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RESEARCH ARTICLE

A COMPLETE AYURVEDIC REVIEW ON SUNISHANNAKA [MARSILEA QUADRIFOLIA LINN].

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Abstract

Sunishannaka (*Marsilea quadrifolia* Linn) is a known pteridophytic herb belonging to the family Marsileaceae. Extensive usage of *Sunishannaka* as an important green leafy vegetable is understood from *Samhithas*. It is included under *pathya saka varga* by *Acharya Charaka and Vagbhata*. *Acharya Susruta* has described the drug as a *pathyasaka* (wholesome leafy vegetable) in *Raktapitta* disease. In *Charaka Samhitha*, *Arsa roga chikitsa*, a *Ghruta* preparation named *Sunishannakachangeri ghruta* is mentioned wherein *swarasa* of the plant is taken, which is indicated in *Raktarsa*, *Tridoshaja raktasrava*, *Mutragraha*, *Mandagni*, *Aruchi*, *Gudabhramsa* etc. Almost all *acharyas* have highlighted the *tridoshahara* property of the drug along with *grahi*, *agnikrit*, *deepana*, *vishya* etc properties. The article reviews about the categorization, synonyms, *karma*, *doshaghata*, therapeutic indication, *amayika prayoga*, formulations of *Sunishannaka*.

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Introduction:-

The drug *Sunishannaka* is botanically correlated as *Marsilea quadrifolia* Linn belonging to the family Marsileaceae commonly known as European water clover. The Ayurvedic references of the drug can be traced from *Charaka samhita*, *Susruta samhita*, *Ashtanga hrudaya* etc and in almost all *Nighantus* like *Dhanwantari nighantu*, *Raja Nighantu* and *Nighantu Ratnakara*, *Priya nighantu* etc. In these *Nighantus* the drug is indicated for *Gulma*, *Arsha*, *Meha*, *Jwara*, *Swasa*, *Kushta*, *Aruchi*, *Bhrama*, *Bhranti*, *Daha* etc. The drug is popularly known as 'Neeraraal or Nalila thamara' in Kerala. The drug is included under pteridophytes which are primitive vascular plant group. But the drug had been used extensively by the reputed *vaidyas* in many conditions like uterine bleeding etc.

1.1 HISTORICAL BACKGROUND

References of *Sunishannaka* can be traced from *Vedic* era itself. In *Vaikhyanasadharmasutra*, mentioning of *Sunishannaka* among vegetables is seen.^[1] Extensive usage of *Sunishannaka* as an important green leafy vegetable is understood from *Samhithas*.

Nighantus also gives ample references regarding the plant.

1.2 ETYMOLOGY[Nirukthi]^[2,3]

सुष्टु निषण्णं स्वप्नो यस्मात्।

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That which produces good sleep.

सुष्टु निषीदन्ति गुणा अस्मिन्।

The one which possess good qualities.

1.3 CATEGORIZATION AS PER CLASSICAL TEXT^[4,5,6,7,8,9,10,11,12,13,14,15,16,17]

The drug *Sunishannaka* is classified under various *ganas* and *varga* in *samhitas* and *nighantus*. These classification is done mainly based on their pharmacological and therapeutic activity.

Table: 1 Classification of *Sunishannaka* in ancient literature

Sl No:	Text	Varga / Gana
1.	<i>Charaka Samhita</i>	<i>Saka varga</i>
2.	<i>Susruta Samhita</i>	<i>Kasaya varga</i>
3.	<i>Ashtanga Hrudaya</i>	<i>Saka varga</i>
4.	<i>Dhanwantari Nighantu</i>	<i>Guducyadi varga</i>
5.	<i>Sodhala Nighantu</i>	<i>Guducyadi varga</i>
6.	<i>Abhidhanaratnamala</i>	<i>Swaduskandha</i>
7.	<i>Madanapala Nighantu</i>	<i>Saka varga</i>
8.	<i>Raja Nighantu</i>	<i>Satahvadi varga</i>
9.	<i>Kaiyyadeva Nighantu</i>	<i>Oushadhi varga</i>
10.	<i>Bhavaprakasha Nighantu</i>	<i>Saka varga</i>
11.	<i>Saraswati Nighantu</i>	<i>Ulapadi varga</i>
12.	<i>Saligrama Nighantu</i>	<i>Saka varga</i>
13.	<i>Nighantu Adarsha</i>	<i>Hamsarajadi varga</i>
14.	<i>Priya Nighantu</i>	<i>Satapushpadi varga</i>

1.4 SYNONYMS AS PER DIFFERENT CLASSICS^[6,7,8,9,10,11,12,13, 14,15, 17]

Morphological identity of *Sunishannaka* is well explained by its synonyms. *Nighantus* are the main source of synonyms, of which *Raja Nighantu* enlists the maximum number of synonyms. Synonyms mentioned in various texts are tabulated below.

Table: 2 Difference of opinion regarding synonyms of *Sunishannaka*

Sl. N	Synonyms	A.H	D.N	So.N	ARM	M.N	R.N	K.N	BP.N	Sa.N	S.N	P.N
1.	<i>Balada</i>	-	-	-	-	+	-	-	-	-	-	-
2.	<i>Baphram</i>	-	-	-	-	-	+	-	-	-	-	-
3.	<i>Cangeri sadrasah dala</i>	-	-	-	-	-	-	-	-	-	-	+
4.	<i>Cangeri sadrasah patra</i>	+	-	-	-	-	-	-	+	-	-	-
5.	<i>Caturdala</i>	+	-	-	+	-	-	-	+	-	-	-
6.	<i>Catushpatri</i>	-	-	-	-	-	-	+	+	-	-	+
7.	<i>Karkatapriya</i>	-	-	-	+	-	-	-	-	-	-	-
8.	<i>Katuka</i>	-	-	-	-	-	+	-	-	-	-	-
9.	<i>Kukkuta</i>	-	+	-	-	-	-	+	+	+	-	-
10.	<i>Kutaja</i>	-	-	+	-	-	-	-	-	-	-	-
11.	<i>Parnakah</i>	-	-	-	-	-	-	-	+	+	-	-
12.	<i>Sikhi</i>	-	+	+	-	-	+	+	+	+	-	-
13.	<i>Sitivaarah</i>	-	+	+	-	-	-	+	-	+	-	-
14.	<i>Sitivarah</i>	-	+	+	-	-	+	-	+	+	-	-
15.	<i>Srivarakah</i>	-	+	+	-	-	+	+	+	+	-	-
16.	<i>Sucidala</i>	-	-	-	-	-	+	-	-	-	-	-
17.	<i>Sucipatrah</i>	-	+	+	-	-	+	+	+	+	-	-
18.	<i>Sucyahvah</i>	-	+	-	-	-	+	-	-	-	-	-
19.	<i>Suksmapatra</i>	-	-	-	+	-	-	-	-	-	-	-
20.	<i>Sulya</i>	-	-	+	-	-	-	-	-	-	-	-
21.	<i>Sunishanna</i>	-	-	-	-	-	-	-	-	-	+	-

22.	<i>Sunisannakam</i>	-	+	-	-	-	-	-	-	-	+	+
23.	<i>Sushena</i>	-	-	-	-	+	-	-	-	-	-	-
24.	<i>Svastika</i>	+	+	+	+	+	+	+	+	+	+	+
25.	<i>Swetaambara</i>	-	-	-	-	-	+	-	-	-	-	-
26.	<i>Tilaparnika</i>	-	-	-	-	+	-	-	-	-	-	-
27.	<i>Upodakam</i>	-	-	-	+	-	-	-	-	-	-	-
28.	<i>Upodi</i>	-	-	-	+	-	-	-	-	-	-	-
29.	<i>Vayasi</i>	-	-	-	+	-	-	-	-	-	-	-
30.	<i>Vitunna</i>	-	-	-	-	-	-	+	-	-	+	-

1.5 INTERPRETATION OF SYNONYMS

Along with drug identification, synonyms gives a comprehensive idea regarding the habitat, pharmacological properties and activities of the plant.

Based on morphology: [18,19]

1. *Cangeri sadrasah patra* - Plant has leaves like *Changeri* plant
2. *Cadurdala* - Leaves are four in number
3. *Catuspatri* - Plant with four leaves
4. *Svastika* - Represents a form of wheel of Solar Visnu, consisting of four spokes crossing each other at right angles.
5. *Sushena* - Having beautiful clusters.

Based on habitat:

6. *Upodakam* - That which is seen near to water.

Based on Properties and Action:

7. *Sushni* - Plant has sleep inducing property
8. *Vitunna* - Pierced or torn

1.6 PHARMACOLOGICAL PROPERTIES ACCORDING TO CLASSICS^[7,8,11,12,13,17,20]

Rasa of *Sunishannaka* is described as *madhura* and *kashaya* in majority of the *nighantus* but *Raja Nighantu* and *Dhanwanthari Nighantu* has attributed only *kashaya* rasa to the drug. *Laghu* and *Ruksha guna* of the drug is being highlighted by most of the *nighantus*. Regarding the *virya* of *Sunishannaka*, all have quoted *Seeta virya* except *Raja Nighantu*. *Vipaka* of the drug is not given in any of the *nighantus* except in *Nighantu Adarsha* as *katu vipaka*. *Prabhava* have not been mentioned anywhere in the *nighantus*.

Table: 3 Difference of opinion regarding Rasa panchaka of Sunishannaka

Nighantus	Rasa	Guna	Virya	Vipaka
<i>D.N</i>	<i>Kashaya</i>	-	<i>Sita</i>	-
<i>So.N</i>	-	<i>Laghu</i>	-	-
<i>R.N</i>	<i>Kashaya</i>	-	<i>Usna</i>	-
<i>K.N</i>	<i>Madhura</i> <i>Kashaya</i>	<i>Laghu</i> <i>Ruksha</i>	<i>Hima</i>	-
<i>BPN</i>	<i>Madhura</i>	<i>Laghu</i> <i>Ruksha</i>	<i>Hima</i>	-
<i>N.A</i>	<i>Kashaya</i>	-	<i>Sita</i>	<i>Katu</i>
<i>P.N</i>	<i>Swadu</i> <i>Kashaya</i>	-	<i>Sita</i>	-

1.7 ACTION ON DOSHA AS PER AYURVEDIC TEXTS^[6,4,8,10,11,12,13,15,20,17]

The *dosha samantva* of *Sunishannaka* is *tridosharatva* as per all *acharyas*.

Table: 4 Action of Sunishannaka on Dosha as per Ayurvedic texts

Doshasamana	A.H	C.S	So.N	R.N	M.P.N	K.N	B.P.N	S.A	N.A	P.N
<i>Tridoshahara</i>	+	+	+	+	+	+	+	+	+	-
<i>Manodoshapahara</i>	-	-	-	-	-	-	-	-	-	+

1.8 KARMA OF SUNISHANNAKA AS PER CLASSICS^[7,8,10,12,13,11,17,6]

Nighantus and *Samhitas* provides the basic informations regarding the actions of *Sunishannaka* which mainly includes its *vrishya*, *grahi*, *vastisudhikara*, *agnikara*, *deepana*, *hridya*, *rasayana*, *rucya* and *medhya karmas*.

Table 5: Karma of Sunishannaka as per different Ayurvedic texts

Karma	D.N	So.N	M.P.N	K.N	B.P.N	R.N	P.N	A.H
<i>Vrishya</i>	+	+	-	+	+	-	+	+
<i>Grahi</i>	+	+	+	+	+	-	-	-
<i>Samgrahi</i>	+	-	-	-	-	+	+	-
<i>Vastisudhikara</i>	+	-	-	-	-	-	-	-
<i>Agnikrit</i>	+	+	-	-	-	-	-	+
<i>Deepana</i>	-	-	-	+	+	-	-	-
<i>Avidahi</i>	-	-	-	+	+	-	-	-
<i>Hridya</i>	-	-	-	+	-	-	-	-
<i>Rasayana</i>	-	-	-	-	-	+	-	-
<i>Rucya</i>	-	-	-	-	+	-	-	-
<i>Medhya</i>	-	-	-	-	-	-	+	-

1.9 THERAPEUTIC INDICATION

Sunishannaka has been mentioned in the *chikitsa* aspects of many diseases like *hridroga*, *pleeha*, *gulma*, *arsha*, *meha*, *jwara*, *swasa*, *kushta*, *aruchi*, *bhrama*, *daha* etc. The opinion of different *acharyas* are tabulated below.

Table: 6 Difference of opinion regarding therapeutic indications in Nighantus.

Indication	D.N	M.P.N	K.N	B.P.N	Guna ratnamala	R.N	P.N
<i>Hridroga</i>	+	-	-	-	-	-	-
<i>Pleeha</i>	+	-	-	-	-	-	-
<i>Gulma</i>	+	-	-	-	-	-	-
<i>Arsha</i>	+	-	-	-	-	-	-
<i>Meha</i>		+	+	+	+	-	-
<i>Jwara</i>	-	-	+	+	+	+	+
<i>Swasa</i>	-	-	+	+	+	-	-
<i>Kushta</i>	-	-	+	+	+	-	-
<i>Aruchi</i>	-	-	+	+	-	-	-
<i>Bhrama</i>	-	-	+	+	+	-	-
<i>Bhranti</i>	-	-	-	-	-	-	+
<i>Daha</i>	-	-	-	-	-	+	-

1.10 PRAYOJYA ANGA [PART USED]^[21]

Whole plant

1.11 MATRA[DOSAGE]^[22]

Juice – 10 to 20ml

1.12 AMAYIKA PRAYOGA^[23, 24, 25,29,30, 31]

- *Vataja kasa* – Saka of *Sunishannaka* as a wholesome diet is advised.
- *Urustambha* - *Sunishannaka* cooked in water and oil without adding salt given as a diet.
- *Vatarakta* - *Sunishannaka* cooked with *ghrutha* and *mamsarasa*.
- *Visha* - Advised as a wholesome green leafy vegetable.
- *Raktapitta* - Used as Saka ahara, after frying in *ghrutha*.
- *Vrana* - *lepa* with *Sunishannaka patra kalka*
- *Mutrakrichra* - Intake of *Sunishannaka beeja choorna* along with *takra*.
- *Asthirava* - Intake of *Sunishannaka* along with milk.
 - Intake of *Mukkudi* with *Sunishannaka* and *Musta*
 - Intake of *Sunishannaka* with sugar for 4 days cures all types of *srava*.

- **Jwara** - *Kashaya* prepared with *Sunishannaka*, *venupatra*, *sunti*, *musta*, and *guduchi* cures *Sannipatha jwara* within 3days.

1.13 FORMULATIONS OF SUNISHANNAKA

Ghruta kalpana

Sunishannakacangeri ghruta.
Avakpushpadyam ghrutha ^[32]

Kashaya kalpana

Pathram venuvaadikashayam. [Sahasrayogam, *Jwara chikitsa*]

Conclusion:-

Hence it can be concluded that the drug *Sunishannaka* mentioned in *Samhitas* and *Nighantus* have the properties of *tridoshaghata*, *vrishya*, *grahi*, *vastisudhikara*, *agnikara*, *deepana*, *hridya*, *rasayana*, *rucya* and *medhya karmas*. The *rasa panchakas* mentioned in *Nighantus* substantiate its clinical uses. So the drug is having a high potential therapeutically, which has to be proved clinically.

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