

A REVIEW ON HARSHRINGAR-AN IMPORTANT MEDICINAL PLANT

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ABSTRACT

Ayurveda is one of the oldest system of medicines that uses plants and their extracts for the treatment and management of various diseased states. Medicinal plants are being widely used either as single drug or in combination in health care delivery system. *Nyctanthes arbor-tristis* is commonly known as Indian Harshringar (family-oleaceae) is an important medicinal large shrub. It contains various phytoconstituents belonging to the categories of glycosides, alkaloids, essential oils, tannins etc. It has been reported as useful in sciatica, arthritis, fever, asthma, diabetes, cancer, etc. Several studies are being carried towards its activities like antibacterial, antifungal, immuno-modulatory, antipyretic, anti-oxidant, hepato-protective properties. With all these potential benefits, this review is carried out to explore the hidden potential and its uses. This present review explores the published scientific literature to compile all the traditional and scientific datas of *Nyctanthes arbor-tristis*.

KEYWORDS:- *Nyctanthes arbor-tristis*, Oleaceae, Indian Harshringar.

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2. INTRODUCTION:- *Nyctanthes arbor-tristis* is commonly known as Harshringar belonging to the family Oleaceae. The name *Nyctanthes* means “Night Flowering”. It is a shrub or small tree growing to 10 m tall flaky grey bark. Leaves are opposite, simple, 6-12 cm long and 2-6.5 cm broad with entire margins. The flowers are fragrant with a 5-8 lobbed white corolla (petals) with orange red centre which are produced in clusters of 2-7 together with individual flower opening dusk and finishing at dawn. The fruit is a flat brown heart shaped to round shaped capsule which is 2 cm in diameter with two sections each containing a single seed. This is a common medicinal plants widely used in Indian system of medicines and also an official drug in Indian pharmacopoeia.

3. MEDICINAL PROPERTIES:- Medicinal properties of *Nyctanthes arbor-tristis* were described by K. Priya and Deepak Ganjewala (2007), Bansal et al (2012), R.K. Saha et al (2012), Ramadan B. Sopi et al (2013), Vipin Sharma and Amit Marwaha (2011). The leaves are used as antibacterial, antimicrobial, bronchodilatory, hepatoprotective, anti-diabetic (K. Priya et al, 2007; Bansal et al, 2012; Sopi et al, 2013; Vipin Sharma and Amit Marwaha, 2011). The fruits are used as anti-anxiolytic, anti-oxidant, diuretic (T.D. Sandhya kumar et al, 2012; Shalini Tripathi, 2012; D. Sasmal et al, 2007).

3. ETHNOBOTANICAL STUDIES:- Ethnobotanical studies on *Nyctanthes arbor-tristis* revealed its benefits towards various ailments like fever, cough and gastritis (Chiranjibi Pattanaik and Rasmita Das, 2007; Bipul Saikia et al, 2008). Juices of leaves is used as digestives, antidote to reptiles venome (P.S. Varier et al, 1995; Nadkerni et al, 1982). Leaves are also used in the enlargement of the spleen (Kirtikar and Basu, 2000) as well as leaf decoction along with honey is used to cure fever, malaria, blood dysentery by the folk peoples of Balasore, Orissa (R.D. Girach et al, 1994). The powdered seeds are used to cure scurfy infection of scalp, piles and skin diseases (Nadkerni et al, 1982; Basu and Kirtikar, 2000; R.D. Girach et al, 1994). Traditionally the powdered stem bark is given in rheumatic

joint pain, oil is used for pain in the eyes and with Arjuna bark it is rubbed on the body in internal injury (Basu and Kirtikar, 2000). Bark and flower decoction are usually given in malaria fever (R.D. Girach et al, 1994). Its flowers are bitter, astringent, carminative, stomachic and used in ophthalmic purposes. The roots are traditionally used as anthelmintics and its decoction is used in enlargement of spleen. Barks are traditionally used as anti-dysenteric and anti-diarrhoeals. The corolla tubes are formerly used to dyeing silk. Flower extract of *Nyctanthes arbor-tristis* along with *Tagetes erecta* shows sunscreen activity (Vaishali Bambal et al, 2011). Its combination with *Piper nigrum* bears antipyretic activity in different dose forms (N.B. Ghiware and T.M. Nesari, 2013).

4. TISSUE CULTURE STUDIES:- Plant tissue culture studies on *Nyctanthes arbor-tristis* were reported by M. Anis and Anushi A. Jahan (2006), S. Bansal, A. J. Bharti et al (2012), G. R. Rout et al (2007), Champa Rani et al (2012). A. A. Jahan and M. Anis successfully developed an efficient, rapid and reproducible plant regeneration protocol for *Nyctanthes arbor-tristis* using cotyledonary node explants supplemented by two cytokinins namely thidiazuron (TDZ) and 6-benzyladenine (BA) to MS-medium. The In-vitro propagation of Harshringar from axillary buds explant on MS-medium was successfully obtained by S. Sasmal with his co-workers. Champa Rani and Sunaina Chawla with co-workers reported about the micropropagation of Harshringar as well as its chemical constitution, biological activities of important compounds, pharmacological actions and medicinal applications. G. R. Rout, A. Mahato and S. K. Senapati also achieved rapid shoot multiplication from axillary meristems on MS basal medium supplemented by 1.0-1.5 mg/l of 6-benzyladenine (BA), 50 mg/l of adenine sulphate and 3% sucrose.

5. CONCLUSION:- The plant *Nyctanthes arbor-tristis* is one of the most important source of medicinally important constituents widely experimented by scientists. Most of the scientific works have been conducted on the leaves and seeds of *Nyctanthes arbor-tristis* plant although there are reports about using bark powder and root extract in folk medicines. The main thrust of this review is to compile a number of uses of all the parts of plants. So far the major uses have been found on the leaf extract of *Nyctanthes arbor-tristis* including from bitter tonic to digestive, laxative, diuretic, in spleen enlargement, as anti-oxidant, anthelmintic, expectorant, bronchiodilatory, even as anti-dote to reptiles venome. The powdered seeds have been used to cure scalp and in piles and skin diseases. Flowers as astringents, carminatives, etc.

From the above study, it is revealed that the leaves of plant *Nyctanthes arbor-tristis* are extensively exhausted for the study purpose but there is a need to pay attention on the flowers and stem also.

6. REFERENCES:-

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