

A Review on Nilini: An Important Ayurvedic Medicinal Plants

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Abstract

Nilini botanically identified as *Indigofera tinctoria* Linn. belong to family Fabaceae. The plant is an important source of natural blue dye (Indigo) obtained from its leaflets and branches and traditionally used for the treatment of cough, splenomegaly, greying of hairs, backache, gout, abdominal distention, rheumatoid arthritis, fever and in worm infestation. Present chapter deals its historical, taxonomical, morphological, ethno-pharmacological and therapeutical aspects.

Keywords: Nilini, treatment, cough, fever.

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Introduction

Nilini is an important medicinal plant described in different ayurvedic literature and are widely used in various health issues, a part from its medicinal value it is also source of natural blue dye known as Indigo. Indigo plants were grown commercially in East India and South and Central America. In Chinese system of medicine, this plants is used in management of fever, liver disorder, inflammation and to alleviate pain. Extracts of *Indigofera tinctoria* Linn has been reported to have nematocidal activity and leaf juice of the *Nilini* has been used to treat Ovarian and Stomach Cancer.

Historical Review of Nilini in Ayurvedic Literature

The reference of Nilini is not found in Vedic period, the first reference of Nilini is found in Charaka Samhita- sutra sthan 2/8, Sushruta samhita-sutra sthan 39/4 and Astanga Hridaya-sutra sthana 15/2 where powder of the plant is indicated in fever, vatic-disorder and in jaundice respectively. In Nighantus, the description of Nilini is found in Ousadhi Varga of Kaiyadeva Nighantu, Guduchyadi Varga of Dhanvantari and Bhava Prakash Nighantu and Shathavadi Varga of Raja Nighantu.

Synonyms

Sanskrit Synonyms	Botanical Synonyms
Neeli	<i>Anila tinctoria</i> var. <i>normalsi</i> Kuntze.
Nilini	<i>Indigofera anil</i> var. <i>orthocarpa</i> DC.
Tooni	<i>Indigofera bergii</i> Vatke.
Kala	<i>Indigofera cinerascens</i> DC.
Dola	<i>Indigofera hauer</i> Forssk.
Neelika	<i>Indigofera indica</i> Lam.
Ranjani	<i>Indigofera oligophylla</i> Baker.
Shriphali	<i>Indigofera orthocarpa</i> (DC.) O. Berg & C. F. Schmidt.
Tuccha	<i>Indigofera sumatrana</i> Gaertn.
Gramina	<i>Indigofera tinctoria</i> Blanco.
Madhuparnika	<i>Indigofera tulearensis</i> Drake.
Klitika	
Kalkeshi	
Neelpuspa	

Vernacular names

Arabic:	Nilaj
Bengali:	Nila.
Eng:	Indigo
Gujrati:	Gali
Hindi:	Neela
Pers:	Darakhte nil
Mal:	Lila
Mar:	Nili
Tamil:	Avari, Nilam
Tel:	Aviri, Nilachettu

Taxonomical Classification

Kingdom:	Plantae
Subkingdom:	Viridiplantae
Infrakingdom:	Streptophyta
Superdivision:	Embryophyta
Division:	Tracheophyta
Subdivision:	Spermatophytina
Class:	Magnoliopsida
Superorder:	Rosanae
Order:	Fabales
Family:	Fabaceae
Genus:	<i>Indigofera</i> L.
Species:	<i>Indigofera tinctoria</i> L.

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Ayurvedic Classification

Nighantu	Varga
Dhanwantari Nighantu:	Guduchyadi varga
Kaiyadev Nighantu:	Osadhi varga
Bhavprakash Nighantu:	Guduchyadi varga
Raja Nighantu:	Shathavadi Varga

Morphological Characteristics

Habit	It is a branching herb or shrub up to 210 cm in high.
Leave	Leaves are 3.0-8.5 cm long, imparipinnate; leaflets 9-13, elliptic or oblong, blackish green, appressed pubescent beneath, tender branches bluish red in colour.
Flower	Flowers are racemes axillary, bluish pink.
Fruit	Fruits are pod, 2-5 cm long, pale, straight or slightly curved
Seed	Seeds are 8-12 glabrous and apiculate.

Chemical Constituents

Apigenin, deguelin, dehydrodeguelin, galactomannan, Indigotin, Kaempferol, Rotenoids, Rotenol, Rotenone, Tephrosin and Sumatrol.

Table: 1. Activity and Duration of extracts of Nilini (*Indigofera tinctoria* Linn.)

Name of activity	Dose	Observation
Anti-diabetic	Methanolic extract of dried leaves	Serum glucose level reduced. ⁽¹⁾
Nephro-protective	Alcoholic extract of leaves	Enhanced renal creatinine clearance and decrease renal total protein loss. ⁽²⁾
Anti-microbial	Methanol extract	Methanol extract showed significant antibacterial property. ⁽³⁾
Anti-oxidant	Leaf extract	Shows higher antioxidant effect r than that of standard ascorbic acid. ⁽⁴⁾
Hepato-protective	Indigotone (FA), a bioactive fraction derived by fractionation of a petroleum ether extract of <i>Indigofera tinctoria</i> aerial parts.	Shows hepato-protective activity in rats and mice against CCl ₄ induced liver injury. ⁽⁵⁾
Anti-Inflammatory	Ethanol extract	Reduced oedema of the paw. ⁽⁶⁾
Anti-Epileptic	Ethanol extract	Significantly reduced status epilepticus on oral administration of the extract. ⁽⁷⁾
Anti-dyslipidemic	Alcoholic extract & chloroform, butanol and aqueous fractions	The decrease in cholesterol the triglycerides and free fatty acids in chloroform fraction ⁽⁸⁾

Table: 2. Ayurveda uses of Nilini

Diseases	Internal Uses
Gulma (Abdominal lump)	Nilini and some other drugs mixed with grhita and used for purgation in the treatment of Gulma. ⁽⁹⁾
Udararoga (Abdominal distention)	Nilini is the chief drug in Nilinyadi churna indicated in Udararoga. ⁽¹⁰⁾
Erysipeals	Nilini is taken with milk in morning and its paste is applied locally to overcomes Erysipeals. ⁽¹¹⁾
Dysuria	Root of nili along with goat milk is effective in Dysuria. ⁽¹²⁾
Wasting	Nilini root taken with cow-milk alleviates the disease. ⁽¹³⁾
Dental Caries	Chewing of Nilini destroys caries. ⁽¹⁴⁾
Enteric poison	Nilini fruit mixed with ghee used in enteric poison. ⁽¹⁵⁾

Conclusion-

On review of various Ayurvedic literature it was found that Nilini is described in Brihatrayee that is in Charaka Samhita, Sushruta Samhita, Astanga Hridaya and also in various Nighantus such as Dhanwantari,

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Kaiyadeva, Bhavaprakash and Raj Nighantu and are found useful in treatment of various diseases, further on review of various published scientific research works it is found that different part of the Nilini has many therapeutic and medicinal value such as Anti-diabetic, nephro-protective, anti-microbial, anti-oxidant and hepato-protective etc.

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