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A REVIEW ON TINOSPORA CORDIFOLIA

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ABSTRACT

Tinospora cordifolia, commonly known as guduchi or giloy, is an important medicinal plant belonging to the Menispermaceae family and is widely used in traditional Indian medicine, particularly in Ayurveda. The plant has attracted considerable scientific interest due to its diverse phytochemical constituents and extensive pharmacological potential. T. Various parts of Cordifolia, especially stems and roots, contain several bioactive compounds, including alkaloids, diterpenoid lactones, glycosides, steroids, sesquiterpenoids, phenolic compounds, polysaccharides and other secondary metabolites. These components are associated with various biological activities.

In the present review, T. The herbal characteristics, traditional uses, pharmacognostic properties, phytochemical constituents and pharmacological activities of cordifolia are summarized. Reported pharmacological properties include antidiabetic, antioxidant, anti-inflammatory, antimicrobial, immunomodulatory, hepatoprotective, anticancer, ulcer, antipruritic and neuroprotective activities.

Review t. It also highlights the importance of standardization, quality control, toxicity evaluation and well-designed clinical studies to establish the therapeutic efficacy and safety of cordifolia. Overall, T. Cordifolia represents a promising medicinal plant with significant potential for the development of standard herbal preparations and novel phytopharmaceutical products.

INTRODUCTION

In today's world of globalization and modernization, the risk of numbers has increased. Diseases like infectious and non-infectious occur due to changes in human being's lifestyle

(stress, work pressure, change in climate) or eating habits (unhealthy dietary habits). Apart from this, diseases like heart disease, cholesterol, stress, diabetes, rheumatoid arthritis, blood pressure have also increased. Due to increasing antimicrobial resistance, adverse effects and cost of chemical drugs from antibiotics, people are losing interest in allopathy and turning to Ayurvedic or natural medicine sources, which is also reducing their potency. In such a situation, research is going on on alternatives to these medicines for the betterment of human and animal health. Herbal preparations contain one or more herbs in given quantities to provide aesthetic, curative, and palliative benefits to humans and animals. Botanical medicine, or phytomedicine, is its other name.

BIOLOGICAL SOURCE

Tinospora cordifolia A climbing shrub of the Menispermaceae family commonly found in India, China and parts of Australia. It has many local names like; In English: Tinospora; In Punjabi: गिलो; In Oriya: Guluchi; In Marathi: Gulvel; In Malayalam: Chittamrutu; In Kashmiri: Amrita, Gilo; In Haryana: Giloy; In Bengali: Gulncha; In Sanskrit: Chakralakshnika; In Hindi: Gurcha; In Gujarati: Garo, Galak. Tinospora cordifolia: Biological Source A climbing shrub of the Menispermaceae family commonly found in India, China and parts of Australia. It has many local names like; In English: Tinospora; In Punjabi: गिलो; In Oriya: Guluchi; In Marathi: Gulvel; In Malayalam: Chittamrutu; In Kashmiri: Amrita, Gilo; In Haryana: Giloy; In Bengali: Gulncha; In Sanskrit: Chakralakshnika; In Hindi: Gurcha; In Gujarati: Garo, Galak.

MORPHOLOGY

It is a large irregular, widely spreading climbing shrub with many coiled branches of various shapes. The stem of the plant is filamentous, substantial and climbing; The color of the bark of this plant is white to brown. The stem powder is creamy brown or light brown in color, has a characteristic odor and pungent taste. It is used to treat certain problems. “Guduchi-satva” stem is used to separate starch. It is a nutritious food that is also easy to process. It has long-petalled, basal (about 15 cm) leaves, which are rounded, swollen, heart-shaped that curve outwards. The lamina is oval fitted, 10–20 cm long, seven nerved and exceptionally membranous. The flowers are unisexual, axillary and greenish-yellow, with branches 2–9 cm long. Male and female flowers have the ability to be solitary and solitary respectively. It features monocultured natural products that mature in the cooler times of the year and bloom in late spring. Aerial roots have a tetra to penta curve fundamental design, they are string-

like, elevated, squareshine, and sometimes continuously cover the earth. The structure of the seeds is curved, and the endocarp is ornamented at several angles, giving it important sorting characteristics.

CHEMICAL CONSTITUENTS

Tinospora cordifolia contains various classes of compounds: di-terpenoids are a part of lactones, alkaloids, steroids, glycosides, polysaccharides, aliphatic synthetics, phenols and sesquiterpenoid parts.

Tinosporide, furanolactone diterpene, furanolactone chlorodane diterpene, furanoid diterpene, tinosporide, ecdysterone mesisterone and several glucosides isolated as poly acetate, phenylpropene disaccharides cordifoliosides A, B and C, cordiphosides D and E, tinocordiosides, cordiosides, palmettosides C and F, sesquiterpene glucoside tinocordifolioside, sesquiterpene tinocordifolin.

USES

Tinospora cordifolia has nephroprotective action, neuroprotective effect, osteoprotective effect, thrombolytic effect, radioprotective antianxiety effect, antiparasitic effect, and also shows anti-parkinson effect. Addition of Guduchi leaf powder to wheat flour improves its organoleptic, nutritional and rheological properties. Additionally the cookies have increased amounts of protein, fiber, beta-carotene, calcium and iron, as well as increased radical scavenging activity. Amrita based whey drinkers have an excellent quality at both ambient and refrigerated temperatures. Additionally, Tinospora cordifolia has been found to be able to accelerate wound healing and reduce the number of days required for wound epithelialization. Its extract has been shown to be helpful in preventing HIV infection, as it induces a decrease in eosinophil count (induced by B lymphocytes, macrophages and polymorphonuclear leukocytes) and an increase in hemoglobin percentage. Plant-based medicines are generally harmless, and Giloy is no exception. However, its water extract has been shown to have actions that lower blood pressure (temporarily), increase ventricular contraction force, and cause bradycardia in dogs, so it should be used with caution in cardiac patients. Minofil, a non-hormonal drug including Giloy and other plant extracts, showed minimal negative effects in women with postmenopausal syndrome and can be used instead of hormone replacement therapy. This plant has been the subject of much research, but no adverse effects have been reported, and it is considered safe at the doses listed. Another study

found that Giloy leaf powder had significant effects on growth parameters and immune-stimulating abilities in Amur carp. It has been found to be androgenic

IMPORTANCE IN AYURVEDA

This plant is being consumed traditionally and each part of it has an important role in improving human health. It is used by many folk and Ayurvedic remedies in the form of juice, decoction, gum, powder and tablets for relief from general weakness, fever, skin diseases, persistent diarrhoea, jaundice, asthma and bone fractures, which are described in old texts like Rasa Ayana, Samgraha, Balya, Agnideepana, Tridoshashamaka, Dahanashaka, Mehnashaka, Kasa-Svasahara, Pandunashaka. Kamla-leprosy, carminative, gonorrhoea, febrifuge, dewormer and dewormer, heart cure. Amrita is used as a blood purifier, eliminating defective and damaged red platelets from the bloodstream. Due to its high alkaloid content, the Ayurvedic Pharmacopoeia of India has recognized amrita stem as a medicine.

CONCLUSION

Amrita plant (Tinospora cordifolia) is particularly famous in old-fashioned remedies, and is one of the most commercially used species in the pharmaceutical industry. Anti-oxidant, hepato-protective, anti-microbial, anti hyperglycemic, anti-pyretic, antihyperlipidemic, cardiovascular-protective, anti-inflammatory, osteo-protective, neuro-protective, anti-anxiety, analgesic, anti-diarrhea and anti-stress properties are just a few of its benefits. It is a commercially available low-cost and effective herbal complementary medicine due to its abundance in subtropical Asian regions. countries. Biological studies and clinical trials of Tinospora cordifolia indicate its safety or low side effects and commercially significant treatment value as a health supplement, along with a storehouse of upcoming drug advancement in essential situations where current treatments have little therapeutic potential.

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