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SWETA MUSLI (*Chlorophytum borivillianum* Linn.): A DRUG FOR LIFESTYLE DISORDERS

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Abstract: Sweta Musli is an important medicinal plant used for various diseases. It is being used for therapeutic application in Ayurveda, Unani, and Allopathic Medicinal system. Tubers of Sweta Musli are used for Rheumatic and Nervous complaints and also useful in Diabetes. The root is used as tonic for general debility and also has outstanding aphrodisiac and rejuvenating properties. It acts as an immuno-modulator. It is good for all round development of health. It is used in many lifestyle disorders due to its antioxidant, antidiabetic, anti stress, analgesic, immuno-modulatory, nutritive, hypo-lipidemic activity. Due to its excellent healthcare properties, there is vast demand of Sweta Musli all over the world. Present study is an attempt to review the classical references, modern pharmacological validations and botanical sources of Sweta Musli.

Keywords: Sweta Musli, Antioxidant, Anti diabetic, Analgesic, Immuno-modulatory.

Introduction: Sweta Musli has been recognized as the sixth most important herb by medicinal plants Board. Sweta Musli is one of the focus drugs in Ayurveda, reputed for its tonic, rejuvenating and aphrodisiac properties. Presently two types of Musli are being used in therapeutics. These are-1. Sweta Musli 2. Krishna Musli.

Botanical Identity: There are around 256 varieties of *Chlorophytum* in the world, 17 species of *Chlorophytum* have been reported from India, native species are sold as Sweta

Musli in Indian drug market. Because of its significant medicinal properties, *C. borivillianum*, a variety of safed Musli has got maximum demand and commercial value [1].

Classical Pharmacology (*Rasa Panchak*)

Rasa : Madhur
Guna : Guru, Snigdha
Vipak : Madhur
Virya : Sheeta
Dosha karma : Vata Pittashamak,
Kaphavardhak [2].

Therapeutic Indication in Ayurvedic Text

Ayurvedic text	Formulation	Indication
Chakradatta	Suran modak, Kshudhawati gutika, Muslikand	Piles, Amlapita, Enlargement of Earpinna [3]
Vangsen		Udar roga, Arsh, Kshudra rog, Raktapitta, Medoroga, Sotha, Vrana, and Rasayana chikitsa. Granthiroga and Vranasotha [4]
Gad nigrath		Arsha and Switra chikitsa Mutraghat [5].
Sharangdhar Samhita	churna, vatak, raskalpana	Piles and as Semanogogues and Aphrodisiac drug [6]
Yoga ratnakar	Sannipat bhairav ras, Satvaryadi yog, Keshar pak, Rativridhdhikar modak and Rativallabhakhyapugpak.	Antipyretic and Aphrodisiac [7]
Bhaisjya ratnawali	Ashwagandharist	Murchchha [8]
Vanaushadhi chandrody		Diarrhoea and Dysentery [9]
Abhinav Buti Darpan		Osteo-arthritis, Stone, Leucorrhoea, IBS, Diabetes and as aphrodisiac [10]

Therapeutic Indication in Ayurvedic Nighantu Text

Nighantu	Indication
ShodhalNighantu	Vajikaran, Atisarnashani Agnivardhni, Vatapittahar sthryamardavdayini ^[11]
Madanpal Nighantu	Brihan, Balya, Arshoghna, Vatashamak ^[12]
KaiydevNighantu	Balya ^[13]
Raj Nighantu	Vrishya, pustibalaprada, pita dah shramhara ^[14]
Bhavaprakash Nighantu	Vrishya Brihan, Rasayana, Arshoghna, Vatshamak ^[15]
Saraswati Nighantu	Arshoghni ^[16]
Rajbhallava Nighantu	Rasayan, Vatshamak, Grahaniroghar ^[17]
Shaligram Nighantu	Vrishya, Dhatuvarhdak, Balya, Rasayana, Pitta dahahar, Raktadoshnashak, Shramhar ^[18]
Nighantu Adarsha	Balya, Vajikar, diabetes ^[19]
PriyaNighantu	Vrisya, Balya, Rasayana, Vatshamak ^[20]
Nighantu kalpdrum	Vrishya, Harmful to pattik prakriti ^[21]
Hridyadeepak Nighantu	Vataghna ^[22]
Dravyaguna vigyan	VPshamak, Balya, Vrisya use in Mutrakrichchha, Puyameh and Ikshumeh ^[23]

Therapeutic Indication in Recent Literature

Indian Medicinal Plant: The *Sweta Musli* identified and mentioned as *A. adscendens* and *C. arundinaceum* with vernacular names, habitat, and morphology. The tuberous roots are used as demulcent and tonic. They are said to be useful in diarrhoea, dysentery and general debility ^[24].

Indian Materia Medica: *A. ascendence* and *C. arundinaceum* are identified as *Sweta Musli*. Useful part is tuberous root. Constituents are Asparagin, albuminous matter, mucilage and cellulose. Powdered root is found to contain watery extract, cellulose, moisture and ash. It is nutritive tonic, galactogogue and demulcent. Colour of tubers is white swell up with water ^[25].

Indigenous Drugs of India: R.N.Chopra identified *Safed Musli* as *A. ascendens* (*Liliaceae*). It is demulcent. Tuberous roots obtained from Bazar frequently administered with boiled milk and sugar in diarrhoea and dysentery ^[26].

Glossary of Indian Medicinal Plants: Its roots are described as demulcent, galactogogue, tonic and useful in diarrhoea, dysentery and general debility ^[27].

Glossary of Vegetable Drugs in Brihttaray: Two varieties of *Musli* are mentioned. Black *Musli* is Talmuli (*Corculigo orchoides*.) and white is believed to be a species of *Chlorophytum* (*C. tuberosum* or *C. arundineceum*.). They believe that in market small *Asparagus* roots are being used in its place ^[28].

The Wealth of India: Botanical source of *Sweta Musli* identified as *A. adscendens* and *C. arundinaceum*. The roots are prescribed in Chamba district to cure diarrhoea and dysentery. Root bark is reputed aphrodisiac. Root contains a steroidal saponin which inhibits the growth of several pathogenic organisms in vitro. The young shoots are eaten as vegetable ^[29].

Materia Medica of Ayurveda: *Musli* is sweet,

hot in potency, aphrodisiac nourishing, heavy, bitter and rejuvenating. It cures *Arsha* (piles) and vitiation of Vayu ^[30].

Classical Uses of Medicinal Plants: *Musli* powder with goat milk and honey use in Freckle. *Musli* also used in deafness and aphrodisiac ^[31].

The Database of Indian Medicinal Plant: Botanical source of *Sweta Musli* identified as *C. Tuberosum*. *C. tuberosum* is the official source plant as per the Ayurvedic Formulary of India. In the Ayurvedic literature cited *A. adscendens* has been mentioned as the source of *Safed Musli*. *C. borivillianum* is being cultivated on large scale in many parts of the country and used as *Safed Musli* ^[32].

Medicinal Plants of India: The book writer accepted *A. adscendens* and *C. arundinaceum* for *Sweta Musli* but use of *Chlorophytum* root as tonic and *Asparagus* root for diarrhoea dysentery, demulcent ^[33].

Phytochemistry: Starch, sugar, proteins, vitamin-C, phenolic compounds, amino acids, alanine, proline, leucine, valine and glutamic acid, steroid, carbohydrates, fiber, saponins (2-20%) alkaloids and several rare element like Zn, Cu and Phosphorus is also present ^[34].

Therapeutic Uses

Immunomodulator: Root of herb used to strengthen the immune system and used as an energy booster in asthmatics patient and immuno-compromised patient.

Aphrodisiac: In all literature and many researchers reported aphrodisiac properties of *Sweta Musli*. Due to their excellent aphrodisiac properties, it is known as *Herbal Viagra*.

Antidiabetic: Traditionally *Chlorophytum* has been acclaimed for its anti diabetic activity. It has been pharmacologically verified in streptozotocin induced diabetes.

Antioxidant: The root powder also increases the activities of antioxidant enzymes and vitamin C levels which may have enhanced the antioxidant

effects.

Antistress: Tuber extracts of *C. borivillianum* have been proved to be anti-stress agent. *Sweta Musli* has significantly increased sleep quality in a scientific study.

Antimicrobial: The herb used for improving the overall resistance of body against common infections and pathogens. Administration of extracts greatly improved antimicrobial activity against *Candida albicans* infection.

Anti-inflammatory: In *Kashyap samhita* anti-inflammatory properties of *Musli* is mentioned.

Hypo-lipidemic: It regulates Cholesterol and used for control and prevents obesity and its side effect. Regular use increased the level of HDL (High density lipoprotein) and decrease in the plasma and hepatic lipid profiles.

Analgesic: It is effective in curing rheumatism and joint pains.

Antidiarrhoeal: Many literature reported its antidysentery and antidiarrhoeal properties.

Obstetrical Problem

Sweta Musli is considered as a curative for Natal and Postnatal problems, it is an essential part of a traditional diet of mothers (after delivery), also used for increasing lactation.

Gynecological Problem: It is also used to treat leucorrhoea, gonorrhoea. its powder is fried with ghee and chewed in case of apthae of mouth and throat.

Health Tonic: A number of health tonic prepared from *Sweta Musli*, roots are used for the preparation of nutritional tonic used in general and sexual weakness^[35, 36]. Traditionally it is used to treat fracture of animals.

Conclusion: *Sweta Musli* (*Chlorophytum borivillianum* Linn.) is one of the wonderful drug of *Ayurveda* for vigour and strength. It is extensively used in Ayurvedic prescription as a single or compound formulation for aphrodisiac, physical weakness and debility for thousands of years ago. It has Adaptogenic, Androgenic, Anti-arthritis, Anti-inflammatory, Antioxidant, Immuno-modulatory, Galactagogue, Antihyperglycemic, Antihyperlipidemic activity. *Sweta Musli* has been widely used in lifestyle disorders like stress, diabetes mellitus, premature aging and infertility. Their glycoside, saponins, phenols, vitamins and micronutrient content, makes it complete health tonic for normal and even diabetic individuals. Presently it proves safe and effective drug for lifestyle disorders.

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