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A LITERARY REVIEW OF PARIJATAC

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ABSTRACT

Ayurveda views healty lifestyle as well as absence of disease.[1] It is also known as Sea of knowledge. The ayurveda consisting of lot of medicine plant based, Parijatac is one of them. It is popularly called as Night jasmine as well as Night smile in various regions. The pharmacological action of Parijatac includes antifungal[2], anticancer[3] cough, antibacterial[3] etc. The various phytochemical constituents like, D-mannitol, Astragaline, palmitic acid, Glucose, steric acid, Flavonol etc. It is easily found in Himalayan region, Godavari, native of India.[5] There is no special condition are required for cultivation and collection hence we selected this plant for the literature review which will help the Research of Ayurveda and other filled of pharmacology, explore more therapeutic valve of plant for the benefit of the public.

KEYWORDS: Parijatac,[4] Night jasmine,[5] Harsingar, *nyctanthes arbortristic linn.*[6] Pharmacognosy.

INTRODUCTION

Parijatac is one of the wonderful drug which is beneficial in Cure many disease by natural therapy. Parijatac is also known as *nyctanthes arbortristis linn.* (Biological Name) belonging to family Oleaceae.[7] It is popularly known as Night jasmine. The term *nyctanthes* has been coined from two Greek words *nykhta* (night) and *anther* (flower).[4] The flowers start falling after midnight and by the day break. The plant appears dull. The specific name 'arbortrisis' meaning the 'sad tree' is supposly derived from dull looks of the tree during daytime.[4]

Hindu Mythology

According to Hindu mythology Devta (Gods) and Asura (Devils) once day decided to the samudra-manthan to solve the issue of Amruta. The vasuki Naga had been used as rope to churn to Sea. Devta and Asura got fightened after seeing it posion come from the sea. These poison took Drinked the Lord Mahadeva. The 14th rantna come out, Parijatac was one of them.

Recently, the Prime Minister Narendea Modi had planted the Parijatac tress on the occasion of the Bhommi pujan marks the building of Ram temple in Ayodhya.

Biological source

The flowering plant, *nyctanthus arbortristis linn*, belonging to family Oleaceae, It has very high medicinal value.[7]

Different Names of Plant (Synonyms)

Plant name in different languages are as follows,

- Bengali : Harsinghar, Sephalika, Seoli.[5]
- English : Coral Jasmine, Night Jasmine.[4]
- Gujarati : Jayaparvati, Parijatak.[4]
- Hindi : Harsinghar, Harsingur.[5]
- Kannada : Goli, Harsing, Parijata.[5]
- Konkani : Pardic, Parizatak, Parzonto.[4]
- Malayalam : Mannapu, Pavizhamalli, Parijatakom.[5]
- Marathi : Kharbadi, Kharassi.[4]
- Oriya : Godokodiko, Gunjoseyoli.
- Punjabi : Harsinghar.[3]
- Sanskrit : Parijata, Parijatah, Parijataka.[5]
- Tamil : Manjha.[4]
- Telugu. : Kapilanagadustu, Pagadamalle.[3]
- Urdu : Harsingar.[3]
- Filipino : Coral Jasmine.[16]

Taxonomical Classification[4]

- Kingdom : Plantae
- Division : MagnolioNyctanth
- Class : Magnoliopsida
- Order : Lamiales
- Family : Oleaceae
- Genus : Nyctanthes
- Species : Arbortristis

GEOGRAPHICAL DISTRIBUTION, SOIL, CULTIVATION AND COLLECTION

Parijatac, native to Indo pak subcontinent, grows naturally in Indo Malayan region, Burma, Thailand, South Asia and Southeast Asia, Jammu, Kashmir, Nepal, Tripura. It is cultivated in garden due to it most agreeable and irregular aroma. The shrub can cultivated by cutting as well as by seeds. The speed of germination is improved by treating seeds with a solution of antioxidant like polyvinyl pyrrolidine to germination.[16]

Soil Type

- Parijatac well grows in loamy soils, with pH 5.6 – 7.5.[17]
- Sunlight is essential for growth.[8]
- It is full watery plant.

CHEMICAL CONSTITUENT

- **Leaves:** It contain D-mannitol, β-sitosterol, nicotiflorin, tannic acid.[15]
- **Seeds:** It contains linoleic, palmitic acid
- **Stem:** It contain the glycoside naringenin-4-0-β-glucapyranosyl-α-xylopyranoside and β-sitosterol.
- **Plant:** The plant contains 2, 3, 4, 6-tetra-0-methyl-D-glucose; 2, 3, 6 tri-0-methyl glucose.[15]
- **Flowers:** It contains essential oils, carotenoids, glycosides.
- **Bark:** The bark contains glycosides and alkaloids.[15]

MORPHOLOGICAL CHARACTER

- **Leaves:** Leaves are opposite, petiolate, exstipulate, 5 -10 cm long, 2.5 – 6.3 cm broad, ovate, acute or acuminate, entire or serrated, petiole 6 cm long.[10]
- **Flower:** The flower is at the tips of branches.often seen in clusters of 2-7 together delightfully fragrant, sessile in pedanculate bracteate fascicles of 3–5 Peduncles. Bracts is suborbicular, 6-10 mm long, apiculate, hairy on both sides. Calyx 6-8 mm. long, glabrous inside, trunctate, obscurely toothed or lobed.[11]
- **Fruits:** It is brown and heart cordate-shaped to rounded-capsule. in the epicarp epidermal cells were compactly arranged, polygonal cells with slightly anticlinical walls covered by a thin cuticle followed by l-3 layers of collenchyma, sclerenchymatous fibres and oil gland.[11]
- **Seed:** The seed is compressed and is one per cell.they are exalbuminous, testa thick and the outer layer of large transparent cells and heavily vascularised.
- **Stem and Bark:** The shrub growing up to 10 m tall, with quadrangular branches. Bark of parijatac plant is dark gray or brown in colour.[16]

PHARMACOLOGICAL ACTIVITY

- **Analgesic activity:** The extract of petroleum ether, beta-sistosterol are responsible for analgesic activity.
- **Anti-inflammatory activity**: 5 hydroxytrytamine, formaline, histamine, hyaluronidase are considered as aqueous and alcoholic extract of steam, leaves. These are prototype compound of acute and sub-acute anti- inflammatory activity.[9]
- **Antimicrobial activity:** Phenolic, Tannin compound are used against anti-microbial activity.[8]
- **Antifungal activity:** Stem bark extract are anti-fungal activity against *aspergillus nigar.*
- **Anticancer activity:** Parijatac were tested for in-vitro anticancer activity.[10]
- **Anti-diabetic activity:** The ethanol root extract reduce the blood sugar level.[10]
- **Anti-cholinesterase activity:** The aqueous extract of parijatac leaves stimulate the acetlycholinestrase in mice and inhibition of enzyme Malathion.
- **CNS depressant:** Ethanol extract seed, leaves and flowers depress of CNS from sedation, cause in dopamine level decreases.
- **Antianxiety:** Hydroalcoholic extract used reduce emotional state.[10]
- **Antibacterial activity:** Arbortristoside A and Arbortristoside C are anti- bacterial activity.[7]

OTHER THERAPEUTIC USES

- Works as laxative,
- Best skin healing properties,
- Manages anxiety,
- Helps to relieve menstrual cramps,[11]
- Prevent dental issues,
- Cures digestive problems ,
- Get rid of worm infestation,
- Hyperacidity,
- Nausea,
- Joint pain
- Malaria[8]

SIDE EFFECTS[12]

- When recommended dose is taken then no side effects.
- Decrease blood sugar level in the diabetic patient so, monitor the sugar level.
- Nausea, vomiting caused by leaf intake that's why, do not chew the leaf.

TOXICITY

- The plant was evaluated for acute toxicity studies, in clinical studies and the result show a toxic effect in a dose-dependent manner. A high dose can have negative effects.
- The toxic effect of ethanolic extract of leaves of Parijatac was noticed in rats.An administration of ethanol extract of the leaves in a high dose (1, 2, and 4 gm/kg/day) orally for 6 consecutive days produced gastric ulcers in rats. In high dose, it also shows the purgative effect.[13]

CONCLUSION

Parijatac is easily available plant and there is no special conditions are required for its collection and cultivation. It is a high source of biologically active compounds, which would attract the attention of drug discovery groups to discover bioactive molecules for the treatment of various diseases. The review article revealed the importance of herbal and ayurvedic pathway for effective treatment of various diseases considering tremendous potential pharmacological activities of the N. arbor-tritis.

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