

A Review Article on Species used as *Musali* (*Curculigo orchoides*) and *Salam* (*Eulophia compestris*)

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Abstract

In day to day practice when we see the market samples of *Musali* it creates confusion in mind; which type *Musali* is sold by the vendor. These days various species of plants are used as *Musali* in different parts of India. Traditionally, *Salam* and *Salam panja* are also used as *Mushali*. To rule out all these differences and arrive to a definite conclusion. This is an attempt to collect the referances from *samhitas* and *nighantus* about *musali*. Botanically classify the species which are used as *musali*. Describe all the species which are in use as *musali* in a systematic manner.

Keywords

Mushali, Shweta Musali, Salam, Talmuli



Greentree Group

Received 09/08/16 Accepted 29/08/16 Published 10/09/16

INTRODUCTION

The term *musali* is famous in traditional Indian system of medicine. Medicine with *musali* name is known to many household in India. Most commonly used as a tonic, aphrodisiac, rejuvenator for increasing vigour and stamina. There are two types of *musali* that are in use *Shveta* and *Krushna*. In nature both Musli prefer same habitat and commonly grows side by side. The traditional healers prefer the Musli herbs growing side by side for preparing the herbal formulations. It is a bitter fact that in indigenous systems of medicine, Kali (Black) Musli is used more frequently as compared to the Safed Musli. *Krushna musali* (*Curculigo orchiodes*) is a plant grown in a asian countries like india, pakistan, malaysia. *Curculigo orchiodes* is a herbaceous tuberous perennial with a short or elongate root stock bearing several fleshy lateral roots. The plant can grow up to 10-35 cm tall. Leaves sessile or petiolate 15-45x1.3-2.5 cm, linear or linear lanceolate, tips sometimes rooting, scape very short, clavate. It has hardy leaves and can take shade: the leaves will just get a bit longer in the shade than in full sun shine. During flowering period it opens a golden yellow flower at the leaf base every day. With name

shwveta musali few species of asparagaceae family are in use and also roots of *salam mishri* and *salampanja mishri* are used as *musali*. The word *mishri* is derived from *musali*, so few people call it as *salam musali*, *salam panja musali*. So, in this review article it has been tried to get all details of *musali* and *mishries* from various references.

MUSALI -

The word *Musali* is not mentioned in Charaka samhita whereas *Sushruta* mentioned the word *Talmuli* in *shwas chikitsa* which is synonym of *krushna musali*. With the name *musali* we get two drugs. One is *shwet musali* and another *krishna musali*. Both type of *musali* that is shwet and *Krishna musali* possess similar property but in *Samhitas* it is rarely used in formulations except *Pakas*.

The word

Musali means = मुस् खण्डने .

दोषान् इति मुस्यति खण्डयति ।

मुस्यति खण्डयति गुदरोगम् अनिलम् च ॥

Krishna musali-

Hindi name: *Kali mushali*

Latin name: *Curculigo orchioides*

Family: Amaryllidaceae

तालमुली तु विध्दभिर्मुशली परिकीर्तिता ।

मुशली मधुरा वृष्या वीर्योष्णा बृहणी गुरु

तिक्ता रसायनी हन्ति गुदजान्यनिलं तथा ॥ भा. प्र. गु. वर्ग १८३

कोलमज्जां तालमूलम ऋष्यचर्ममसीमपि । लिह्यात् क्षौद्रेणङ्ग..... सु. श्वास चि.

According to *Bhavprakash*, *Talmuli* is the synonyms of *krishna musali*. The properties of *Krishna musali* explained in *bhavprakash nighantu* are *Madhura* and *Tikta Rasa*, *Ushna Virya*, and *Guru Guna*, *Vrushya*, *Brihana*, *Rasayana*, *Arshoghna*, and *Vatanashana*. According to *Acharya Sushruta Musali* is useful in treatment of *shwasa*. Traditionally it is used in management of various disorders like *arsha*, *kamala* and *shula*. Due to *Madhura* and *Tikta Rasa*, *Ushna Virya*, and *Guru guna* it performs various action (karmas) in the body like *Vrushya*, *Vajikara*, *Bruhana*, *Rasayana*, *Shramahara*, *Agnivardhaka*, *Sthairyakara*, *Mardavkara*, *Vatapitta shamaka*.

मुशली मधुरा शीता वृष्या पुष्टिबलपदा ।

पिच्छिला कफदा पित्तदाह श्रमहरा परा ॥

मुसली रसपाकाभ्यां स्वादुः शीताऽग्निवर्धिनी ।

वातपित्तहरा वृष्या स्थैर्यमार्दवदायिनी ॥

रा. नि.

शोढल

मुसली तालमुलीच सुवहा तालपत्रिका ।

गोधापदी हेमपुशपी भुताली दीर्घकन्दिका। रा. नि.

According to *Raja nighantukara Musali*, *Talmuli*, *Suvaha*, *Talpatrika*, *Godhapadi*,

Hemapushpi, *Bhutali*, *Dirghakandika* are synonyms of *Musali*.

Etymological derivation of synonyms-

तालमुली – Roots are similar to Tal (Palm tree)

सुवहा – Posses beautiful odor.

तालपत्रिका –Leaf are similar to Tal (Palm tree)

गोधापदी – Roots are similar leg of Godha (a reptile – monitor lizard)

हेमपुशपी– Flowers are golden color.

ताली ट्ट similar to palm tree but short in height

दीर्घकन्दिका– deep penetrating roots

Following are some of the medicinal uses of Krishna musali according to Ayurveda-

Shandhatwa (Male libido): Crush root of black *musali* and make it into powder form. Take 250gms of this powder and mix 50ml of honey to it. Take ½ tsp of this solution 2 times a day for 1-2 weeks.

Shwetapradara (Leucorrhoea): Mix 5gm. of powder made out of its roots with jaggery and take it 2 times a day.

Kamala (Jaundice): Mix 5grms of root powder in warm milk properly and take is once every day. You could continue your regular medication and take this solution for faster relief. This could aid in fast recovery from the ailment

Mutrakrichha (Dysuria): In case you are suffering from this ailment where the urination is painful and difficult then consume a mixture of 3grms of dried root

powder of black *musali* with warm milk 1 time of your choice in a day

Amlapitta (Hyperacidity): Take 3gms of black *musali* powder and mix it in milk. Take is once a day. It would help in getting rid of heartburn and stomach gas and other digestion related problems

Twakavikar (skin diseases): Crush the roots and prepare a past out of powder. Apply this on skin to get rid of pimples and rashes. You could also use it as a face pack to get glowing skin

Constituents of *Krishna musali*

Krishna musali contains following active compounds –

- Starch – 43.48%
- Tannins – 4.15%
- Ash – 8.6%
- Enzymes – 14.18%
- Glycoside
- Syringic acid
- Curculigoside
- Flavone glycoside-5
- Alkloid lycorine
- Palmatic acid

Scientific classification of *C. orchioides* -

Table 1 Showing scientific classification of *C. Orchioid*.

Scientific classification

Kingdom:	Plantae
Order:	Asparagales
Family:	Hypoxidaceae
Genus:	<i>Curculigo</i>
Species:	<i>C. orchioides</i>

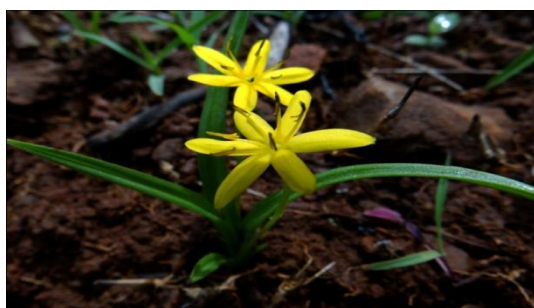


Image No. 3 *C.orchioid* Roots

Shweta musali-

Hindi name: *Safed Musali*

Sanskrit Name: *Shweta musali*

Latin name: *Asparagus adscendens*

Family: Liliaceae (Asparagaceae)

Habitat: it is found in E. Asia, Afghanistan, Himalaya and forest of Uttarpradesh.

Description: It is an evergreen shrub, the flowers are dioeciously either male or female but only one sex is to be found on any one plant so both male and female plant must be grown and are pollinated by bees.

Useful part: Root and Stem

Principle constituents: It has several principle constituents like steroidal Glycosides, several compounds like 3-heptadecanone, 8- Hexadecenoic acid, methyl pentacosanoate, palmitic acid, steric acid.

Medicinal Uses:

Roots are used in diarrhoea, haematuria, leucorrhoea, general debility. It is used as an aphrodisiac as well as to increased sperm count. Effectively used in erectile dysfunctioning and premature ejaculation. It is useful in dubieties related debilities. Its use as general tonic is also well known all over India, it has been found very effective in increasing male potency and is considered as an alternative to Viagra. It offers significant protection against stress induced changes, it is used for increasing

general body immunity, cures physical illness and weakness, can be taken as a milk decoction, powder, confection (*musali paka*).



Image No. 4- *Asparagus adscendens*

Following Species of liliaceae Family are also used as *Shweta musali* –

1. *Chlorophytum tuberosum*
2. *Chlorophytum borivillanum*
3. *Chlorophytum arundinaceum*

1 *Chlorophytum tuberosum* -

Table 2 - Showing scientific classification of *C. tuberosum*.

Scientific classification	
Kingdom:	Plantae
Order:	Asparagales
Family:	Asparagaceae
Subfamily:	Agavoideae
Genus:	<i>Chlorophytum</i>
Species:	<i>C. tuberosum</i>

Following Species of liliaceae Family are also used as *Shweta musali* –

4. *Chlorophytum tuberosum*
5. *Chlorophytum borivillanum*
6. *Chlorophytum arundinaceum*

1 *Chlorophytum tuberosum* -

Table 2 - Showing scientific classification of *C. tuberosum*.

Scientific classification	
Kingdom:	Plantae
Order:	Asparagales
Family:	Asparagaceae
Subfamily:	Agavoideae
Genus:	<i>Chlorophytum</i>
Species:	<i>C. tuberosum</i>



Image No. 5- *Chlorophytum tuberosum*

2) *Chlorophytum borivillianum* -

It is a herb with lanceolate leaves, from tropical wet forests in peninsular India. The

Hindi name is Safed musali (also commonly known as musali). It is cultivated and eaten as a leaf vegetable in some parts of India, and its roots are used medicinally as a sex tonic under the name Safed musali. The medicinal value is thought to derive from its saponin content, up to 17 percent by dry weight. It has also recently been suggested that it may produce an aphrodisiac agent. As medicinal demand has increased, the plant has been brought under cultivation. The saponins and alkaloids present in the plant are the source of its alleged aphrodisiac properties. In traditional Indian medicine it is used as 'Rasayan' or adaptogen.

Table.3 Showing scientific classification of *C. borivillianum*

Scientific classification	
Kingdom:	Plantae
Order:	Asparagales
Family:	Asparagaceae
Subfamily:	Agavoideae
Genus:	<i>Chlorophytum</i>
Species:	<i>C. borivillianum</i>



Image No. 6-*Chlorophytum borivillianum***3) *Chlorophytum arundinaceum* –****Image No. 7 -*Chlorophytum arundinaceum***Table No. 4 - Showing scientific classification of- *C. arundinaceum*

Scientific classification	
Kingdom:	<u>Plantae</u>
Order:	<u>Asparagales</u>
Family:	<u>Asparagaceae</u>
Subfamily:	<u>Agavoideae</u>
Genus:	<u><i>Chlorophytum</i></u>
Species:	<i>C. arundinaceum</i>

***Salam mishri* :**

Eulophia campestris - it is known as *Salam Mishri* or *Salam Musali* and it is mentioned as *Munjataka* in *Charaka Samhita*.

Table No.5 - Showing scientific classification of - *E. campestris*

Scientific classification	
Kingdom:	<u>Plantae</u>
Division:	<u>Magnoliophyta</u>
Class:	<u>Monocots</u>
Order:	<u>Asparagales</u>
Family:	<u>orchidaceae</u>
Genus:	<u><i>Eulophia</i></u>
Species:	<u><i>campestris</i></u>

Other Names

- English name- *Salep*
- Hindi name – *Salam*
- Sanskrit name – *Munjatak*

Habitat

It is found the levels of 8000 to 12000 feet. It is more common in the western Himalayan region. It is also found in Tibetan region, Nepal, Kashmir, and Baluchistan.

Morphology

The stem of the plant is 1 to 3 feet. At the apex of the stem there arise the 2 to 6 inch long ovate shaped leaves. Flower presentation 1 to 6 inch long that has 2/3

inch long flowers which are of purple color. The rhizome is round which is yellow to brown in colour.

Chemical Constituents

The rhizome contains a bitter compound and a volatile oil. It contains moisture which constitutes 14 % and ash that is 3%. The leaves of the plant contain loroglossin.

Pharmacology

It is *Vata pitta* suppressant it strengthens the nervous system and also brain. It improves the peristaltic movements of the gastro intestinal tract. It is aphrodisiac in nature. It helps in gaining strength in the body and avoids the weakness.

According to Ayurveda -

- *Gunna* (properties) – *Guru* (heavy) and *Snigdha* (slimy)
- *Rasa* (taste) – *Madhura* (sweet)
- *Vipaka*- *Madhura*
- *Virya* (potency) – *Sheet* (cold)
- *Doshaghanat*- *Vata-pittashamaka*.

बल्यः शीतो गुरुः स्निग्धः तर्पणो बृहणात्मकः ।
वातपित्तहरः स्वादुवृष्यो मुञ्जातकः स्मृतः ॥ चरक सु. २७
मुञ्जातक अभावे तालमस्तकम् । वृंद

According to *Acharya Vrinda, Talmastakam* that is *Krishna musali* can be used in absence of *Munjataka*.

Pharmacological action and properties of *Munjatka*-

बल्यः : - The term *Balya* stand for action that enhance the “*Bala*” and the word *Bala* refers to the strength and ability of the body with the help of *Guru* and *Snigdha Guna* and *Shita Virya* it enhance the strength and ability (t.e. *bala*) of the body.

तर्पणो - The term *Tarpana* stands for nourishment of *Rasadi Dhatus* quickly.

बृहण - *Brihana* is the process of nourishment of *Mamsadi dhatus* and improves tone of body

वृष्य The term *Vrushya* means Aphrodisiac. With above *Gunas* and *Karmas* this drug act as *Saptadhatu Vardhaka* and result into increase in *Shukradhatu* which causes Aphrodisiac action.

Indication

- **Powder** – it is being used mainly as the aphrodisiac agent and improves the general health condition of the body.

- **Dose**- 2 to 3 gm



Image No. 8 *Eulophia compestris* plant

Following Species of plants are used as *Salam mishri* –

Eulophia nuda

Eulophia vera

Eulophia larbacea

Eulophia pratensis

Alium macleanii

Orchis mascula

Orchis latifolia

orchis laxiflora

***Eulophia nuda* -**

Amarkanda is mentioned by *Raj nighantukara*. He explained its synonyms and properties.

Sanskrit name – *Malakanda*

Marathi and Hindi name – *Amarkanda*

Habitat – Dang forest (Gujrat) and Kokan.

Useful part – *Kanda* (Rhizome)

Dose – 5-10 *Rati* (up to 1 gm)

Raja nighantukara explained the synonyms and property of *Malakanda* are as follow:

Synonyms -	मालाकंदः स्यादलिकन्दश्च पङ्गतिककन्दश्च । त्रिशिखदला ग्रन्थिदला कन्दलता कीर्तिता षोढा ।	रा. नि.
Property -	मालाकंदःसुतीक्ष्णः स्याद गण्डमालाविनाशकः । दीपनो गुल्महारि च वातश्लेष्मापकर्षकृत ॥	रा. नि.

The tubers or Rhizome of *Amarkanda* used in *VataShleshmaja Vikara*. It has *Tikshna Guna*, *Dipana Karma* and *Vata-Kaphahara* action on *dosha*. Tubers are used for Bronchitis,

(वातश्लेष्मापकर्षकृत), tumours, (गुल्महारि) and scrofulous glands .

Traditionally tubers are used in inflamed joint diseases; lumbar pain and it also used in the form of lepa in *Gomutra* (external application) for anti-inflammatory action on joint diseases and inflamed scrofulous glands. It exerts tonic action on body that's why useful in degenerative disorders and fatigue.



Image No.10 Rhizome of *E. nuda*



Image No.11 Flower of *E. nuda*



Image No.12 Plant of *E. nuda*



Image No.15 *Orchis mascula*



Image No.13- Plant of *Orchis latifolia*



Image No.16 -*Orchis mascula* roots



Image No.14 Roots of *orchis latifolia* (*salam panja*)



Image No.17-*Orchis mascula*

Semal musali:

Fresh young roots of *Shalmali* t. e. *Bombax ceiba* are called as *Semal Musali*. It increases semen, and promotes vigour and vitality. After making scar to young root, there oozes liquid which is collected. This liquid is taken as it is or after drying, mixing with *Tila* [Sesame], for *Rasayana karma* t.e. *Rejuvenation* and *Vajikarana* t.e. aphrodisiac action.

शुक्रवृध्यर्थम् शुक्रक्षये..... विदारीकंदशाल्मली..... हरित सं चि. १०
 रसायनवाजीकरणार्थम् ।
 उदकं शाल्मली मूलादव्रणीताद् गलितं घटे ।
 शोषितं सतिलं खादेत् केवलं वा वृषायने ॥ वैद्यमनोसा



Image No.18- *Shalmali*, *Bombax ceiba*

DISCUSSION

The word *Musali* is not mentioned by *acharya charaka*. *Acharya sushruta* mentioned it as *Talmuli* in *shwas vyadhi chikitsa*. Later on *acharya bhavprakasha*

describe it by name *Musali*. *Shodhala* and *Raj Nighantukara* also describe it. All of the *Smahitakara* explained Only *Musali* t.e. *Krishna musali*. So in *samhita* and *Nighantu* the word *musali* is used for *Krishna musali* (*Talmuli*) that is *Curculigo orcheiod*.

In today's era we get two types of *musali* in market that are *Shweta* and *Krishna Musali*. By name *shweta mushali* different plant roots are used such as *Asparagus adscendens*, *Chlorophytum borivillanum*, *chlorophytum tuberosum*, *chlorophytum arundinaceum*. These all species belong to family *Asparagaceae* all are having similar properties and action. Now a day's few of them are commercially cultivated.

The property of *Krishna Mushali* mentioned in Ayurvedic literature is *Tikta Madhura Rasa*, *Snigdha Guna*, *Ushna virya* and *Brihana*, *Balya Karma*. Due *Tikta rasa* it helps to increase *Dhatwagni* of *Saptadhatu* and with the help of *Ushna virya* it act as *nervine stimulants*' hence it is useful in management of *erectile dysfunction* and *Libido*. It increases *Vigour vitality* and *tone of body*. Clinically *shweta musali* possess similar properties and action as that of *Krishna musali* and it is one of the types of *Shatavari* (*Asparagus racemosus*) and also belongs to family *Liliaceae*.

Munjataka is one of the plants mentioned in *Charaka samhita*. According to various commentators' *Munjataka* means *Salam Mishri*. In Indian subcontinent traditionally *Salam* and *Salam panja mishri* are used for their *Bhrihana Balya Vrushya karma*. Both are having *Sheeta virya* and *Snigdha, Picchila gunas* due that it increases *Saptadhatus*, vigour vitality and tone of the body. Also various species of *Eulophia* are used as *salam* Like *E. compestris*, *E. nuda*, *E. vera*, *O. mascula* and *O. latifolia*. Among them *Eulophia nuda* is called as *Amarkanda* which is describe by *Raja Nighantu* and it possess similar properties like *Salam* and used by local community of Western *ghata* and *Kokan* for *Brihana* and Aphrodisiac action. The root of *E. latifolia* is used as *Salam Panja*. The logical reason behind the word *Panja* is, when *E. latifolia* roots dries it attained shape Like *Panja* t. e. palm.

Also the roots of *Allium macleanii* are called as *Badshahi Salam* or *Lashuniya salam*. In *kokan* area of Maharashtra *E. partensis* roots are used as *salam* while in western Himalaya *E. larbiaceae* are used as *salam*.

As above discussed all these species are used for *Brihana karma* and Aphrodisiac action in different parts of India and they are

having similar properties and action. But considering their *Viryas* and *Gunas* we can selectively use them according to *Agni of Rugna*. Clinically *Krishna mushali* is easy to digest due to its *Ushna virya* and *Shweta mushali*, *Salam mushali*, *Salam panja mushali* are somewhat *Guru guna* hence they are used in a person having proper digestive fire (*Agni*).

CONCLUSION

Musalies t.e. *Krishna musali* and *shveta musali* including its different species, all are having similar properties and uses. Commonly they are used as tonic, aphrodisiac, rejuvenator. They are used as *Rasayana*, *Vajikara*, for increasing vigour and vitality. Also used in oligospermia and to treat libido. According to *Aacharya vrunda Talmuli* t.e. *Krishna musali* can be used in absence [abhava] of *munjataka* t. e. *salam musali*. Both are belong to same family that is orchidaceae. *Safed musali* also poses similar properties and action as well as uses as that of *Krishna musali*. Hence all types of *musalis* and *mishris* are used in absence [absence] of each other, after observing all these references I want to conclude that with the term *musali* we should use *Krishna musali* t.e. *curculigo*

orchoidies. *Salam* and *salam panja* are heavy to digest, hence it is used in *Diptagni purusha* t.e. person having good digestive capacity and appetite. *Krishna musali* poses *ushna veerya*, hence it can be given to person having *Mandagni* or to improve *Agni* and *Bala*.

REFERENCES

1. Acharya P. V. Sharma and Dr. Guruprasad Sharma, Kaideva Nighantu by Kaiyyadeva, Chaukhamba Orientalia, Edition 1st 1979.
2. Bapalal G. Vaidya(1999), Nighantu Adarsha (Vol.II), Chaukhambha Bharati Academy, Varanasi, India.
3. Bapalal G. Vaidya, Nighantu Adarsha (Vol.-1), Chaukhamba Bharti Academy, Edition. 3rd 2002.
4. Bapalal Vaidya, (1982), some controversial drugs in Indian medicine, Chaukhambha Orientalia, Varanasi, India.
5. Dr. G. S. Pande, Bhavprakasha Nighantu (Indian Materia Medica) of Sri Bhavamishra, Commentry by Dr. K. C. Chunekara, Chaukhamba Bharti Academy, Varanasi, Edition 10th 1995. Reprint: 2002
6. Dr. Indradeva Tripathi, Raj Nighantu by Pandit Narahari, Chukhambha Krishnadas Academy, Varanasi, Edition 3rd, 2003.
7. Dr. K. M. Nadkarni, R. N. Chopra, Indian Materia Medica Bombay Popular Prakashana, 1976.
8. Dr. P. V. Sharma, Dravyaguna Vijnana (1st & 4th part) Chaukhamba Vishva Bharti Edition-2006.
9. Kaviraj Kunjalal, Bhisgratna, Sushrut Samhita (English Translation) Part -1, & 2, Chaukhamba Sanskrit Series Office & Krishnadas Academy, Varanasi, Edition-2nd, 2002.
10. The Ayurvedic Pharmacopoeia Of India, Part 1, Vol I, National Institute Of Science Communication, 1st Edition: 1990, Reprint: 2001.
11. Oudhia, Pankaj. "Problems perceived by safed moosli (*Chlorophytum borivilianum*) growers of Chhattisgarh (India) region: a study." Proceedings of the national seminar on the frontiers of research and development in medicinal plants.. Vol. 22. No. 4a. 2000.
12. F. Thakur M., Bhargava S., Dixit V.K. "Immunomodulatory activity of *Chlorophytum borivilianum* Sant." *Evidence-based Complementary and Alternative Medicine*. 4 (4) (pp 419-423), 2007.