

A Critical Review on *Morat* With Special Reference to Ayurveda Classical Texts

Review Article

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Abstract

Morat is considered as a significant medicinal plant in the indigenous system of medicine [Ayurveda] as it has wide application as single drug. It is very effective in various Urinary disorders. It has been observed that several species of plants which are referred under one common name, making them more controversial. Documentation defects in manuscripts, same synonym but different plants, geographic variations are some of the reasons attributed to it. Due to different languages and morphological similarities between plants generates controversy. In India, there are many plants which use a common name *Morat* and creates controversy. Under the name of *Morat*, botanical identity such as *Leea macrophylla* Roxb., *Saccharum officinarum* L., *Alangium salvifolium* (L.f.)Wang, *Marsdenia tenacissima* Wight. & Arn., *Maerua arenaria* Hook, *Chonemorpha fragrans* Moon are considered as they exhibit same medicinal properties. The purpose of this work is to review and differentiate the plants which are known as *Morat* in Ayurved classical texts.

Key Words: *Morat*, *Controversial plants*, *Bruhatryee*, *Nighantu*.

Introduction

Over 2500 species of medicinal plants are documented in the classical texts of Ayurved. Beside the usefulness of plants in various disorders, today we are using comparatively very smaller number of plants for various ailments, because many of them have not been identified properly. Moreover, the same synonyms may be given to more than one plant, causing confusion in identifying the genuine plant. This confusion is compounded by the lack of a technically precise description of the complete plant. As per the Ancient Indian Literature, Controversial plant or *Sandigdha drayas* is a term used for medicinal plants having notorious botanicals as sources. Quantum of information gained from Ayurvedic & other Sanskrit literature revealed various incidences where one common name is used for two or more entirely different plant species in traditional system of Medicines.

Morat is one of the controversial plants useful in *Mootrakruchchhra* (Dysuria), *Mootraghata*, (Anuria), *Ashmari* (Urinary calculi), Cephalalgia, *Gulma* and internal abscesses. Since Samhita period, the plant is in ambiguity & still not clearly identified botanically. To tackle controversy of *Morat*, here an

attempt had been made to review various Ayurved classical texts, *Samhita*, *Commentaries*, *Nighantu*, *Chikitsagranth*.

Materials and methods

All available *Vedic* literature including *Puran*, *Samhita* [Ayurved classical texts *bruhatryee* and *Laghutrayee*], various treatises of samhita period and *nighantu* [Ayurved Materia Medica] were searched with the key words like *Morat* or its *parayaya* (synonyms) names. Textbooks of dravyaguna and various commentaries available were reviewed and analyzed using above mentioned keywords.

Literature about various plant species were compiled from different modern books, flora, journals, web based search engines like Google, Google scholar, PubMed, AYUSH portal etc. The obtained information about drug *Morat* & its noted synonyms from the classical has been analyzed regarding its controversial aspect and presented in a systemic manner.

Observations

Historical perspective of *Morat*

Morat is well known in Ayurveda. It is used since time immemorial to till date in various purposes. In vedic period [2500- 300 BC] *Morat* is not mentioned. But it definitely seems to be known in “*Garud Puran*” by the name *Morata*. (1)

It is observed that major Ayurvedic classical texts *Samhita Period* [300BC-1300AD] describes the *Morat* in various classification as follow-

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Table 1- Morat in Ayurved classical text

Classical texts	Terminology used	Varga [class]	Uses	Reference
<i>Charak Samhita</i> (1000 B.C - 4 A.D.)	<i>Moratam</i>	<i>Goras Varga</i>	-	(2)
	<i>Morat</i>	<i>Madhuraskandha</i>	-	(3)
<i>Sushrut Samhita</i> (1000 B.C - 2 A.D.)	<i>Morat</i>	<i>Varunadi Gana, Veeratarvadi Gana</i>	Ashmari [Urinary calculi]	(4)(5)
	<i>Kshiramorat</i>	<i>Madhura Varga</i>	<i>Kitak Danshachikitsa</i> [Diseases due to stinger]	(6)(7)
<i>Ashtang Sangraha</i> (6 th Century AD),	<i>Morat</i>	<i>Varunadi Gana and Veeratarvadi Gana.</i>		(8)
<i>Ashtang Hriday</i> (7 th Century AD),	<i>Morat</i>	<i>Varunadi Gana, Veeratarvadi Gana</i>	<i>Pittajashmari Bhedan</i> [Urinary calculi due to <i>Pitta</i> , penetrative action]	(9)(10)
	<i>Kshiramorat</i>	-	-	(11)
<i>Kashyap Samhita</i> (600BC–7 th Century AD)	<i>Morat</i>	<i>Trivrutya Yoga</i>	<i>Morat</i> is used along with <i>Murva</i> root.	(12)
	<i>Kshiramorat</i>	-	<i>Murtragraha</i> [urinary problems]	(13)
<i>Harit Samhita</i> (10-12 th century AD)	<i>Morata</i>	-	<i>Ashmari rog chikitsa</i> <i>Khadiradi Kvath</i>	(14)(15)
<i>Bhavaprakash Samhita</i> (16 th Century AD),	<i>Morat</i>	<i>Varunadi Gana, Veeratarvadi Gana</i>	Ashmari [Urinary calculi]	(16)
	<i>Moratam</i>		<i>Pittaj Masurika</i> [chicken pox]	(17)

Morat name is mentioned by *Bruhatryee, Kashyap, Harit & Bhavaprakash Samhita*, while *Kshirmorat* is introduced in *Sushrut Samita, Ashtang Hriday & Kashyap Samhita*. There is no any reference found in *Bhel & Sharangadhar Samhita*.

It is observed that different names are used for drug *Morat* by various commentators [Table 2] as follow-

Table 2 Opinion of different commentators about Morat

Name	Commentators								
	Brihatryee	CK	DA	AR	HE	SH	GA	YO	JY
<i>Ankolpushpa</i>	+	+	+						
<i>Hastiparni</i>	+	+	+			+			
<i>Ikshumul</i>	+	+	+						
<i>Kshirmorat</i>	+		+	+					
<i>Kshirmurva</i>	+				+				
<i>Karnamorat</i>	+						+		
<i>Murva</i>	+	+		+					+
<i>Piluparni</i>	+	+	+					+	

(Abbreviation :- CK- Chakrapania 11th Cen. AD, DA- Dalhana 12th Cen AD, AR- Arundatta 12th -13th Cen AD, HE- Hemadri 13th -14th Cen AD, GA- Gangadhar 19th Cen AD, SH- Shivadas Sen 19th Cen AD, YO-Yogendranath 20th Cen AD, JY- Jyotish Chandra Saraswati 20th Cen AD)

Compendia

Morat is mentioned in *Virataradi gana & Varunadi gana* used in *Pittaj Ashmari* by Vrund Madhav and Chakradatta (18)(19). Chakradatt also mentioned in *Guduchyadi kashay for Masurika*.

Vangsen and Bhaishjya Ratnavali used *Morat* in *Bhadravahaghruta* for *Mutrughat, Kushadyaghruta & virataradigana* for *Ashmari*. As *Moratu*, mentioned in *Masurika* and as *Kshirmorat* in *Madhuvarga*. (20)(21)(22)(23)

Yogaratanakar has prescribed *Morat* in *Rasnaputik tail & Guduchyadi yoga* for *Vatvyadhi & Masurika* respectively. (24)(25)

Nighantu [Materia medica]

Nighantu means lexicon or dictionaries dealing with Indian material medica, have their origin in 8-10 A.D collection of words, synonyms and the names of the medicinal substance. It throws light on to the secret meanings of the terms denoting different synonyms of the drugs. The ancient *nighnatus* were actually like *Kosha* containing the synonyms of drugs. Later the drugs had given the description of properties, actions and their uses. All most all the *nighantus* have also described various synonyms, attributes of drug *Morat* [Table 3, 4].

Table3 Different references of Morat in Nighantu

Nighantu	Terminology	Synonyms	Class	Reference
Paryayratnamala Nighantu (8 th century AD)	Morat	Piluparni	-	(26)
	Moratum	Ikshumool	As dugdhavikar	
	Kshirmorat	Shitadru, Sarala, Salya, Kshiravan	-	
Ashtang Nighantu (9 th century AD)	Murva	Morati, Kshirmorat	Patoladi Gana Varunadi Gana , Veeratarvadi Gana	(27)
	Morat	-	Guduchyadi varga Jwaraghna [useful in fever] and Kaphapittahar [pacify Kaphapitta], Useful in Trushna [thirst], Daha [burning sensation], Shwas [dyspnea].	(28)
Dhanvantari Nighantu (10 th -13 th century AD)	Morat as Murva-vishesh [type of murva]	Pilupushpa, Madhustray, Kshiramorat, Tejani & Dirghamoola		
Nighantushesh (12 th century AD)	Murva	Morata	Aushadhi varga	(29)
Sodhala Nighantu (12 th century AD)	Murva	Morat	Guduchyadi varga	(30)
Sidhhamantra Nighantu (13 th 14 th century AD)	--	Kshiramorata	Pittakaphaghna varga	(31)
Hridaydipak Nighantu (13 th - 14 th century AD)	Morat	Kshiramorat	Ekpad varga	(32)
Madanpal Nighantu (14 th century AD)	Murva	Morat	Abhayadi varga	(33)
		Morat	Paniyavarga as Dugdhavikar	
Saraswati Nighantu (14 th century AD)	Murva	Morata	Lata varg	(34)
Raj Nighantu (15 th century AD)	Morat	Kirnapushpa , Pilupatra, Madhustrava, Ghanamoola, Dirghamoola, Kshiramorat	Guduchyadi varga, Pacify Pitta, used in Daha, Jwara	(35)
	Moratakam	synonym for Ikshumool	--	(36)
Kaiyadev Nighantu (15 th century AD)	Morat	Ghanamool, Kirnapushpa, Madhustrava, Kshiramorat, Hastiparni, Piluparna	Aushadi varga, madhurarasatmak and having action on Jwara, Trushna, Kapha pitta dosha.	(37)
	Moratum	Ikshumul	--	
Bhavaprakasha Nighantu (16 th century AD)	Murva	Morata	--	(38)
		Moratum	Dugdha varg	(39)
Shiva Kosha (17 th Century AD)	Kshiramorat	Murva bhed	--	(40)
Shaligram Nighantu (19 th Century AD)	Murva	Morat	Guduchyadi varga.	(41)

Table 4 Morat & its Synonyms in Nighantu

Synonyms	S.N.	M.N.	D.N.	H.D.N.	K.N.	R.N.	S.K.	A.M.
Ankolpushpa					+			
Badhamulak					+			
Dirghamula	+	+	+		+	+		
Ghanamula	+				+	+		

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Hastiparni								+
Kirnapushpa		+	+					+
Kolahya								+
Kolpatri								+
Kolpushpi	+							+
Kshirmorat		+	+	+	+	+	+	
Kundali								+
Madhustrava		+	+					
Madhumul		+						
Pilupatra	+	+						+
Pilupushpa			+					
Pischileshwar								+
Purusha		+						
Swedana								
Tejani			+					
Vanamula								+

(Abbreviation :- S.N.-Soushrut Nighantu, M.N.-Madanadi Nighantu, D.N.-Dhanvantari Nighantu, H.D.N.-Hruday Dipak, K.N.-Kaiyadev Nighantu, R.N.-Raj Nighantu, S.K.-Shivakosh, A.M. Abhidhanmanjiri)

Table showing *Kshirmorat* and *Dirghamula* synonyms are used maximum times. *Morat* is treated as synonym for other plants like *Murva*, *Iskumul*, *Ankolpushpa* & *Piluparni*. *Morata* is used as synonym for *Murva*, at the same time *Dhanvantari Nighantu*, *Raj Nighantu* & *kaiyadev Nighantu*, stated as synonym as well as a separate drug.

Table 5 Morat as synonym for Murva, Ikshumul, & Piluparni

Texts	Murva(Morata)	Iskhumul	Piluparni	Ankolpushpa
Ashtang Nighantu	+			
Paryayratnamala		+	+	
Dhanvantari Nighantu	+			
Shabdachandrika	+			
Nighantu Shesha	+			
Shodhal Nighantu	+			
Madanpal Nighantu	+			
Raj Nighantu	+	+		
Kaiyadev Nighantu		+		
Bhavaprakash Nighantu	+			
Saraswati Nighantu	+			
Shivakosh		+	+	+
Sidhhasar Nighantu			+	

Attributes

A drug performs certain local and general actions by its *Rasa* and *Guna*, and certain specific therapeutic actions its *Vipak*, *Veerya* and *Prabhav*. The Attributes (*Rasapanchak*) of *Morat* in various texts is described in table 6.

Table 6- Attributes of Morat

Attributes		C.S	S.S	R. N.	K. N.	M.D.N.	A.M.	A.R.
Guna [properties]	Guru [Heavy]				✓			
Rasa [taste]	Madhur [Sweet]	✓	✓	✓	✓	✓	✓	
	Tikta [Bitter]							✓
	Kashaya [Astringent]			✓				
Vipak [post digestive effect]	Madhur [Sweet]				✓			
Virya [potency]	Sheet [Cold]				✓			

(Abbreviation :- C.S.-Charak samhita, S.S.-Sushrut samhita, K.N.-Kaiyadev Nighantu, R.N.-Raj Nighantu, M.D.N.-Madanadi nighantu, A.M. Abhidhanmanjiri. A.R.N. Abhidan Ratnamala)

Plants used as Morat

Though drug has been listed in the *Samhita* and *Nighantu*, it remains controversial because several plants are used and sold under the name of '*Morat*' in different parts of country. About six different plant species were to be taken in the name of *Morat* by Ayurveda practitioners in different parts of the country.

Table 7 The plants considered as *Morat* are [42][43][44] [45]

No.	Name Family	Macroscopic characters	Geographical character	Uses	Ref
1	<i>Saccharum officinarum</i> L. Gramineae Root	A perennial grass/herb with slender culms of varying thickness & colour	Extensively cultivated in hotter parts throughout India	Diuretic, demulcent, cooling & useful in urinary disorders	(46) (47) (48)
2	<i>Alangium salvifolium</i> (L.f.)Wang. Alangiaceae	Small tree up to 10 meter high	The drier parts of India, in plains & foothills of southern India	Diarrhea, paralysis, piles, vomiting	(49) (50) (51)
3	<i>Leea macrophylla</i> Roxb. ex Hornem. Vitaceae	Large herbaceous shrub, 30-90 cm in height with perennial tuberous root	Throughout the hotter parts of India, Assam, Burma	Astringent, anodyne, styptic, antiseptic. mucilaginous; applied to wounds and sores; used for ringworm, guineaworm	(52) (53)
4	<i>Marsdenia tenacissima</i> Wight. & Arn. Asclepiadaceae Root, Bark	Large stout, twining shrub,	Abundantly found in Bengal, Madhyapradesh, western ghats, Gujarat, eastern & western Himalaya	Purgative, antispasmodic, mild CNS depressant; used in colic. Bark in lipid disorders, also in polyuria and hemorrhagic diseases.	(54) (55)
5	<i>Maerua arenaria</i> Hook Capparidaceae Root	Large woody climber, with thick rootstock and thick leaves, flowers strongly scented	Punjab, Sind, Gujarat, Central & southern India	Bleeding piles, as alterative in fevers; as atonic in muscular debility.	(56) (57)
6	<i>Chonemorpha fragrans</i> Moon Apocynaceae	It giant stout climber with large, sweet scented, white flower	Dense moist forest throughout India up to 1500m altitude	Diarrhea, fever, polyuria, anemia, boils, leprosy, eye diseases, vomiting, poisoning, intermittent fever, gynaecological disorders	(58) (59) (60)

Conclusion

Due to lack of scientific names in the original texts, different plants are known in different parts of the country under one name which makes the drug controversial. It is more difficult to identify the actual plant among the various varieties of *Morat*. So there is need to conduct the systemic study with the help of literature, pharmacognostical, pharmacological & clinical study for confirmation of species.

In present paper different plants named as *Morat* in Ayurved classical texts have been reviewed. Many plants are known with the same name in different regions. Literature review suggested that *Morat* is different from *Murva* & useful in Urine disorders. On the basis of synonyms & description mentioned in Ayurved classical text, two plant namely *Marsdenia tenacissima* Wight. & *Chonemorpha fragrans* Moon may be taken as *Morat*. But proper identification and standardization should be done to identify exact species as *Morat* for desired therapeutic effect as well as minimized adulteration and substitutes.

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