</td>
</tr>
<tr>
<td>5</td>
<td>murva</td>
<td>Sun</td>
</tr>
<tr>
<td>6</td>
<td>bhringaraja</td>
<td>lord shiva</td>
</tr>
<tr>
<td>7</td>
<td>akhukarni</td>
<td>kamadeva</td>
</tr>
<tr>
<td>8</td>
<td>harikrantha</td>
<td>lord Vishnu</td>
</tr>
<tr>
<td>9</td>
<td>lakshmana</td>
<td>shree bhagavathy</td>
</tr>
<tr>
<td>10</td>
<td>sahadevi</td>
<td>brahma</td>
</tr>
</tbody>
</table>

Dashapushpas are culturally and medically significant to the people of Kerala. All are used as ingredients in various ayurvedic formulations. They are considered auspicious in Kerala and each herb is associated with a deity in hindu mythology.

The dashapushpa drugs have been referred in classical ayurvedic texts such as arogya kalpadruma, sarvaroga chikitsaratna, abhidana manjari, kodaseri margam, prayoga samuchayam, chikitsa kauthukam, vaidya manorama and agastyamarmashastra. As per the tradition of Kerala, the women wears dashapushpam garland on the head for it was considered sacred plants. In front of the household shrine, the ten sacred plants of dasapushpamwere displayed in a gleaming brass plate in the Malayalam month of karkkidakam (the monsoon season in Kerala state) in the olden days. It was also prescribed by the rajajaiya (doctors for the king) to the ladies to wear these plants on their head; probably due to the medicinal value imparted by them.

Several studies were undertaken on different members of dasapushpam. In this endeavor, author would throw some light to further popularize these sacred plants as these plants are essential as better remedy for various ailments. Coming to the detailing of these ten plants.

1. *Aerva lanata (L.) A. L. Juss. ex Schultes*[^5]

*Aerva lanata (L.) A. L. Juss. ex Schultes.* belongs to family Amaranthaceae, locally known as ‘bui.’[^70]

**Habit and distribution**[^70]

This is an erect, prostrate undershrub and occurs throughout India as a common weed in fields and waste places. Herb, erect or prostrate with a long tap-root, branched from near the base;
branches many, pubescent or wolly- tomentose, striate. Plant occurs in tropical regions of India ascending to 6000 feet altitude. In addition to Kerala state, the plant is also found in Uttar Pradesh, Andhra Pradesh, Gujarat, Rajasthan, Tamil Nadu and Madhya Pradesh.

**Chemical constituents**

Plant contains biological active canthin-6-one alkaloids such as 10-methoxy-canthin-6-one, 10-hydroxy-canthin-6-one, 10-O-β-D-glucopyranosylxanthin-6-one, 10-hydroxycanthin-6-one (ervine), 10-methoxycanthine-6-one (methylervine), 10-β-D-glucopyranosylxanthin-6-one (ervoside), aervine (10-hydroxycanthin-6-one), methylaervine (10-methoxycanthin-6-one) and aervoside (10-β-D-glucopyranosylxanthin-6-one). *Aerva lanata* is a rich source of flavanoids such as kaempferol, quercetin, isorhamnetin, isorhamnetin 3-O-β-[4-p-coumaroyl-α-rhamnosiyl(1→6) galactoside and flavanone glucoside perisolin, persinosides A and B, 5,4′-hydroxy-3, 6, 7-trimethoxyflavone, 5-hydroxy-3, 6, 7, 4-tetramethoxyflavone, 5-hydroxy 2′, 3,5′, 6, 7-pentamethoxyl flavone, 3,3′,5,7, trihydroxy-4′-methoxy flavone, apigenin 7-O-β-D-glucoside and 7-O-β-D-glucopyranoside.

**Pharmacodynamics**

Rasa: tikta (bitter), kashaya (astringent)
Guna: laghu (light), teekshna (Penetrating)
Virya: usna (hot)
Vipaka:katu (pungent)
Doshakarma: kaphavata shamana (pacifying kapha and vata dosha)

**Therapeutic uses**

The plant is diuretic, used in lithiasis. The root is useful in strangury (slow to be and painful discharge of urine). The roots are used in the treatment of headache. The plant is regarded as a demulcent on the Malabar Coast. It is valued for cough in Ceylon; also as a vermifuge for children. The Meena tribals of the Sawaimadhopur district of Rajasthan give orally the juice of the roots to patients of liver congestion, jaundice, biliousness and dyspepsia. They also give decoction of the whole plant to cure pneumonia, typhoid and other prolonged fevers. It also has anthelmintic action. The roots of plants are used in the treatment of headache. It is also used as demulcent and useful in strangury. It is used in traditional medicine as antidiarrheal, diuretic, and in lithiasis. It is valued in arsenic poisoning. The herb is also used in malaria and skin diseases.

**Pharmacological studies**

The plant is reported as antimicrobial, diuretic and antiurolithiatic, acute renal failure, antiasthmatic, antifertility activity, antihyperglycemic and anti-diabetic, hypolipidemic, hepatoprotective, immuno-modulatory and antitumor, and anti-diarrheal activity.

2. **Biophytum sensitivum** (L.) DC

This herb is known as ‘viparita lajjalu’ in Sanskrit, belonging to Oxalidaceae family.

**Habit and distribution**

It is a very small flowering plant, an annual herb of erect stem, stout or slender, and glabrous. This plant flower is an important flower for the people of Kerala state. The flower is used in Athapoo (special floral formation that adores courtyards and public places) during Onam festival, the festival of Kerala state. It is distributed throughout the hotter parts of India as weeds in moist shady places and all over tropical Africa and Asia to the Philippines.

**Chemical constituents**

The main constituent present is insulin. The other constituents are two biflavones; cupressuflavone and amentoflavone, three flavonoids, luteolin -7-methyl ether, isoorientin
and 3-methoxyluteolin 7-O-glucoside as well as two acids, 4-caffeoylquinic acid were isolated from the aerial parts of *Biophytum sensitivum*.

**Pharmacodynamics**

- **Rasa:** tikta (bitter), kashaya (astringent)
- **Guna:** laghu (light), ruksha (dry)
- **Virya:** sheeta (cold)
- **Vipaka:** katu (pungent)
- **Doshakarma:** kaphapitta shamana (pacifying kapha and pitta dosha)

**Therapeutic uses**

In Ayurveda, this is a tonic, stimulant and in the treatment of stomach ache, diabetes and asthma. It is also used in insomnia, convulsions, cramps, chest-complaints, inflammations and tumours. Decoction is given in bronchial asthma and phthisis. Roots decoction is given in lithiasis. The leaves are diuretic and relieve strangury. The seeds are powdered and applied to wounds. The root in decoction is given in gonorrhea and lithiasis. The crushed whole plant is used in chronic skin troubles. It is eaten to induce sterility in man.

The effect of the leaf extract for the treatment of hyperglycaemic patients was studied on glucose homeostasis in rabbits. The anti-inflammatory activity of aqueous and methanol extracts of aerial parts and roots were studied in the carrageenin-induced rat paw oedema model. All the extracts except the methanol extracts of aerial parts exhibited anti-inflammatory activity.

**Pharmacological studies**

The plant is reported as antioxidant, anti-inflammatory, antidiabetic, anti angiogenic activity, anti cancer, chemo protective, immunomodulatory, radio-protective and wound healing property.

3. *Cardiospermum halicacabum* Linn.

The common names of this plant are Balloon vine and a member of Sapindaceae family.

**Habit and distribution**

Climbing, annual (sometimes perennial) herbs, up to 3 metres long. Stem and branches furrowed. Plant is commonly climbing on bushes and hedges along road-sides, forest-clearings and in dry deciduous forests, also common in cultivated fields. Greatly found throughout the plains of Southern India.

**Pharmacodynamics**

- **Rasa:** tikta (bitter)
- **Guna:** laghu (light), ruksha (dry)
- **Virya:** ushna (hot)
- **Vipaka:** katu (pungent)
- **Doshakarma:** vatakapha shamana (pacifying vata and kapha dosha)

**Therapeutic uses**

The root is considered diaphoretic, diuretic, and aperient. The fried leaves are considered emmenagogue. The leaves and stem are used against common cold and angina. The leaf paste is applied on domestic animals to kill lice and other insects. It is used in the treatment of rheumatism, lumbago, skeletal fractures,
nervous diseases, amenorrhoea, haemorrhoids, and erysipelas, emetic, laxative, rubefacient and stomachic. The herb is used in hair oils for treating dandruff, alopecia and for darkening hair. *C. halicacabum* has been used in the treatment of rheumatism, nervous diseases, stiffness of the limbs and snakebite. Leaves are crushed and made into a tea, which aids itchy skin. Salted leaves are used as a poultice on swellings. Young leaves can be cooked as vegetables. The leaf juice has been used as a treatment for earache as well.\(^\text{26}\)

**Pharmacological studies**\(^\text{86}\)

The plant extracts showed marked insecticidal effects as ovicde and larvicide for *Musca domestica* Linn. and as larvicide for *Philosamia ricini* (Boisd.) Alcoholic extract of the plant showed antischling and antiarthritic activity. In the pharmacological validation of this plant, the toxicological evaluation of *C. halicacabum* revealed that the drug is safe and is not toxic upto 40 g/kg in rats. The plant extract showed significant analgesic and anti-inflammatory activity and sedative effect on CNS. The drug also showed (transient) vasodepressant activity. Seeds have positive anabolic activity and increase body weight by inducing a positive nitrogen balance. The alkaloid fraction from the seeds showed hypotensive activities and cardiac inhibition in anaesthetized dogs; blocked spasmodic effects of acetylcholine, histamine on guinea pig ileum, biphasic action on frog rectus abdominus muscle. The seeds also showed antibacterial activity.

4. **Curculigo orchioides Gaetrn.**\(^\text{28}\)

This plant is known as ‘kali musali’ in Sanskrit belonging to family Amaryllidaceae.\(^\text{76}\)

**Habit and distribution**\(^\text{76}\)

A sub-erect excessively branching and tall with densely crowded whitish cladophylls shrub with stout, terete stem and ascending branchlets. It occurs in the subtropical Himalayas from Kumaon eastwards ascending to 1800 meters, the Hhasia hills, Bengal, Assam, Konkan, the Western Peninsula and Chennai extending South as far as Cape Comorin. In many parts of India, due to it’s over exploitation, kali musali is becoming rare in occurrence.

![Figure 6: Curculigo orchioides](image)

**Chemical constituents**\(^\text{28}\)

A new orcinol; glucoside, orcino-1- beta D-apiofuranosyl beta-D glucopyranoside was isolated. Orcinol glucoside, curculigoside, curculigoside B &C, Syringic acid, 2, 6 dimethoxy benzoic acid. The rhizome contains saponins (curculigosaponin C and F) sapogenins; phenolic glycosides, a triterpene alcohol; a pentacyclic triterpene, an aliphatic compound, hentriacontanol, sitosterol, stigmasterol, cycloartenol and sucrose. A peptide, Curculin C, containing amino acids, has been isolated from the fruit.

**Pharmacodynamics**\(^\text{77}\)

Rasa: madhura (sweet)

Guna: guru (heavy), snigdha (unctuous)

Virya: sheetha (cold)

Vipaka:madhura (sweet)

Doshakarma: vatapitta shamana (pacifying vata and pitta dosha) and kapha vardhaka (increasing kapha dosha)

**Therapeutic uses**\(^\text{37}\)

It is present in several drug formulations used in the treatment of menorrhagia and other gynaecological problems. The root is bitter, appetizer, nervine, adaptogenic, sedative, anticonvulsive, androgenic and anti-inflammatory. It is also used in jaundice, urinary disorders and skin diseases, useful in piles, fatigue, diseases of the blood. The rhizome is used for asthma, diarrhoea, and gonorrhoea, demulcent and diuretic, tonifying kidney and for strengthening muscles and bones. According to Ayurveda, root is heating, aphrodisiac,
appetizer, useful in the treatment of piles, fatigue, blood related disorders. According to Unani system of medicine, root is carminative, tonic, aphrodisiac, antipyretic and useful in bronchitis, ophthalmic, indigestion, vomiting. The powdered rhizomes with milk are taken as a restorative tonic, also for sexual debility.

**Pharmacological studies**

Curculigosaponin C and F promoted proliferation of spleen lymphocytes very significantly; F and G increased the weight of the thymus in *vitro* in mice. Alcoholic extract of the plant exhibited hypoglycaemic property. The plant is reported to possess antioxidant,27 antihyperglycaemic,28 immunostimulant,29 hepatoprotective,30 aphrodisiac31 and estrogenic activities.32

5. **Cynodon dactylon (Linn.) Pers.**78

Cynodon dactylon (Linn.) Pers. belongs to family Poaceae. This herb is known as ‘Durva’ in Sanskrit language which can grow in poor soil. Bermuda grass or dhub grass was considered as a sacred grass by the Hindus, and it is still used for worship in temples.78

**Habit and distribution**78

A large twining herb; extremities soft-tomentose; bark grey, corky and deeply furrowed on old stems. It grows throughout the Southern part of India. It grows in open areas where there are frequent disturbances such as grazing, flooding, and fire.

**Chemical constituents**78

Bermuda grass is reported to contain cynodin, hydrocyanic acid, and triticin. Phenolic phytotoxins - ferulic, syringic, *p*-coumaric, vanillic, *p*-hydroxybenzoic and *O*-hydroxyphenyl acetic acids, are reported from the plant. The leaves contain flavone C glycosides and a flavonoid sulphate.

**Pharmacodynamics**79

Rasa: tikta (bitter), kashaya (astringent)

Guna: guru (heavy), ruksha (dry)

Virya: usna (hot)

Vipaka: usna (hot)

Doshakarma: tridoshshara (pacifying tridosha)

**Therapeutic uses**33

The parts used medicinally are the stems and the leaves. The Ayurvedic Pharmacopoeia of India describes the dried fibrous root in menorrhagia, metrorrhagia and burning micturation. It is also reported to be antiseptic, demulcent, diuretic, and emollient. The grass is a remedy in epitaxis, haematuria, inflammed tumours, whitlows fleshy excrescences, cuts, cystitis, nephritis and in scabies and other skin diseases. Herb is possessing astringent, anticatarrhal, styptic properties. A decoction of the root is used to stop bleeding from piles. Internally it is used in the treatment of chronic diarrhoea and dysentery. The leaf juice has also been used in the treatment of hysteria, epilepsy and insanity. The plant is a folk remedy for headache, haemorrhage, hypertension, measles, snake bite, uro-genital disorders warts and wounds.

**Pharmacological studies**

The over ground parts of Cynodon dactylon (Linn.) Pers. evaluated for in vitro antioxidant activity by DPPH free radical scavenging activity, Nitric oxide radical scavenging activity.34

6. **Eclipta Alba Hassk.**90

It is commonly known as ‘false daisy’ belonging to family Asteraceae. [46]

**Habit and distribution**45

It is an erect or prostrate, much branched, roughly hairy, annual, rooting at the nodes. The stem and branches trigose with appressed hairs on both sides and tapering base. It is found as a
common weed throughout Southern India ascending up to 6000 ft.

Chemical constituents
Main active principles consist of coumestans like wedelolactone, desmethylwedelolactone, furanocoumarins, oleanane & taraxastane glycosides. *Eclipta alba* (L.) contains wide range of active principles which includes coumestans, alkaloids, flavonoids, glycosides, polyacetylenes, triterpenoids. The leaves contain stigmasterol, a-terthienylmethanol, wedelolactone, demethylwedelolactone and demethyl-wedelolactone-7-glucoside. The roots give hentriacontanol and heptacosanol. The roots contain polyacetylene substituted thiophenes. The aerial part is reported to contain a phytosterol, P-amyrin in the n-hexane extract and luteolin-7-glucoside, P-glucoside of phytosterol, a glucoside of a triterpenic acid and wedelolacitone in polar solvent extract. The polypeptides isolated from the plant yield cystine, glutamic acid, phenyl alanine, tyrosine and methionine on hydrolysis. Nicotine and nicotinic acid are reported to occur in this plant.

Pharmacodynamics
Rasa: tikta (bitter), katu (pungent)
Guna: laghu (light), ruksha (dry)
Virya: usna (hot)
Vipaka:katu (pungent)
Doshakarma: kaphavata shamana (pacifying kapha and vata dosha)

Therapeutic uses
It is used as a tonic and diuretic in hepatic and spleen enlargement. It is also used in catarrhal jaundice and for skin diseases. The alcoholic extract of the plant has shown antiviral activity against Ranikhet disease virus. The plant is commonly used in hair oil all over India for healthy black and long hair. The fresh juice of leaves is used for increasing appetite, improving digestion and as a mild bowel regulator. It is commonly used in viral hepatitis to promote bile flow and protect the parenchyma and popularly used to enhance memory and learning. The plant has a reputation as an anti ageing agent in Ayurveda. It is used as a general tonic for debility. Externally it is used for inflammation, minor cuts and burns and the fresh leaf-juice is considered very effective in stopping bleeding.

Pharmacological studies
The water extract of the whole plant exhibited the most potent inhibitory activity against HIV-1 integrase (HIV-1 IN). The plant is reported as anti-hepatotoxic, anti-hyperlipidemic, antioxidant, immuno-modulatory, analgesic and anti-inflammatory, antidiabetic, hair growth and alopecia and anticancer activities.

7. *Emilia Sonchifolia* (L.) DC.
This plant is commonly known as ‘red Pualele,’ ‘cupid’s shaving brush’ belonging to Convolvulaceae family.

Habit and distribution
A glabrous slender herb, 30-40 cm in height. Erect, variously branched. Leaves obovate and flowers purplish in colour. Distributed throughout India, Ceylon, most tropical and subtropical regions. The whole plant is used medicinally.
The therapeutic potential of ten sacred plants

**Chemical constituents**

The aerial part of the plant has been reported to contain alkaloids, flavonoids, and terpenes. The aerial parts contain pyrrolizidine alkaloids, senkirkine and doronine. Presence of similar, β-sitosterol, palmitic and triacontannic acids is also reported in the plant.

**Pharmacodynamics**

Rasa: tikta (bitter), kashaya (astringent), katu (pungent)
Guna: laghu (light), teekshna (penetrating)
Virya: sheeta (cold)
Vipaka: katu (pungent)
Doshakarma: kapha vata shamana (pacifying kapha and vata dosha)

**Therapeutic uses**

The whole plant is used for various ailments. The plant is used as a remedy for dysentery and to enhance intelligence and improve memory. The plant is bitter, acrid, febrifuge, aphrodisiac, anthelmintic, expectorant and useful in bronchitis, brain tonic, an aid in conception, astringent, antisyphilitic and asthma. It is also useful in epilepsy, forgetfulness, falling and greying of hair, intermittent fevers and general debility. Used in nerve affections (epilepsy, insanity, spermatorrhoea), and duodenal ulcers, also for uterine affections uterine bleeding and internal haemorrhages. A decoction of this herb is given as a blood purifier.

**Habit and distribution**

This is a perennial prostrate herb widely distributed in tropical and subtropical regions throughout the world. It grows as a weed in open and grassy places throughout India. It is with a small woody root stock.

**Chemical constituents**

The plant contains alkaloids: betaine, shankha-pushpine and evolvine. Fresh plant contains volatile oil. It also contains a yellow neutral fat, an organic acid and saline substances. An unidentified compound has been isolated.

**Pharmacodynamics**

Rasa: tikta (bitter), katu (pungent)
Guna: laghu (light), ruksha (dry)
Virya: usna (hot)
Vipaka: katu (pungent)
Doshakarma: kapha vata shamana (pacifying kapha and vata dosha)

**Therapeutic uses**

The whole plant is used for various ailments. The plant is used as a remedy for dysentery and to enhance intelligence and improve memory. The plant is bitter, acrid, febrifuge, aphrodisiac, anthelmintic, expectorant and useful in bronchitis, brain tonic, an aid in conception, astringent, antisyphilitic and asthma. It is also useful in epilepsy, forgetfulness, falling and greying of hair, intermittent fevers and general debility. Used in nerve affections (epilepsy, insanity, spermatorrhoea), and duodenal ulcers, also for uterine affections uterine bleeding and internal haemorrhages. A decoction of this herb is given as a blood purifier.
Pharmacological studies

It is reported to show powerful stimulant activity on respiration and blood pressure (possibly analeptic). Aqueous extract of the petal showed antifungal property. The plant is reported as anti bacterial, anti helmintic, anti stress, anti amnesic, anti ulcer and anti catatonic, anti oxidant, gastro protective and immunomodulatory activities.


This plant known as ‘lakshmana’ in Sanskrit language belonging to convolvulaceae family.

Habit and distribution

A slender twining perennial with villous stems and tuberous roots. It is distributed throughout greater part of India.

**Chemical constituents**

Ipomoea resin, the seeds contain non-ergoline type indole alkaloids, ipobscurine A & B, and a serotonin alkaloid Ipobscurines C.\(^{64}\)

**Pharmacodynamics**\(^{83}\)

Rasa: madhura (sweet)
Guna: guru (heavy), snigdha (unctuous)
Virya: sheetha (cold)
Vipaka: madhura (sweet)

Doshakarma: vatapitta shamana (pacifying vata and pitta dosha) and kapha vardhaka (increasing kapha dosha)

**Therapeutic uses**\(^{64}\)

Juice of the plant is used as deobstruent, diuretic, hypotensive, uterine tonic, antidote to arsenic poisoning. The plant is reported to show aphidicidal activity and appeared to be useful as pesticides. Seeds used as cardiac depressant, hypotensive, spasmylytic. Plant is also used in the treatment of sterility in women, urinary retention, constipation, gynaecological disorders.

10. *Vernonia cinerea* (Linn.) Less.\(^{84}\)

This plant is commonly called as ‘ash-coloured fleabane’ belonging to the family Asteraceae.\(^{84}\)

**Habit and distribution**\(^{84}\)

An erect, rarely decumbent, tender or soft herb, a weed; stems slender, 15-17cm., high (6 inch to 3 feet) grooved and ribbed; branches hairy. It is distributed throughout India, as a weed on roadsides and open places. It is one of the commonest Indian weeds.

**Chemical constituents**\(^{65}\)

The chief constituents are the triterpenes. Aerial parts gave luteolin- monobeta- D-glucopyranoside. Whole plant gave triterpene compounds- betaamyrin acetate, lupeol acetate, betaamyrin and lupeol; sterols- beta- sitosterol, stigmasterol and alpha-spinasterol; phenolic resin and potassium chloride. The useful parts include the flower (treatment of conjunctivitis), seeds (used as anthelmintic), root (dropsy), and juice (piles).

**Pharmacodynamics**\(^{85}\)

Rasa: tikta (bitter)
Guna: laghu (light), ruksha (dry)
Virya: ushna (hot)
Vipaka: katu (pungent)

Doshakarma: kaphavata shamana (pacifying kapha and vata dosha)
Therapeutic uses

The whole plant is also considered to promote perspiration in febrile condition. The roots are useful in diarrhoea, cough, inflammations, skin diseases, leprosy, renal and vesical calculi. The leaves are useful in humid herpes, eczema, ring worm, guineaworms, and elephantiasis. The flowers are used in conjunctivitis. The seeds are useful in roundworms, threadworms, cough, flatulence, leucoderma, psoriasis, chronic skin disease. The plant is used as anticancer, febrifuge, diaphoretic (infusion of herb, combined with quinine, is used against malaria). Used as a specific herb for leucorrhoea, dysuria, spasm of bladder, strangury and for haematological disorders, as a blood purifier and styptic, also used in asthma. Seeds used as antiflatulent, antispasmodic; used in dysuria, decoction used for colic. The Ayurvedic Pharmacopoeia of India recommends the plant in intermittent fever, filariasis, pityriasis versicolour (tinea versicolor), blisters, boils, vaginal discharges and in cases of psychosis.

Pharmacological studies

The water soluble fraction of the methanol extract of the defatted dried ground whole plant of Vernonia cinerea showed significant diuretic activity in rats comparable to lasix a known diuretic. The plant is reported as antimicrobial, antioxidant, immunomodulatory, anti inflammatory, analgesic, anti pyretic and cytotoxic activity.

Discussion:

The ten drugs referred to as dashapushpa drugs are both culturally and therapeutically significant especially to the people of Kerala state. Almost all the ten drugs except kali musali and lakshmana possess similar pharmacodynamics. These drugs are with bitter, kashaya (astringent) and katu (pungent), with light, sharp and dry properties and with ushna virya and katu Vipaka. Henceforth, these ten herbs are to be studied and understood like the other group of herbs such as dashamoola, panchamoola and other dashamani explained by acharya charaka. All these drugs are being used traditionally in several ailments as headache, stomach ache, diarrhea, amenorrhrea, rheumatism, antipyretic etc. later on the studies conducted proved the folklore claims on the efficacy of these drugs. The drugs in the dashapushpa group have been extensively studied even for its anticancer effect.

The pharmacological studies done on different dashapushpa drugs proved the antimicrobial, antiparasitic, antidiabetic, antidiarrheal, antioxidant, antiinflammatory, immunomodulatory, antibacterial, antihelminthic, anti stress, antiamnesic, antiulcer, anticatatonic, analgesic, antipyretic, gastroprotective and cytotoxic activity like effects. Henceforth, more extensive research studies should be conducted in this direction.

Conclusion:

The therapeutic potential of these ten sacred plants are unlimited and not explored properly to cure various illness. Research and development must be encouraged for developing new drug molecules from these plants. The detailed investigation of its standardization, pharmacological activity, toxicity and clinical trials may help to develop new drugs for controlling various diseases. The global scenario has shown a great increase in phytomedicine research. So, the drug development from these plants has tremendous scope in the future. Some of the research activities have been carried out on these plants during the past few decades which give sufficient motivation among the scientist community in exploring more information about these sacred plants. A research and development programme should be undertaken on dashapushpam for their potential in economic and therapeutic utilization. Also the cultivation, collection, and further pharmacological exploration of these ten plants are essential.

References:

Arun Raj GR, Shailaja U, Rao Prasanna N, Ajayan S: The therapeutic potential of ten sacred plants

Journal of Ayurveda and Holistic Medicine | July, 2013 | Vol 1 | Issue 3

33


66 Kumar PP, Kuttan G. Vernonia cinerea L. scavenges free radicals and regulates nitric oxide


Source of support: Nil, Conflict of interest: None Declared