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Review on Upavishas of clinical significance

Dr. Varsha Sumedhan¹, Dr. Soumya MC², Dr. Sinimol TP³

^{1,2,3}Research Officer (Ayu), RARILSD, Poojappura, Thiruvananthapuram, Kerala, INDIA.

ABSTRACT

'Visha' (poisonous substance) is that which causes 'Visannatva' (distress) and/ or visada (sadness) in the body. The classification of Visha is based on certain basic criteria like origin, base, properties, potency etc. Some of the Ayurvedic classics and texts in medieval period have classified all the poisons into two categories as Mahavisha and Upavisha based on their toxicity and potency. Upavisha (semi-poisonous drugs) are the group of drugs which were less toxic in nature but produce certain toxic symptoms on consumption or administration. The symptoms produced in the body by *Upavishas* are less toxic, less severe, usually not life threatening and their toxicity can be controlled by therapeutic measures. The paper deals with different types of upavisha mentioned by different acharyas with special emphasis to Rasa Tarangini. Snuhi Ksheeram (Euphorbia nerifolia), Arkaksheeram (Calotropis procera), Dattura beeja (Datura metel), Karaveera (Nerium indicum), Langali (Gloriosa superba), Vijaya (Cannabis sativum), Vishatintuka beeja (Strychnos nuxvomica), Rechakam (Croton tigilium), Bhallatakam (Semicarpus anacardium), Ahiphenam (Papaver somniferum), Gunja (Abrus precatorius) are the upavishas mentioned in Rasa Tarangini. The therapeutic importance of these drugs along with sodhana (purification), dosage, important formulations etc. are dealt in detail.

Key words: Upavisha, Sodhana, Visha.

INTRODUCTION

'Visha' (poisonous substance) is that which causes Visannatva'[1] (distress) and/or visada (sadness) in the body. Thus Visha has been defined as substance which prove destructive to life and which possess Vyavayi (absorbed quickly), Vikasi, Ushna (hot potency), Tikshna (penetrating), Ruksha (dryness), Sukshma (can pass through sukshma srotas), Asukari (acts quickly), Anirdesya rasa (indistinct taste) and Apaki (not properly digested) properties. The drugs

Address for correspondence:

Dr. Varsha Sumedhan

Research Officer (Ayu), RARILSD, Poojappura, Thiruvananthapuram, Kerala, INDIA.

E-mail: varshasumedhan@gmail.com

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which possess these properties are called Visas and those which are considered less toxic in comparison with the Mahavishas^[2] are called Upavishas.

According to mythology Visha (poisonous substances) and Amrutha (ambrosia) arose during the Ksheera Sagara Madhana (churning of milky ocean) suggesting the paradoxical nature of Visha and Amrutha. The concept of poison is broad and etiologically varied. Charaka identified the necessity of complete knowledge of herbs and their utility in therapeutics. Charaka opined that "Even an acute poison can become an excellent drugif it is properly administered".[3] On the other hand, even a drug if not properly administered become an acute poison. A few factors which decided Visha as medicine

- Dosage
- Time of administration
- **Duration of treatment**
- Type of formulation
- Skill of individual physician

Classification

The classification of *Visha* is based on certain basic criteria like origin, base, properties, potency etc. Some of the *Ayurvedic* classics and texts in medieval period have classified all the poisons in to two categories as *Mahavisha* and *Upavisha* based on their toxicity and potency.

Upavisha are the group of drugs which were less toxic in nature but produce certain toxic symptoms on consumption or administration. The symptoms produced in the body by *Upavishas* are less toxic, less severe, usually not life threatening and their toxicity can be controlled by therapeutic measures.

Broadly Vishas are classified as

- Sthavara and Jangama^[4] according to Charaka,
 Susrutha and Rasatharangini
- Krithrima and Akrithrima^[5] in Ashtanga Hridaya

Akrithrima again classified in to Sthavara and Jangama types.

Of these *Sthavara Vishas* are those which belong to minerals or to poisonous herbs group while *Jangama Vishas* are obtained from animals. The *Krithrima Vishas* are formed as a result of undesired compounding of drugs.

Classification as per ancient literature

'Rasarnava' appears to be the first text to mention 'Visha - Upavisha' classification. After Rasarnava, Rasa Ratnakara, Rasendra Choodamani, and Rasaratna Samuchayam have mentioned about five Vishas while other texts like Rasendra Chintamani, Sarngadhara Samhita, Bhava Prakasa and Ayurveda Prakasa have enumerated nine dravyas as Vishas.

Rasa Tarangini (20th C AD) described only Vatsanabha in Visha group considering its medical importance, common availability and frequent use in therapeutics. The other drugs of poisonous nature have been included in Upavisha group by this text. There is a difference of opinion amongst the authors regarding the drugs of 'Upavisha' group. Rasarnavakara mentioned five dravyas in 'Upavisha' group while Rasa Ratna Samuchaya and Rasendra Chintamani

enumerated seven drugs. In later texts like *Ayurveda Prakasha* and *Yogaratnakara* it is raised upto nine, while in Rasatarangini it has gone up to eleven.

Sthavara Visha adishtanaas per Rasatharangini^[6]

There are 10 Sthavara Visha Adishtana namely Kanda (tubers), Sara (heart wood), Niryasa (exudate/resin), Pushpa (flower), Moola(root), Dala (leaf), Twak (bark), Ksheera (milky exudate).

Table 1: Showing *Upavishas* as per different *Acharyas*.

Rasarna va - 5	Rasendra sara samgraha - 7	Rasa ratna samuchay am - 7	Rasatharan gini - 11	Yoga ratnakara m - 7
Snuhi (Euphor bia nerifolia)	Snuhi (Euphorbi a nerifolia)	Neelaka	Snuhiksheer am (Euphorbia nerifolia)	Arkaksheer am (Calotropis procera)
Arka (Calotro pis procera)	Arka (Calotropi s procera)	Arka (Calotropis procera)	Arkaksheera m (Calotropis procera)	Snuhi ksheeram (Euphorbia nerifolia)
Unmath a (Datura metel)	Dattura (Datura metel)	Kanaka (Datura metel)	Dattura beeja (Datura metel)	Langali (Gloriosa superba)
Karaveer a (Nerium indicum)	Karaveera (Nerium indicum)	Karaveera (Nerium indicum)	Karaveera (Nerium indicum)	Karaveerak am (Nerium indicum)
Langali (Glorios a superba)	Langali (Gloriosa superba)	Langali (Gloriosa superba)	Langali (Gloriosa superba)	Gunja (Abrus precatorius)
	Gunja (Abrus precatoriu s)	Jaya (Cannabis sativum)	Vijaya (Cannabis sativum)	Ahiphenam (Papaver somniferu m)
	Ahiphena (Papaver	Vishamush ti	Vishatintuk a Beeja	Dattura (Datura

Somniferu m)	(Strychnos Nuxvomic a)	(Strychnos Nuxvomica)	Metel)
		Rechakam (Croton tiglium)	
		Bhallataka m (Semicarpus anacardium	
		Ahiphenam (Papaver somniferum)	
		Gunja (Abrus precatorius)	

Pharmacological properties of Visha

'Charaka' in the 23rd chapter of *Chikitsa Sthana* has mentioned following 10 properties of *Vishas*. 'Susrutha' in *Kalpasthana* also mentions 10 properties of *Visha*. Susrutha mentions Avipaki in place of *Anirdeshya Rasa*.

Acharya Sharngadhara has mentioned 8 properties of Visha.

Table 2: Showing the properties of *Visha Dravyas* mentioned by various Acharyas.

Charaka ^[7]	Susrutha ^[8]	Sharngadhara ^[9]
Laghu (light in nature)	Ruksha (dryness)	<i>Vyavayi</i> (absorbed quickly)
Ruksha (dryness)	Ushna (hot in potency)	Vikashi
Asu (acts quickly)	Tikshana (penetrating)	Sukshma (passes easily through srotas)
Visada (clear)	Sukshma (passes easily through srotas)	Chedi (has chedana property)
Vikashi (absorbed	Asu (acts quickly)	Madavaha

quickly)		(intoxicating)
Tikshna (penetrating)	Vyavayi (quick acting)	Agneya (having predominance of agni mahabhuta)
Sukshma (passes easily through srotas)	Vikashi (absorbed quickly)	Prananasaka (causes mortality)
Vikashi	Visada (clear)	Yogavahi (acts quickly)
Ushna (hot in potency)	Laghu (light in nature)	
Anirdeshya rasa (not specified taste)	Avipaki (not digested)	

Importance of Visha dravya in Rasasashtra

Rasasamskara Upayogat - Visha drayas are used in various samskaras of parada.

The *Visha dravyas* are extremely useful in various mercurial processes and *parada bandhana* (binding of mercury).It may prove to be fatal if used improperly.

Importance of Sodhana of Visha-upavisha dravyas

The poisonous plants reported in ancient scriptures of Ayurveda are being still practised widely in a number of disease after proper *Sodhana*(purifactory procedures). The concept of *Sodhana* was mentioned for the first time in *Charaka Samhita* in the context of 'Danti dravanti kalpadhyaya'. To reduce the 'Vikashi (quick absorption) property of Danti root, *Charakacharya* mentioned it as 'Samskara'.

Acharya Vagbhata also mentioned Sodhana of plant drugs in detail in the context of Bhallataka rasayana. The concept of Sodhana in Ayurveda is not only a process of purification/detoxication but also a purificatory procedure to enhance the potency and efficacy of the drug. It is reported that Aconite (Vatsanabha) purified by cow's urine is converted to cardiac stimulant, whereas Aconite is cardiac depressant.

It is clearly mentioned in 'Bhavaprakasha' that the bad / toxic effects attributed to 'Asodhita Vishas' (not

purified) are minimised when these are used after being subjected to *Sodhana* process. Hence *Visha* should be subjected for *Sodhana* before being used in therapeutics. Various *Sodhana* are mentioned for *Upavishas*.

- Gomutra Nimajjana (soaking in cow's urine) for a prescribed period
- 2. Swedana (boiling) in various medium such as cow's milk, goat's milk, cow's urine, vegetable extractives, kanjika etc.
- 3. Bharjana (frying) with ghee or without ghee.
- 4. Nisheshana (reducing the oily content)
- 5. Kshalana (washing) with hot water.

Among the above procedures the treatment with cow's urine and boiling in cow's milk are the most common procedures applied for almost all the 'Visopavisha' drugs.

Ayurveda Prakasha - a classical Ayurvedic text book mentions Samanya Sodhana of Visha Dravyas

Method 1

The small pieces of drug is tied in a clean cloth and made in to a *pottali*. *Dola yantra swedana* is done with cow's milk as the medium for 5 *ghatika* (15 hrs). After *Swedana* for the prescribed time period, drug is

taken out, washed with warm water and dried in sun. It is then stored in air tight containers.^[10]

Samskarana of Visha Dravya

The *Visa Dravya* should be carefully covered with a cloth soaked in *Rakta Sarshapa Thailam*. This procedure will enable the drug to retain its potency.^[11]

Eradication of Visatwam

To the purified *Visha Dravya*, equal quantity of purified *Tankan* (Borax) is added and triturated thoroughly in a *Khalwa Yantra*. This procedure eradicates *Visatwa* of *Visha dravya*.^[12]

Visha Dravya - contraindicated

The persons who are short tempered (of *Pitta prakriti*), who are suffering from *Pithaja Rogas*, who are impotent, suffering from *Rajayakshma*, hungry, thirsty, tried after prolonged work, pregnant women, children, old age people, *Sukumaras* are considered unfit for administration of *Visha Dravya* as per *Ayurveda Prakasha*.^[13]

Visha Dravya Sevana Pathyas

Aharaja Pathyas - The Visha Dravyas should be taken along with Ghee, milk or other Hitaharas (compatible food). Viharaja Pathyas - Brahmacharya should be followed while administering Visha dravyas.^[14]

Table 3: Short description of *Upavishas* by *Rasatharangini*

Name with synonyms	Scientific name and family	English name	Morphology	Poisonous part	Chemical constituents
Kuchala, Vishatintukam, Kuchelakam, Kuchliam, Tindukam, Karaskaram, Remyaphala, Kupaaka, Vishamushti, Kalakuta	Strychnos nux vomica Family Logananiaceae	Poison nut, Quaker buttons.	Thorny tree native to Indian sub-continent.	Seed	Srychnine, Loganine, Brucin.

Ahiphena , Aphena, Nishphena, Ahiphenaka, Aphookam, Phaniphenam, Nagaphenam.	Papaver somniferum. Family - Papaveraceae	Opium- poppy, Bread seed poppy.	It is the species of plant from which opium and poppy seeds are derived. Valuable ornamental plant grown in gardens.	Seed	Naturally occurring alkaloids known as opiates- morphine, codeine, thebine, papaverine, noscapine and oripavine.
Jayapala, Rechaka, Saraka, Vibhedana, Maladravi.	Croton tigilum. Family- Euphorbiaceae.	Purging croton	An erect evergreen shrub or small tree, 5-7 m height, found through out tropical India.	Seed	30 - 45% of a fixed oil named croton oil and about 20% protein. The oil comprises the fatty acids oleic acid 37%, linoleic acid 19%, myristic acid 7.5%, arachidic acid 1.5%, palmitic acid 1%, formic acid 1%, acetic acid 0.5%, stearic acid 0.5% and smaller amounts of butyric acid, lauric acid, tiglic acid and valeric acid. The oil also contains a group of proteins called 'crotin', about 3.5% croton resin ('crotonol'), a glucoside called crotonoside (isoguanosine), and a nonvolatile unsaturated fatty acid responsible for the purgative properties. ^[21]
Dathura, Kithava, Unmatha, Dhurtha, Kanaka, Sata, Kantakaphala, Shivasekhara.	Datura metel Family - Solanaceae.	Thorn apple, Devil's trumpet.	It is a shrub-like annual or perennial herb. It grows in the wild in all the warmer parts of the world, such as India and is cultivated worldwide for its chemical and ornamental properties	Seeds	Contains higher levels of tropane alkaloids which are highly poisonous and may be fatal if ingested.
Bhanga, Bhangi, Matulani, Madini, Mathika, Mathuli, Vijaya, Tantrakarini, Bahuvadini.	Cannabis sativa Family- Cannabacea.	Indian hemp.	Is an annual herbaceous plant.	Inflorescence as ganja & Tender leaves and fruits as bhanga.	The flowers and fruits (and to a lesser extent the leaves, stems, and seeds) contain psychoactive chemical compounds known as cannabinoids that are consumed for recreational, medicinal, and spiritual purposes. When so used, preparations of flowers and

					fruits (called marijuana) and leaves and preparations derived from resinous extract (e.g., hashish) are consumed by smoking, vaporising, and oral ingestion.
Gunja, Rakta, Rattika, tamrika, Krishnachudika, Uchada, Sitapaki, Bhillabhushanika, Aruna, Chudamani, Shikhandi, Krishnala, Kakananthi,	Abrus precatorius Family- Leguminoseae	Jequirty, Indian licorice, Rosary pea.	It is a herbaceous flowering plant. It is a slender, perennial climber with long, pinnate- leafleted leaves that twines around trees, shrubs, and hedges.	Leaves, roots and seeds.	Seeds contain a toxic substance called abrin.
Bhallataka, Bhallata, Tapana, Arushkara, Agnika, Krimigna, Vatari	Semicarpus anacardium Family- Anacardiaceae	Marking nut	It is a deciduous tree. The nut is about25mm long, ovoid and smooth lustrous black.	Seeds	Black fruit is toxic and produces a severe allergic reaction if it is consumed or its resin comes in contact with the skin.
Karaveera,Hayari, Hayamara, Aswamaraka, Aswantaka, Aswaghna, Chandataka.	Nerium indicum Family - Apocyanaceae.	Oleander, rose berry.	Evergreen shrub or small tree which is toxic in its all parts.	Roots, bark, seeds and leaves	A water extraction of crushed leaves of <i>Nerium</i> oleander yielded 2.3% of a crude polysaccharide. The seed oil in <i>Nerium</i> oleander contains about 12% isoricinoleic acid. ³³
Langali, Halini, Seeri, Visalya, Kaliharika, Agnijihwa, Swarnapushpa, Dipta, Naktendupushpika, Vidhyudjwala, Vahnisikha, Langali, Garbhapatini,Hali,	Gloriosa superba Family- Liliaceae.	Glory lilly, wolf's bane.	It is a climber with leaf tendril and large , solitary and corymbose, showy flowers.	Dried tuberous root	Every part of the plant is poisonous, especially the rhizomes. The plant contains high levels of colchicine, a toxic alkaloid. It also contains the alkaloid gloriocine.
Arka kshira, Raviksheera,Soorya ksheera, Arkadugda,	Calotropis procera Family- Apocyanacea	Sodom apple, Mudar	It is a species of flowering plants in the dogbane family.	Root bark, milky exudate, flowers and	Calotropis procera contained many biological active chemical groups including, cardenolides,

Ravidugda,				leaves.	steroids, tannins, glycosides,
Sooryadugda.					phenols, terpenoids, sugars, flavonoids, alkaloids and
					saponins.
Snuhi kshira, Sudhakshira, Sehundaksheera, Snuhidugdha, Sudhadugdha, Snugdugdha.	Euphorbia nerifoila Family- Euphoriabiaceae.	Common milk hage.	It is a small tree or big shrub growing to a height of 10-20 feet in dry regions of India.	Milky exudate.	Triterpenoids, euphol, 24- methylene cycloartenol, euphorbol etc

Table 4: Methods of purification, dosage, properties and important formulations of *Upavishas*.

Name of the drug	Method of Sodhana (purification)	Dosage	Properties	Important formulations
Kuchlala	1. Seeds are soaked in Kanji for 3 days. On the 4 th day , the external cover is removed and dried under sun [15] 2. Dolayantra swedana with godugdha as medium [16]	¼ gunja to 1 gunja [17] (31mgs- 125mg) Anupana- milk, ghee or butter.	Rasa – Katu (Pungent) Guna – Agni deepana, tikshna, aphrodisiac, pachana, kaphahara, mutrala, medohara etc. Veerya – Ushna (Hot potency) Vipaka- Action – Grahani, unmadam, admanahara, swasa etc.	Agnitundi Rasa, Lakshmivilasa Rasa, Soollanirmoola Rasa, Suptivatari Rasa etc
Ahiphena	After Nirmalikarana procedure, ahiphena is taken in a khalwa yantra and subjected to bhavana with ardraka swarasa for 7 times ^[18]	¼ gunja to 1 gunja ^[19] (31mgs– 125mg) Anupana- milk, ghee, butter.	Rasa- Tiktha Guna- grahi, Nidrajanakam(200nducing sleep) Action- useful in sannipata jwara,chardi, acute and chronic atisara ,vishoochika etc. ^[20]	Vedananthaka rasa, Nidrodaya rasa, Sindhoorabhupana rasa, Harshodaya vati, Ahiphenasava, Mangalodaya vati etc.
Jayapala	The seeds of well grown fruits are selected and the external covering of the seeds are removed. The testa (greenish structure inside the seed) is removed and cotyledons are tied in a pottali. Dolayantra swedana is done for 3 hours with cow's milk as the	1/8 – ¼ ratti (15.65 to 31mg) [23] Anupana- Cold water	Rasa- Tiktha Guna-Virechanakara, vanthikrit, Vata-kapha samana. Useful in Jalodara, Navajwara, krimi, kushta ^[24]	Ichabhedi rasa, Jalodarari rasa, Jwarari rasa, Anjana bhairava rasa, Vrishchika vishahara pralepa.

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	medium ^[22]			
Dhattura	Dolayantra swedana of the seeds done with cow's milk as the medium for 3 hours [25]	Sudha dhattura bija churna – ¼ to ½ ratti.(31- 62.5mg) Sudha dattura patra churna- starting from ½ ratti to 1.5 ratti (62.5- 1.5mg) ^[26] Anupana- Cow's milk	Rasa – Katu Veerya – Ushna Action – Swasasamana and kapha samshoshana(useful in respiratory disorders) Useful in bahya and abbhyantara sopha, krimi, kushta, jwara. Cures skin diseases.	Unmadagajankusha rasa, Pralapantaka rasa, Kanakasava.
Vijaya	The dry leaves of bhanga is taken along with enough quanity of 'Babbula kwatha' and it is subjected to swedana for half ghati (24minutes)[27]	2-4 gunja (250- 500mg) ^[28]	It increases digestion, induces sleep, aphrodisiac, reduced abdominal pain etc	Madanodaya modhaka, Trailokya vijaya vati, Trailkya sammohana rasa.
Gunja	Dolayanra swedana of crushed seeds are done with kanjika for 1 yama (3 hours) [29]	½ to 1½ ratti (62,5- 187,5mg) ^[30]	It is aphrodisiac, effective in urusthambha, sopha, amavata etc Rasa – Madhura, katu	Gunjadya thailam, Gunja jeevanarasa, Gunjabhadra rasa.
Bhallataka	The seeds along with brick powder are tied in a pottali and rubbed thoroughly from outside until the brick powder is soaked with oil from bhallataka seeds. [31]	1- 3 gunja (125- 375) ^[32]	Rasa –Katu, tikta Veerya- ushna It is rasayana, krimihara, ballakara, subsides gulma, arshas, grahani, kushta etc.	Bhallataka rasayanam.
Karaveera				Karaveeradyam thailam.
Langali			Rasa –Katu, Veerya- ushna Properties – Kaphavata hara, Aparapatini, Sadyaprasava karika, Useful in Sopha, Kushta, krimi, parikarthika etc.	Langalyadi lauha.
Arka ksheera			Rasa- Tikta, Veerya- Ushna	

		Properties- Snigdham Useful in kushta, gulma, udara, arshas, krimi and dantaroga. It produces emesis and purgation. Also used in Ksharakarma.	
Snuhi ksheeram	96ml of Snuhiksheera is taken 24ml of filtered 'Chinchapatra swarasa'(Tamarind juice) in a wide mouthed container and placed in sun and dried.		

Table 5: Important formulations in which *Visha* and *Upavisha* as one of the ingredient which are used extensively in Ayurvedic practise.

Bhallataka	Kupilu	Snuhi	Dhattura	Arka	Jayapala
Sanjeevani Vati	Agni Tundi Vati	Arshakutara Rasa	Piyusha Valli Rasa	Pravala Panchamruta Rasa	Asvakanchuki Rasa
Narasimha Choornam	Mahavisha Garbha Thailam	Jalodarari Rasa	Jayamangala Rasa	Soothikabharana Rasa	Icchabhedi Rasa
Amruta Bhallataka Ghritam	Vishamushti Vati	Kaseesadi Thailam	Sootasekhara Rasa	Maha Vatavidhwamsini Rasa	Sukhavirechana Vati
Prasarini Thailam	Soolaharana Yogam	Abhaya Lavana	Tribhuvanakeerthi Rasa	Bruhut Marichadia Thailam	
Panchatikta Guggulu Ghritam	Krimi Mudgara Rasa		Lakshmi Vilasa Rasa		
Kutajavaleham			Pushpa Dhanwa Rasa		
			Kanakasava		

Therapeutic significance: Screening of formulations which commonly practised by Ayurvedic practitioners reveal the extensive use of *Visha* and *Upavishas* drugs. Nearly 160 formulations are mentioned in the Ayurveda formulary of India and about 430 formulatons in Bhaishajya Ratnavali.

General antidotes of Visha Dravyas^[34]

- Tankanam (Borax)
- Haridra (Turmeric)
- Goghrita (Ghee)
- Nimba swarasa (Lemon juice)
- Go dugdha (Cow's milk)
- Ajadugdha (Goat's milk)

- Meghanada rasa
- Sarpakshi
- Arjuna twak
- Putranjivaka
- Vandhya karkoti
- Gojihwa
- Trisulika
- Sarpakshi

Figures of *Upavisha*



Figure 1: Srychnos nux vomica



Figure 2: Papaver somniferum



Figure 3: Croton tigilum



Figure 4: Datura metel



Figure 5: Cannabis sativa



Figure 6: Abrus precatorius



Figure 7: Semicarpus anacardium



Figure 8: Nerium indicum



Figure 9: Gloriosa superba



Figure 10: Calotropis procera



Figure 11: Euphorbia nerifoila

REFERENCES

- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse-1, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p.646.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 6, edited by Sashtri K. S , 11th ed. Delhi : Motilal Banarasidas, 2012; p 648.
- Agnivesha, Charaka, Charaka Samhita, Ayurveda Deepika commentry by ChakrapaniDatta, Chapter1, verse-126, edited by Ramkaran Sharma and Bhagvan Dash, 6th ed. Varanasi, Chowkhamba, 1999, p -60.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 3, edited by Sashtri K. S , 11th ed. Delhi : Motilal Banarasidas, 2012; p 647.
- 5. Acharya Susrutha, Susrutha Samhita, commentry by Dalhana, Kalpasthana Chapter 2, verse 24, edited by Priyavrat Sharma, Varanasi, Chaukhamba, 2005; pg 20.
- Sadananda Sharma, Haridatta Sastri, RasaTharangini, Prasadini commentry 24th Taranga, verse- 5, edited by Sashtri K. S , 11th ed. Delhi : Motilal Banarasidas, 2012; p 648.
- Agnivesha, Charaka, CharakaSamhita, Ayurveda Deepika commentry by ChakrapaniDatta, Chapter23, verse -24, edited by Ramkaran Sharma and Bhagvan Dash, 6th ed. Varanasi, Chowkhamba, 2007,p -330.
- Acharya Susrutha, Susrutha Samhita, commentry by Dalhana, Kalpasthana Chapter 2, verse 19, edited by Priyavrat Sharma, Varanasi, Chaukhamba, 2005; pg 19.
- Sarngadara, Sarngadhara samhita, Dipika commentry of Adhamalla and Gudhartha dipika of Kasirama, Chapter 4, purvakhanda, verse 22, edited by Pandit Parasurama sashtri, Vidhyasagar, Varanasi, Chaukhambha Orientalia, pg 39.
- 10. Madhava, Ayurveda prakasha, Chapter14, verse 50-51, edited by Vaidya Yadvji Trikamji, Mumbai; pg 192
- 11. Madhava, Ayurveda prakasha , Chapter14, verse 57, edited by Vaidya Yadvji Trikamji, Mumbai; pg 194.
- 12. Madhava, Ayurveda prakasha, Chapter14, verse 49, edited by Vaidya Yadvji Trikamji, Mumbai; pg 192
- Madhava, Ayurveda prakasha , Chapter14, verse 64-65, edited by Vaidya Yadvji Trikamji, Mumbai; pg 192.

- 14. Madhava, Ayurveda prakasha, Chapter14, verse 62-63, edited by Vaidya YadvjiTrikamji, Mumbai; pg 192
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 172, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 678.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 176-177, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 679.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 203, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 684.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 242, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 692.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 262, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 697.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 243-244, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 692.
- 21. http://tropical.theferns.info/viewtropical.php?id=Croto n+tiglium
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 310-312, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 704.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 320, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 706.
- 24. Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 318-319, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 706.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 346-347, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 711.

- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 367-368, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 715.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 396-397, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 720.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 414, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 723.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 445, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 729.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 453, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 731.
- Sadananda Sharma, Haridatta Sastri, Rasa Tharangini, Prasadini commentry 24th Taranga, verse- 477-478, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 735.
- Sadananda Sharma, Haridatta Sastri, RasaTharangini, Prasadini commentry 24th Taranga, verse- 482, edited by Sashtri K. S, 11th ed. Delhi : Motilal Banarasidas, 2012; p 737.
- 33. https://ijpsr.com/bft-article/phytochemical-and-pharmacological-potential-of-nerium-oleander-areview/?view=fulltext
- 34. Ravindra Angadi, A text book of Rasasastra, Chapter24, Chaukhamba Surbharathi Prakashan, Varanasi, 2014, 1st edition, pg 542.

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