



MUSTA (*Cyperus rotundus*)-A Critical Review

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Received on 23/12/2016

Accepted on 27/12/2016

Published on 05/02/2017

ABSTRACT

Life style disorders are deeply affecting human health now a day. *Shoulya (Medovridhi)* and Prameha are major health issues in the present era. Musta having Botanical name *Cyperus rotundus* belongs to Cyperaceae Family is a drug which acts on Prameha and Medovridhi both, as mentioned by Acharya Charaka in Prameha chikitsa in Chikitsa sthana and in Lekhaniyae Mahakashaya in Sutra Sthana. Musta is having Tikta, Katu, Kashaya Rasa, Laghu, Ruksha Guna, Sheeta Virya, Katu Vipaka, Kapha-Pittahara Doshakarma. This article aims to summarise the drug Musta regarding its morphology, chemical constituents and the therapeutic application.

KEY WORDS: *Musta*, Morphology, Chemical constituents, *Rasapanchaka*,

INTRODUCTION

It is perennial weed, thrives on all kinds of soils under varying climatic conditions, regeneration is mainly through underground rhizomes. Optimum temperature range for its sprouting is 25-35°C. The plant is propagated by tubers¹.

It is found, throughout India upto an elevation of 1800m, from Kashmir to Shimla, Garhwal & Khasia hills, throughout the plains of almost all the states & ascending the mountains of the central tableland from Mount-abu & Pune to the Nilgiri Hills¹.

Botanical name : *Cyperus rotundus*
Family Name : Cyperaceae
Botanical Synonyms : *Cyperus rotundus*

Synonyms: *Must, Vaarid, Kuruvindh, Krodhakasheru, Bhedra musta, Gundra, Nagarmusta, Musta, Abherabheda, Megha, Gangaeya, Ambhodda, Ghana, Vrahaad, Pithaar, Pindamustaka, Purna Koshtha, Bhedra hamsa, Prachaya, Rajakasheruk, Ambuhara, Vraha, Naadeya, Naagr, Shishira, Abeed, Jeemut, Jalaad, Anukesaar.*

VERNACULAR NAMES²

1. Sanskrit : Musta, Mustaka
2. Bengali : Moothoo, Mutha, Nagarmothee
3. Gujarathi : Barik Motha
4. Hindi : Korehi-jhar
5. Kannada : Konnari Gadde
6. Malayalam: Karimuttan
7. Marathi : Moth, Nagarmoth, Bimbal
8. Tamil : Korai-kizanghu
9. Telugu : Tungamusti
10. Konkani : Bhadramusti
11. Assam : Mutha, Somad koophee
12. Punjabi : Mutha, Motha
13. Urdu : Sad Kufi
14. English : Nut grass

Family Characters³ (Cyperacea)

Perennial herbs (rarely annual) with the habit of grasses. Roots fibrous, Stem terete or 3-angled, usually simple. Leaves grass like, (rarely 0), 3-ranked, mostly crowded at the base of the stem (the upper fewer), with tubular sheaths which are more or less closed or the lower split to the base, ligule 0 or a short prolongation of the mouth of the sheath opposite to the blade.

Inflorescence of solitary, fasciculate, paniculate or spicate spikelets, composed of small distichously or spirally imbricate scales (glumes)

Flower minute, 1-2-sexual, in the axils of glumes.

Perianth 0, or of 2 or more hypogynous bristles or scales (ovary enclosed in a utricle in carex).

Stamens 1-3, filaments flattened, anthers basiflexed, linear.

Ovary 1-celled, ovule solitary, basal, erect, anatropous, style short or long, Stigmas 2-3. Fruit a compressed or Trigonous nut.

Seed erect, free, embryo minute, with in the base of the floury albumen.

Genus Characters (Cyperus)

Perennial (rarely annual), glabrous herbs

Rhizomes – creeping, short or long or 0

Leaves – Mostly towards the base of the stem, occasionally reduced to sheaths

Spikelets in solitary globose or umbellate heads or spikes, involucre bracts 1 or more, foliaceous, bracteoles under the secondary divisions of the inflorescence, rhachilla usually persistent, not or in a few species disarticulating towards the base, sometimes with membranous wings derived from the persistent glume-bases. Glumes distichous, the 2 lowest empty, those above 2-sexual, all nearly equal, deciduous from below upwards, the uppermost 1-3, sessile or empty, hypogynous scales or bristles 0.

Stamens-1-3, anthers linear or oblong

Ovary-compressed, style-short or long, stigma-2 or 3.

Fruits-Trigonous, triquetrous, obovoid or plano-convex.

Species-400-Tropical & warm temperate regions.

SPECIES CHARACTERS

Glabrous, stolons elongated, slender, 10-20 cm long, bearing hard ovoid tunicate black fragrant tubers 0.8-2.5 cm diameter

Root-fibres, clothed with flexuous hairs

Stems subsolitary, 10-75cm long triquetrous at the top, sometimes tuberous at the base

Leaves- Shorter or longer than the stem, narrowly linear 4-8mm broad, finely acuminate, flat, 1-nerved.

Umbel- Simple or compound, rays 2-8, the longest reaching 7.5 cm, long bearing, short spikes of 3-10 slender spreading red-brown spikelets (the inflorescence sometimes contracted into a head, occasionally of only one spikelet)

Bracts 3, variable in length, the longest reaching 15 cm, long, but sometimes abbreviated and much shorter than the head. Spikelets variable in length, 1.6-3.8cm by 2.5cm, linear, subacute, red brown, 10-50 flowered, compressed, rhachilla with hyaline wings.

Glumes 3.4mm long, oblong, obtuse or slightly apiculate, black reddish brown, 3-7 nerved, sides, margins and tip hyaline.

Stamens-3, Anthers 2.5mm long, Nut 1.6mm long, broadly obovoid, trigonous, greyish black, style-1.6 mm long, Stigma-

3, elongated reaching 4mm long, much exerted.

Chemical constituents of Musta¹

B-sitosterol, 4 alpha, 5 alpha-oxidoeudesm-11-en-3alpha-ol from (rhizome), pinene, cineol, alcohol-isocyperol (essential oil from the tubers), linolenic, linolic, oleic, myristic and stearic acids and glycerol (fatty oils), a sesquiterpeneketone-mustakone and copaene, cyperotundone sesquiterpenes, copadiene, epoxyguaine, rotundone and cyperolone, cyperenone designated as isopatchoul and aureusidine (essential oil) two sesquiterpenic ketoalcohols, alpha rotunole, Beta rotunole, kobusone and isokobusone, oleanic acid and its glycosides oleanolic -3-O-neohesperidoside along with sitosterol, sesquiterpenes, alpha cyperone, cyperene, Beta-selinine and cyperenone (tubers), duteolin and aureusidin (leaves).

Rasa panchaka of Musta⁴ -

RASA - Tikta, Katu, Kashaya

GUNA - Laghu, Ruksha

VIRYA - Sheeta

VIPAKA - Katu

DOSHAKARMA - Kaphapittahara

MATERIALS AND METHODS

A Review of categorization of Musta from various literary books of ayurveda and internet media.

TABLE NO.1 SHOWING GANA-VARGA OF MUSTA

NIGHANTU	Gana/Varga
Charaka Samhita	Triptihana, Trishana nighrana, Lekhanya, Kanduhana, Stanya shodhana
Sushruta Samhita	Mustaadi gana, Vachaadi gana
Vagbhatta	Karpuraadi varga
Bhavaprakasaha Nighantu	Karpuraadi varga
Madanpala Nighantu	Mustaadi Varga
Kaiyadeva Nighantu	Oushadhi Varga
Madhava Dravyaguna	Vividha Oshadha varga
Nighantu Aadarsh	Mustaadi varga
Raja Nighantu	Pippalyaadi Varga
Priya Nighantu	Shatpushpaadi Varga

THERAPEUTIC USES⁵

Musta is used in the management of various diseases in the following two forms.

Bahya prayoga (external application)

Abhyanthara prayoga (internal use)

1. Bahya prayoga :

- The paste of Nut grass is used in treatment of skin related ailments like scabies and eczema and help in relieving itching.
- The powder is massaged to reduce the subcutaneous fat deposition in case of obese people.
- The paste is used in increasing the size of breasts. It also purifies the milk , improves eyesight and helps in eye related ailments.
- It is often used as an insect repellent for perfuming clothing.

2. Abhyanthara prayoga:

- The extract from the roots is installed into eyes in conjunctivitis to reduce the pain , redness and ocular discharges.
- Nut grass when taken in powdered form , improves digestive system ,removes worms from the gastro intestinal tract cures infection and purifies blood.
- Nut grass proves useful in diseases like psychosis and epilepsy and mental disease.
- The herb helps in healing wounds and uterine contractions and provides strength to the body.
- It is used as a diuretic to treat ulcers and as an emmenagogue.
- The herb proves to be a keen stimulant in appetite , digestion and digestion of amma.
- Nut grass is an effective remedy for distaste , vomiting, diarrhoea, colitis, and dyspepsia.
- It is considered as the best herb for treating any type of fever. In Fever-

Tubers are useful in infusion or as decoction in fever.

PART USED⁶ : Whole plant

DOSAGE⁶

Powder: 1-3gm

Fresh juice : 5-10ml

Decoction: 20-40 ml

SUBSTITUTES⁷

Cyperus scariosus R.Br. and *Cyperus arundinaceum* Baker are used as substitute to *Cyperus rotundus*.

CONCLUSION

The above review reveals that the plant belongs to Cyperaceae family. It is having a wide range of medicinal value like in obesity, skin diseases, conjunctivitis, psychosis, Epilepsy, Vomiting, Diarrhoea, fever etc. Acharya Charaka mentioned it under Triptighana Mahakashaya, Trishana Nigrahan Mahakashaya, Lekhaniya Mahakashaya, Kandughana Mahakashaya and Stanyashodhana Mahakashaya.. Musta is having Tikta Katu kashaya, Rasa, Katu vipaka, Sheeta virya. Its dose in powder form is 1-3gm , Fresh juice 5-10ml, Decoction 20-40ml. Its useful part is Whole plant.

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Source of support: Nil
Conflict of interest: None Declared