SJIF Impact Factor (2024): 8.675| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 9 | Issue: 7 | July 2024 - Peer Reviewed Journal

A REVIEW ARTICLE ON THE *VISHAGHANA* PROPERTIES OF *MANJISHTHA* (*Rubia Cordifolia*) IN AYURVEDIC AND CONTEMPORARY SCIENCE

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ABSTRACT

Visha, or poison, comes from plants, animals, and minerals. We require antidotes or antitoxic medications to offset the harmful effects that poisons have on our bodies. In our treatises, Charak Samhita, Sushruta Samhita, and Ashtanga Hridyam, Vishaghana medicines are listed as a means of arresting the poisonous effects. The antipoisonous properties of Manjishtha will be covered in this article. The availability of both single and multiple manjishtha formulations suggests that it is useful in treating various poisonings. Comprehensive research is conducted on all facets of Manjishtha, with a particular focus on detoxification. All logical references have been chosen, and requirements-based collection, correlation, and explanation have been completed. Manjishtha's medicinal uses are highlighted based on indications and detoxification; these are particularly well-described in Ayurvedic and contemporary texts.

The idea is that it will eventuallydenaturize any poison by dissecting the pathophysiology of toxicity. If the illness falls under any category related to toxicity, it might be helpful. Many toxicological illnesses are treatable and preventableNowadays, it can be widelyapplied for both curative and preventive purposes to ensure a life free from toxicological agents and disease, based on the concept of Vishaghana qualities of Manjishtha.

KEYWORDS: *Manjishtha, Vishaghana, effects*

INTRODUCTION

Ayurvedic drugs with several pharmacological actions, such as antidiabetic, antipyretic, anti-inflammatory, analgesic, anti-histaminic, anti-microbial, immunomodulator, anti-herpes, cosmetic conditions, menstrual disorders, and cardio-gastro-hepatoprotective properties, are most commonly found in *Rubia cordifolia*, also known as *Manjishtha*[1]. *Manjishtha* is categorized within the *Vishaghana Mahakashaya Dravya* group, as stated in the *Shadvirechanshatashreeya* chapter of the *Charak Samhita's Sutra Sthana*. Detoxification and *Vishaghana* share the same practical meaning. By neutralizing and denatured toxins and aiding in their escape from the body at the cellular level, *Vishaghana Mahakashaya Dravya* may have antitoxic properties. The medications found in *Vishaghana Mahakashaya* are effective in treating all forms of poisoning, including *Dushi* and *Gara Visha*, as well as bites from snakes, scorpions, rats, stings, and chronic cumulative biochemical toxicity. In Ayurveda, *Agada* is a multi herbo-mineral drug preparation which indicates in various types of poisoning.

COMMON DESCRIPTION & SCIENTIFIC CLASSIFICATION OF RUBIA CORDIFOLIA[2]

It is a perennial climber that can reach a maximum length of 12 meters on a thorny stem. The leaves are very varied, with whorls of four to six, ovate lanceolate, 5-7 nerved, 2 to 10 cm long, and 2 to 5 cm broad. Flowers are little, white or greenish yellow, aromatic, and tiny. When fruit reaches maturity, it is tiny, glabrous, has one or two seeds, and is either dark purple or blackish. The shrub has fruit and flowers from August to October. The roots of perennial plants display a long, cylindrical shape and a rusty brown color.

Kingdom	Class	Subclass	Order	Family	Genus	Species
Plantae	Dicotyledons	Sympetalae	Rubiales	Rubiaceae	Rubia	cordifolia

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Table 1: Categorizes *Manjishtha* in different Ayurvedic texts based on General and *Vishaghana* classifications

S.N.	*Ayurvedic* Literature	General Classification	*Vishaghana* Classification
1.	*Charak samhita*[3,4,5]	*Varnya, Jwarhar*	+
2.	*Sushruta samhita*[6,7]	*Priyangavadi, Ambashthadi gana*	-
3.	*Ashtang Samgraha*[8,9,10]	*Priyangavadi*	+
4.	*B.P. Nighantu*[11]	*Haritkyadi varga*	+
5.	*Raj Nighantu*[12]	*Pippalyadi varga*	+
6.	*Kaideva Nighantu*[13]	*Aushadhi varga*	+
7.	*Dhanvantari Nighantu*[14]	*Guduchyadi varga*	+
8.	*Priya Nighantu*[15]	*Pippalyadi varga*	+

Table 2: *Ayurvedic* pharmacodynamics of *Manjishtha*
(Textbook of Dravyaguna P.V.Sharma,Vol.2, P;800)

S.N.	Pharmacodynamics	Explanation
1.	*Rasa* (Taste)	*Tikta* (Bitter), *Kashaya* (Astringent), *Madhura* (sweet)
2.	*Guna* (Properties)	*Guru* (Heavy), *Ruksha* (dry)
3.	*Veerya* (Potency)	*Ushna* (Hot)
4.	*Vipaka* (Post digestive effect)	*Katu* (Pungent)
5.	*Dosha prabhava*	*Kapha-pitta shamaka*
6.	Pharmacological Action	*Varnya, Balya, Vishaghana, Raktaprasadaka, Rasayana*

Chemical Composition of Rubia cordifolia

The phytochemical components of Rubia cordifolia that are most well-known are anthraquinones and naphthohydroquinones[16]. Rubiadin[17], Rubicordone A18, Rubiasins A–C19, Rubiatriol[20], and two pentacyclic triterpenoid compounds, Rubicoumaric acid and Rubifolic acid[21], are the main components of Rubia cordifolia. Additional chemical components include furomollugin[22], garancin, mollugin, mangistin, and alizarin.

Table 3: *Agada* Preparation of *Manjishtha* and Therapeutic *Vishaghana Yoga*

S.N.	Mention	Name	Indication	References
1.	*Charak*	*Rajniadi Churna*	*Visha*	C.S.Chi.23/50
		Mahagandhahasti	*Visha*	C.S.Chi.23/77-94
		Pipplyadi Pishthi	*Visha*	C.S.Chi.23/185
		Manjishthadi Pana	*Mandali Sarpa visha*	C.S.Chi.23/196
2.	*Sushruta*	*Mahagada*	*Vishavegahar*	S.S.K.5/61-62
		Rishabhagada	*Sarpakeeta visha*	S.S.K.5/68-72
		Drakshadi agada	*Sarpavisha*	S.S.K.5/76-77
		Ksharagada	*Visha*	S.S.K.6/3-7
		Kalyanak Sarpi	*Visha*	S.S.K.6/8-11
		Snukakshiradi lehya	*Mushak damsha*	S.S.K.7/22
3.	*Vagbhatt*	*Manjishthadi churna*	*Sarpa visha*	A.H.U.36/59
		Kashmaryadi pana	*Sarpa visha*	A.H.U.36/65
		Pathyadi lepa	*Vraschika visha*	A.H.U.37/38
		Champakadi agad	*Luta visha*	A.H.U.37/71
		Agardhumadi lepa	*Mushaka visha*	A.H.U.38/18
		Suryodaya agad	*Visha*	A.S.U.40/57
		Priyangavadi agad	*Visha*	A.S.U.40/59
		Mushkadi yoga	*Visha*	A.S.U.40/81
		Ajeya ghrita	*Visha*	A.S.U.40/98
		Mahagada	*Visha*	A.S.U.42/61
		Rishabh Agad	*Visha*	A.S.U.42/62
		Kshara agad	*Visha*	A.S.U.47/38
4.	*Bhavprakash*	*Jatyadi Taila*	*Vishaj Vrana*	B.P.M.47/90-95
		Mritypasachhedi ghrita	*Visha*	B.P.M.67/82-87

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		Rajniyugmadi lepa	*Luta Visha*	B.P.M.67/89
5.	*Yogratnakar*	*Jatyadi Taila*	*Vishaj Vrana*	Y.R. sadyovrana 46-50
		Grahadhumadi yoga	*Aakhu Visha*	Y.R. visha 111
		Rajniyugmadi lepa	*Luta Visha*	Y.R. visha 138
		Mrityuchhardi ghrita	*Visha*	Y.R. visha164-169

MATERIALS AND METHODS

All *Ayurvedic* and contemporary references regarding *Vishaghana* are collected from *Ayurvedic* fundamental books and various textbooks, research article, international journals. *Agada's* descriptions were gathered from several old Ayurvedic books.

LITERARY REVIEW

The words "*Agada*" and "*Tantra*" are the two words that make up the sentence. The word *Agada* originates from *Gada*. The names *Gada (*illness*) and Visha (*poison*)* have distinct meanings. *Agada* can also be referred to as drugs. This is the reason *Agada* is an anti-poisoning medication. *Gada* signifies two different things*: Roga (*illness*) and Visha (*poison*)*. Medication is another name for *Agada*. *Agada* can also be referred to as drugs. This is the reason *Agada* is an anti-poisoning medication. In the Ayurvedic Samhitas (Compendium), a variety of single herbs, polyherbal formulations, and herbo-mineral formulations are listed as anti-poisonous. Antitoxic drugs, also referred to as "*Vishaghana*" drugs, neutralize dangerous substances. Some *Vishaghana* medications work because of their inherent qualities (*Dravya Prabhava*), some because of their characteristics (*Guna Prabhava*), and still others because of their dual qualities (*Dravya Guna Prabhava*). These antitoxic herbs and preparations, or *Vishaghana Dravya* and *Vishaghana Yogas* and *Agadas,* are used to treat a variety of diseases and poisonings. These Ayurvedic kinds of anti-toxic remedies contain unique combinations for specific dosha vitiation in a range of poisoning situations. *Raktashodhaka* (blood purifying), *Tridoshaghana* (creates bodily humour balance), *Hridya* (protects the heart), and *Ojovardhaka* (rejuvenates) are the results of most of these antitoxic therapies.

Certain Detoxification-Related Pharmacological Actions of Rubia Cordifolia

1. Rubia cordifolia has been shown to exhibit antioxidant action against radiation-induced toxicity[24] and lead nitrate[23].
2. Rubia cordifolia's alizarin biomarker is in charge of its antigenotoxic properties[25].
3. The anti-inflammatory effects of Rubia cordifolia in rats with carrageenan paw edema. When the plant was given 10 and 20 milliliters per kilogram of the water extracts, it exhibited notable anti-inflammatory properties comparable to phenylbutazone (100 mg/kg [26].
4. Anti-adipogenic activity of 2-carbomethoxy-2, 3-epoxy-3-prenyl-1, 4-naphthoquinone (CMEP-NQ)isolated from the roots of *Rubia cordifolia* L., its effects on cell viability, apoptosis, and adipogenesis in 3T3-L1 preadipocytes were investigated[27].
5. Alcoholic extracts of Rubia cordifolia whole plant show enhance immune-modulating activity (Cell mediated and humoral) due to alkaloids, flavonoids, tannins and phenols of plant[28].
6. Rubia cordifolia's alcoholic root extract offers defense against lipid peroxidation, hemopoietic damage, and genotoxicity brought on by radiation[29].
7. Purpurin (anthroquinone derivatives) constituents of Rubia cordifolia show antigenotoxic activity[30].
8. It has been demonstrated that R. cordifolia exerts cell/neuroprotective effects via avoiding glutathione depletion, raising GSH levels by promoting the production of c-glutamylcysteine ligase, lowering oxidant levels through direct scavenging, and lowering iNOS expression[31].
9. R. cordifolia extracts were also assessed using the 1, 1-diphenyl-2-picryl-hydrazyl and TBARs Thiobarbituric acid reactive substances technique, respectively, for their antioxidant and lipid peroxidation inhibitory activity[32].
10. Lipid peroxidation in the kidney and liver tissues was also considerably reduced in *Rubia cordifolia* extract treated animals[33].
11. The hepato-protective activity of an aqueous-methanol extract of *Rubia cordifolia* (Rubiaceae) was investigated against acetaminophen and CCl4 induced hepatic damage[34].
12. R. *cordifolia* also inhibited lipoxygenase enzyme pathway and production of cumene hydroperoxides as anti-inflammatory reaction[35],[36]

USES OF *MANJISHTHA* IN POISONING

Manjishtha: Rubia cordifolia shows antioxidant activity against lead nitrate and radiation induced toxicity.[37] Purpurin constituents of Rubia cordifolia shows antigenotoxic activity.According to *Bhavaprakash*, *Manjishtha* is able to bind itself *Amavisha* and *Garavisha.*

Contemporary uses

Antimicrobial, antioxidant & astringent

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Action against poison in *Vishaghana Mahakashya*

In *Mahakashaya*, *Manjishtha* is primarily chosen for its blood-purifying qualities.
It purifies *Rakta Dhatu* since it contains *Madhur*, *Kashaya*, *and Tikta Rasa.*

DISCUSSION

As we have seen in above literature that *Manjishtha* have been used as a prominent content in many *Agada* (antitoxic) preparations. These *Agada* are mainly used for different types of toxicity as such *Sarpa*, *Luta*, *Vrishchika* and *Mushaka* etc. by our great sages of Ayurveda. According to recent studies, *Manjishtha* also has immunomodulatory, hepatoprotective, nephroprotective, antigenotoxic, and antioxidant properties. The idea of *Manjishtha's Vishaghana Guna* is strengthened by these studies. As we've seen, *Manjishtha* shields the kidney, liver, and many body cells against various radiation and chemical exposures.

CONCLUSION

As per the above discussion, we conclude that *Manjishtha* is a *Vishaghana* (Anti-toxic) drug useful in different type of toxicity. It will help with biological toxicity, cumulative toxicity, acute and chronic substance-acquired toxicity, metabolic toxicity, etc. and diseases due to toxicity. *Manjishtha* can be easily used in today's era for preventive as well as curative disease and make the life free from toxicological agents.

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