



Medicinal Properties of Harsingar (*Nyctanthes Arbor-tristis* Linn.): A Review

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Abstract

Harsingar is commonly known as Parijat and Night Jasmine. It is one of the most useful traditional medicinal plants in India. Various parts of the plant like seeds, leaves, flowers, bark, and fruit have some medicinal properties and used in the folk remedy. It is used in Ayurveda, Sidha, and Unani systems of medicines. Traditionally, whole plants and different parts have used as an herbal remedy for treating sciatica, arthritis, malaria, enlargement of spleen and as blood purifier.

Key Words: Harsingar, Parijat, Medicinal Properties.

Introduction:

Parijat is commonly known as Harsingar, and Night jasmine. The scientific name of the plant is *Nyctanthes Arbor-tristis* Linn. It is one of the most useful traditional medicinal plants in India. Various parts of the plant like seeds, leaves, flowers, bark, and fruit have some medicinal value and used in the folk remedy. According to Hindu mythology Parijat is heavenly tree brought to earth by Lord Krishana. Its lowers have seven to eight petals arranged on an orangish red stem which blooms at the night so it is commonly known as Night Jasmine. *Nyctanthes Arbor-tristis* is loaded with beneficial qualities and is native to South East Asia and found in abundance in West Bengal, India and also in Kanchanaburi province in Thailand. Plant is a small tree or a shrub growing upto 33feet tall with a grey flaky bark. The leaves are quite rough broad with margin. The fruit of the plant is round to heart shaped capsule of 2cm diameter and brown in colour.

Nyctanthes arbor-tristis Linn (commonly known as Night-flowering Jasmine), belonging to the family Oleaceae, is known for its extensive traditional medicinal use by the rural, mainly tribal people of India along with its use in Ayurveda, Sidha, and Unani systems of medicines.[8] Traditionally, whole plants and different parts have used as an herbal remedy for treating sciatica, arthritis, malaria, enlargement of spleen and as blood purifier. The beautiful white flowers are bitter in taste and are used as stomachic, carminative, astringent to bowel, anti-bilious, expectorant, hair tonic and in the treatment of piles and various skin diseases.[9] Recent pharmacological studies showed anti-spasmodic, antioxidant, anthelmintic, cytoprotective, anti-diabetic, anti-leishmanial, CNS depressant activity of the flower extract.[9]

Parijat does well in a wide variety of loamy soils, and in soils found in average garden situations, with pH 5.6–7.5. It can be grown in full sunlight to partial shade. It needs water regularly.

Taxonomical Classification:

- *Kingdom: Plantae*
- *Division: Magnoliophyta*
- *Class: Magnoliopsida*
- *Order: Lamiales*
- *Family: Oleaceae*
- *Genus: Nyctanthes*
- *Species: arbor-tristis*
- *Binomial name: Nyctanthes arbor-tristis*

Vernacular Names of Harsingar:

- Bengali: Harsinghar, Sephalika, Seoli, Sheoli
- English: Coral Jasmine, Night Jasmine
- Filipino: Coral Jasmine
- Gujarati: Jayaparvati, Parijatak
- Hindi: Harsinghar, Harsingur, Seoli, Sheoli, Sihau
- Indonesian: Srigading (Sundanese, Javanese)
- Kannada: Goli, Harsing, Parijata
- Konkani: Pardic, Parizatak, Parzonto, Parzot
- Lao (Tibetan): Salikaa
- Malay: Seri Gading
- Malayalam: Mannapu, Pavizhamalli, Parijatakam
- Marathi: Kharbadi, Kharassi, Khurasli, Parijatak
- Oriya: Godokodiko, Gunjoseyoli, Singaraharo
- Punjabi: Harsinghar
- Sanskrit: Parijata, Parijatah, Parijataka, Sephalika
- Tamil: Manjhapu, Pavala-Malligai, Pavazha-Malligai
- Telugu: Kapilanagadustu, Pagadamalle, Parijat, Sepali
- Thai: Karanikaa

- Urdu: Gulejafari, Harsingar
- Vietnamese: Iai Tau

Chemical components of various parts of Harsingar:

The flowers are very beneficial as it contains essential oils and glycosides (10,11). The seeds contain palmitic, oleic and myristic acids. The leaves of the plant contains benzoic acid, fructose, glucose, carotene, amorphous resin, ascorbic acid, methyl salicylate, tannic acid, oleanolic acid and flavanol glycosides. The bark of Parijat plant is useful due to its alkaloids and glycosides content. But the most beneficial parts of this plant are leaves and flowers so here is brief information about their components.

- **Leaves**

Alkaloid nyctanthine along with nannitol, β Amyrin, β -Sitosterol, hentriacontane, benzoic acid, astragalin, nicotiflorin, oleanolic acid, nyctanthic acid, friedelin, lupeol, mannitol, astringent, resinous substances, ascorbic acid, coloring matters, sugar, and traces of an oily substance, tannic acid, methyl salicylate, carotene, an amorphous resin and traces of volatile oil(12,13).

- **Flowers**

Apigenin, Anthocyanin, D-Mannitol, Tannin, Glucose, Carotenoid, Essential Oil, Kaemferol, Nyctanthin, Glycosides, Quercetin, Rengylone, α -crocetin (or crocin-3), β -monogentiobioside, β -monogentiobioside- β -D, β -digentiobioside

Medicinal uses of various parts of Parijat plant:

From leaves to the roots, the whole Parijat plant is very useful for various healing properties. It is a wonderful plant in Ayurveda and known for its number of health benefits. Due to its broad-spectrum medicinal properties, it has become a matter of interest for research.

- **Uses of Leaves**

The leaves of the Harsingar plant have been used to treat a different kind of fevers, cough, arthritis, worm infestation, etc. The leaves juice is bitter and works as a tonic. The kadha or decoction is excellent for arthritis, constipation, worm infestation. Ayurveda doctors suggests that decoction of Parijat leaves are excellent for relieving arthritis and sciatica. It cures various nauseous types of fever including malaria, dengue, and chikungunya fevers. It Recent studies suggest that Parijat leaf and bark extract are very useful to ameliorate fever instantly helps to increase platelet count in dengue and chikungunya fever.

- **Uses of Flowers**

This small, aromatic, white flower works wonderfully for gastric complaints and respiratory complaints. Flowers of Parijat works as a hair tonic and are used to strengthen the hairs and prevent hair fall. It also helps to prevent greying of hairs and other scalp related problems. One of the major health benefits of Parijat is to control high blood sugar levels. Previous studies suggest that Parijat flower extract has a potent anti-diabetic effect. Parijat flowers and leaves act as an immune-stimulatory to boost immunity due to the presence of ethanol in it. Thus leaves and

flowers of the plant is of great medicinal value like it is Anthelmintic, Antibacterial (24), Antifungal, Anti-Inflammatory (17, 19), Antioxidant (23), Anti-Pyretic (21), Hepato-protective (16), Immuno-potential.

- **Uses of Stem seed and bark**

Every part of *Nyctanthes arbortristis* is used for medicinal purposes due to health benefitting properties. Powder of Harsingar stem is very useful in joint pain and malaria and the seeds of the plant help in hair loss, and alopecia. Seeds are also used in the treatment of piles. If its bark is eaten with paan, it cures cough.

Health benefits of Harsingar:

As Harsingar plant exhibit a number of medicinal values like anti-allergic, antibacterial (14), antiviral, anti-inflammatory (15), anti-diabetic, antipyretic (22), natural laxative, antihistaminic, antioxidant(13), excellent bronchodilator, etc. due to presence of mentioned phytochemical components the plant is very useful in different health problems. It is widely used in treatment of Bronchitis, arthritis, Asthma, cough, heartburn, nausea, Sciatica, Rheumatism, constipation etc. It reduces swelling due to its anti-inflammatory activity; protect the liver as a good hepato-protective agent. The leaf, seed, bark are helpful in decreasing dopamine and increases the serotonin level showing CNS depressant activity. The leaves decoction has significant aspirin like property thus helpful to manage the fever while seeds are mainly good for skin and hair.

Side effects and Toxicity:

When it is taken in recommended dose no side effect is known but sometimes leaf intake may cause nausea and vomiting due to its bitter taste. It can reduce the blood sugar level in diabetic patient so monitor the sugar level. It is observed in several clinical studies for acute toxicity and high dose can have negative effects.

REFERENCES:

1. Sandhar HK, Kaur M, Kumar B, Prasher S. An update on *Nyctanthes arbortristis* Linn. *Internationale Pharmaceutica Scientia*. 2011; 1(1): 77-86.
2. Dr. Lakshmidutta Shukla harsingha benifites medicinal uses and side effects my upchar .com 30 august 2018
3. Meshram MM, Rangari SB, Kshirsagar SB, Gajbiye S, Trivedi MR. *Nyctanthus arbortristis* A herbal panacea. *International Journal of pharmaceutical sciences and research*. 2012; 3(8): 2432-2440.
4. Suresh V, Jaikumar S, Arunachalam G. Antidiabetic activity of ethanolic extract of stem bark of *Nyctanthus arbortristis* Linn. *Research journal of pharmaceutical, biological and chemical sciences*. 2010; 1(4): 311- 317.
5. Sandhar HK, Kaur M, Kumar B, Prasher S. An update on *Nyctanthes arbortristis* Linn. *Internationale Pharmaceutica Scientia*. 2011; 1(1): 77-86.
6. Amarite O, Bhuskat P, Patel N, Gadgoli C. Evaluation of antioxidant activity of carotenoid from *Nyctanthes arbortristis*. *Int J Pharmacol Biol Sci*. 2007; 2:57-59.
7. Amarite O, Bhuskat P, Patel N, Gadgoli C. Evaluation of antioxidant activity of carotenoid from *Nyctanthes arbortristis*. *Int J Pharmacol Biol Sci*. 2007; 2:57-59.
8. Omkar A, Jeeja T, Chhaya G. Evaluation of antiinflammatory activity of *Nyctanthes arbortristi* and *Onosma echiodes*. *Pharmacog. mag.*, 2006; 8:258-60

9. Sasmal D, Das S, Basu SP. Phytoconstituents and therapeutic potential of *Nyctanthes arbortristis* L. Pharmacog. Rev. 2007; 1: 344-349.
10. Kirtikar KR, Basu BD. Indian Medicinal Plants, vol. VII, Sri Satguru Publication, New Delhi. 2000; pp. 2110-2113.
11. Girach RD, Aminuddin. Ethnomedicinal Studies on Harshringar-A Less known medicinal plant in Unani Medicines, Hamdard Med. 1994;37(2);60-66.
12. Saikia B, Saikia N. Medico-ethnobotany of bodo tribals in Gohpur of Sonitpur district, Assam, Indian journal of traditional knowledge. 2008; 9(1);52-54.
13. Rathee JS, Hassarajani SA, Chattopadhyay S. Antioxidant activity of *Nyctanthes arbor-tristis* leaf extract. Food Chem. 2007; 103:1350-57.
14. Balasubramanian M. Study on phytochemical screening and antibacterial activity of *Nyctanthes-arbor tristis*. J Chem Pharm Res. 2012; 4(3):1686-95.
15. Das S, Sasmal D, Basu SP. Evaluation of CNS depressant activity of different parts of *Nyctanthes arbortristis*. Indian Journal of Pharmaceutical Science. 2008; 70:803- 06.
16. Hukkeri VI, Akki KS, Sureban RR, Gopalakrishna B, Byahatti VV, Rajendra SV. Hepatoprotective activity of the leaves of *Nyctanthes arbor-tristis* Linn. Ind J Pharm Sci. 2006; 68(4):542-43.
17. R S Saxena, B Gupta, K K Saxena, R C Singh, D N Prasad Study of anti-inflammatory activity in the leaves of *Nyctanthes arbor tristis* Linn.--an Indian medicinal plant Ethnopharmacol. 1984 Aug;11(3):319-30.
18. Tranquilizing, antihistaminic and purgative activity of *Nyctanthes arbor tristis* leaf extract. Saxena RS, Gupta B, Lata S. J Ethnopharmacol. 2002 Aug;81(3):321-5
19. Anti-inflammatory studies on *Polygonum glabrum*. Singh B, Pandey VB, Joshi VK, Gambhir SS. J Ethnopharmacol. 1987 May;19(3):255-67
20. *Nyctanthes arbor-tristis* Linn--a critical ethnopharmacological review. Agrawal J, Pal A. J Ethnopharmacol. 2013 Apr 19;146(3):645-58
21. Analgesic, antipyretic and ulcerogenic activity of *Nyctanthes arbor tristis* leaf extract. Saxena RS, Gupta B, Saxena KK, Srivastava VK, Prasad DN. J Ethnopharmacol. 1987 Mar-Apr;19(2):193-200
22. Anti-inflammatory, analgesic and antipyretic effects of methanol extract from *Bauhinia racemosa* stem bark in animal models. Gupta M, Mazumder UK, Kumar RS, Gomathi P, Rajeshwar Y, Kakoti BB, Selven VT. J Ethnopharmacol. 2005 Apr 26;98(3):267-73
23. Poly herbal formulation with anti-elastase and anti-oxidant properties for skin anti-aging. Kalyana Sundaram I, Sarangi DD, Sundararajan V, George S, Sheik Mohideen S. BMC Complement Altern Med. 2018 Jan 29;18(1):33
24. Antiparasitic and disease-modifying activity of *Nyctanthes arbor-tristis* Linn. in malaria: An exploratory clinical study. Godse CS, Tathed PS, Talwalkar SS, Vaidya RA, Amonkar AJ, Vaidya AB, Vaidya AD. J Ayurveda Integr Med. 2016 Oct-Dec;7(4):238-248.
25. Investigation of the Anti-Inflammatory and Analgesic Activities of Ethanol Extract of Stem Bark of *Sonapatha Oroxyllum indicum* In Vivo. Lalrinzuali K, Vabeiryureilai M, Jagetia GC. Int J Inflam. 2016;2016:8247014. doi: 10.1155/2016/8247014