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The Traditional Ayurvedic Herb Tinospora Cordifolia

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Abstract :- Nowadays, natural materials with therapeutic potential are receiving more attention in clinical research since they have no adverse effects and a better pharmacological response than allopathic medications. The common name Tinospora cordifolia, often known as "Guduchi" or "Giloy," is well-known in traditional Ayurveda literature for its use in treating a variety of diseases.

Keywords:- giloy, natural product, illnesses, Ayurveda, plant, tinospora

Introduction:-

T. cordifolia, is a naturally occurring herbaceous plant that belongs to the Menispermaceae family, which also includes moonseeds. Traditional medical practices have traditionally used this plant to treat a wide range of ailments, such as gout, diabetes, skin disorders, jaundice, and others.Seen from this perspective, guduchi is a nectar plant that is also referred to as amrita in Sanskrit, which means "cleansing, rejuvenating, and strengthening of the immune system."The herb has undergone extensive evaluation and research in modern medicine, and most recently, the medication has been used to lessen the side effects of chemotherapy. The review focuses on the phytochemical analysis, the pharmaceutical features, and the potential for additional scientific research to advance the field of traditional medicine.

HISTORY AND AYURVEDIC ASPECTS:-

Tinospora cordifolia (Giloy) has numerous advantages for skin and health. Although there is no concrete evidence, there are two stories about the origin of this magical plant. The first is that during Samundra Manthan, a pot filled with amrita is said to have emerged from the sea, and some people ran with it. During this time, some drops of amrita fell on the earth and took the form of a climbing shrub known as giloy. The second story

is that there is evidence that suggests Lord Rama traveled to Sri Lanka, and that during the Ramayana war between Ram and Ravana, giloy was utilized to heal the warriors.

The Indian Vedas, the source of the 5,000-year-old Ayurvedic medical system, identify three elemental substances: Pitta, Vata, and Kapha. According to the Ashtang Hridaya and Sushrut, Charak, and other Ayurvedic texts, T. cordifolia is known by the following names: Amara, Amritvalli, Chinmarrhuha, Chinnodebha, and Vatsadani, among others. It is most popularly known as Guduchi or Amrita. It is traditionally stated to be beneficial for treating a number of diseases, including Svasa (asthma), Maha Jvara (fever), Aruci (anorexia), and kustha (leprosy) in Sushurta Samhita under Tikta-SakaVarga.There is also strong evidence supporting the treatment of other diseases, such as Jvara (fever), Vat Rakta (gout), and Kamala (jaundice), in the context of Ashtang Hridaya and Charak Samhita.It is in Bhavya Prakash it is thought to be an aphrodisiac, diuretic, astringent, bitter tonic, and maybe a cure-all for diabetes, jaundice, chronic diarrhea, dysentery, and skin diseases. It is said to alleviate bleeding piles, relieve itching, treat erysipelas, and lengthen life in Dhanvantri Nighantu. Guduchi has also been demonstrated to be Deepanam (kindles digestive fire), Laghu (light), and Dhatukrit (builds the seven physiological faculties).
Bayasthaapankarakam (preserves youth and lifespan), Chakshushyam (beneficial for the eyes), and Medhayam (rejuvenates the intellect). Guduchi was included in the Bengal Pharmacopoeia in 1868 and has been regarded by European medical professionals as a significant source of tonic, diuretic, and antiperiodic medicines in India. T. cordifolia is a common ingredient in Ayurvedic formulas for the treatment of a number of disease, including fever, debility, and disorders connected to the urinary system and dyspepsia. Guduchi taila, Sanjivani vati, Kanta-Kari avaleha, Guduchyadi churna, Chyavnaprasha, Guduchu ghrita, Guduchi satva, Brihat guduchi taila, Amrita guggulu, amritashtaka churna, and many more are among the essential formulations made from T. cordifolia. The most commonly used plant in Ayurvedic medicine is T. cordifolia, which has been utilized by diseases. In Ayurveda, T. cordifolia is highly valued for its many therapeutic qualities, which include immune-boosting, anti-rheumatic, rejuvenating, and cleansing effects. Nowadays, T. cordifolia's medicinal qualities are used in modern medicine to treat a variety of conditions, including gout, arthritis, skin, liver, and immune system support, as well as to prevent colds and flu and, more recently, to mitigate the side effects of chemotherapy. It is now evident that T. cordifolia is the most significant medicinal herb, valued by the ancient rishis of the Vedic era for

its immense potential (medical properties) to heal a wide range of ailments.

Other Names of T. Cordifolia:-

Latin : Tinospora cordifolia(willd.) Hook.F. & Thomsonthi
English : Gulancha/ Indian Tinospora

Sanskrit : Guduchi, Madhuparni, Amrita, Chinnaruha, Vatsadaani, Tantrika, Kundalini & chakralakshanika.
Hindi : Giloya, Guduchi
Bengali : Gulancha

Telugu : Thippateega

Tamil : Shindilakodi
Marathi : Shindilakodi
Gujarathi : Galo
Kannada : Amrita balli, Madhupa

Taxonomic classification:-

Kingdom: Plantae – Plants ;
Subkingdom: Tracheophyta –Vascular Plants;
Super- division: Spermatophyta-Seed bearing plants;
Division: Magnoliophyta-Flowering;
Class: Magnoliopsia-Dicotiledons

Subclass: Polypeptalae-Petals are free;
Series: Thalamiflorae-Many stamens and flower hypogynous
Order: Ranunculales
Family: Menispermaceae-The Moonsee family
Tribe: Tinosporeace
Genus: Tinospora
Species: cordifolia

Growth Requirement:-

Though it can be grown in nearly every climate, the plant prefers a warm one and is extremely stiff. June through August is the rainy season when planting is typically done . Every type of soil can support its effective growth. Black or red soil is a good choice for agriculture purposes.

Botanical description:-

The huge, deciduous shrub Tinospora corifolia has multiple long, twining branches that allow it to spread out abundantly. This demonstrates many morphological types, which are explained below, in different parts.

Root-

roots are thread-like, long, filiform, squairsh, and they extend downward from mature branches or chopped stem segments. If they keep growing longer, they may eventually touch the ground. Tetra to penta-arch main structure is the defining feature of aerial root microscopic studies. The cortex of the root is separated into an inner parenchymatous zone and an outside thick walled area, albeit. The dried aerial roots have a taste that is bitter, an odorless color, and a light grey-brown or creamy white hue. The aerial root's parenchyma contains starch in its whole.

Stem-

This plant has a fairly succulent stem that is long, filiform, fleshy, and tends to climb. The branches give rise to aerial roots. The dried stem has a slender, cylindrical shape that is somewhat twisted. The outer bark is papery and thin, with a color ranging from brown to grey. Transverse sectioning of the stem reveals a structure like a wheel. Circular and noticeable are lenticels. The color of the stem powder ranges from light brown to dark brown, and it has a distinct taste and smell.The stem is used to treat urinary tract infections, fever, and dyspepsia. The "Guduchi-satva" stem contains a highly nutritious and digestible starch that is used to treat a different of diseases.

Leaves-

The plant's membranous, simple, alternating leaves have a long, roughly 15 cm-long petiole that is pulvinate, spherical, heart-shaped, and partially and halfway twisted. When viewed in bulk, leaves have a bright green color, but as they age, they take on a yellowish green to yellow hue. The leaves have a faint, bitter smell. The lamina measures 10–20 cm in length and 8–15 cm in width. Protein, calcium, and phosphorus are abundant in leaves.

Flowers-

Little, unisexual flowers with a greenish-yellow hue are produced. Female flowers are solitary, whereas male flowers are grouped together. There are six sepals in two series of three. The inner sepals are larger than the outer ones. Petals are likewise six, free, membrane-bound, and smaller than sepals. Summertime brings flowering (March to

June).

Fruits-

Fruits are fleshy and contain one to three seeds. These drupelets are on thick stalks and have subterminal scars.The fruit has an ovoid form, silky texture, and is scarlet or orange-red in color.These occur in the winter.

Seeds-

The seeds are white, bean-shaped, and curled. The embryo transformed into a curve shape naturally

Nutritional value of Tinospora cordifolia:-

Iron, calcium, vitamin C, fiber, proteins, carbs, and other vital minerals are all abundant in T. cordifolia.The plant has historically been consumed in its raw form by people as a preventative measure and as a remedy for a variety of illnesses. Nutraceuticals are made from all parts of the Tinospora plant, including the leaves, stem, fruits, and roots.

292.54 kcal are produced by T. cordifolia. Five Using the data from their investigation, the nutritional makeup of Gulvel is:

- protein – 4.5%.
- Fat-3.1%.
- Fibre- 15.9 %
- Carbohydrate- 61.66%
- Nitrogen-0.45%
- Phosphorous-0.571%
- Potassium- 0.845%
- Sodium -0.33%
- Copper- 0.031%
- Zinc-0.12%
- Magnesium- 6.41%
- Calcium- 0.131%

Properties of Tinospora cordifolia:-

T.cordifolia many advantageous qualities are the following.

1. It might have immunomodulatory properties, which are effective properties on immunity.
2. It might have anti-toxin qualities.
3. It might have anti-diabetic qualities.
4. It could have antiarthritic properties and exhibit antioxidant activity.
5. It might has antitumor properties.
6. It may has antibacterial properties. It might have anti-inflammatory qualities.
7. It might protect the liver from activity.

Phytochemistry of Tinospora cordifolia (TC):-

Clerodane furanoditerpene glycoside , N-formylannonain, 11-hydroxymustakone, N-methyl-2-pyrrolidone, arabinogalactone polysaccharide (G1-4A), α-D-glucan , epoxy clerodane diterpene (ECD) , Immunomodulatory protein (ImP), Policosanol, Jatrorrhizine , Berberin, Palmatine, Tembetarine, Mangoflorine, choline, Tinosporine, Isocolumbin, tetrahydropalmatine, Furanoid diterpene glycoside . The stem of tobacco can be used to extract several organic solvents, including tinocordiside, tinocordifolioside, cordioside , cordifolioside A, cordifolioside B, syringin , β sitosterol, and δ sitosterol. The majority of these compounds are classified as immunomodulatory (α-D-glucan, G1-4A, N-formylannonain, etc.), anticancer (berberine, palmatine, clerodane furano diterpene, etc.), and antioxidants (the remaining compounds). These compounds function either directly or indirectly through a variety of chemical processes to combat oxidative, inflammatory, and cancerous diseases.

THERAPEUTIC USES:-

1. Immunity Enhancer-

Immunity is enhanced or boosted by giloy. It has many antioxidants that prevent disease, fight free radicals, and maintain the health of your cells. Giloy combats microorganisms, helps cleanse the blood, and eliminates pollutants.

2. In Chronic Fever-

Giloy aids in fever recovery. As an antipyretic medication, giloy can also lessen the symptoms of a number of potentially fatal illnesses, including malaria, swine flu, and dengue. In cases of fever, it enhances blood platelets.

3. In Digestion-

Giloy is extremely beneficial in treating intestinal disorders and improving digestion. For optimal results, mix giloy powder with amla on a regular basis. It can be combined with jaggery to alleviate constipation.

4. Treats Diabetes-

Giloy is a hypoglycemic drug that is also used to treat diabetes, particularly Type 2. It also helps with blood sugar management. Research shows it can reduce oxidative stress, increase insulin secretion, and restrict gluconeogenesis and glycogenolysis. It regulates blood glucose as a mediator of its anti-diabetic properties. Tinospora cordifolia contains a variety of phytoconstituents with anti-diabetic activities, including alkaloids, tannins, cardiac glycosides, flavonoids, saponins, and steroids.

5.Treats Arthritis-

Anti-inflammatory and anti-arthritic qualities found in giloy aid in the treatment of arthritis and its various symptoms. The powder made from giloy stem is used for joint pain. It can be used to treat rheumatoid arthritis in conjunction with ginger. Tinospora cordifolia may find use as an anti-osteoporotic agent because it has been shown to influence the growth, development, and mineralization of bone-like matrix on osteoblast model systems in vitro.

6. Reduces Asthmatic Symptoms-

Breathlessness, coughing, wheezing, and tightness in the chest are all symptoms of asthma. Because of its anti-inflammatory properties, goloy helps treat respiratory conditions such persistent coughing, colds, and tonsils.

7. Improves Vision and reduces Signs of Aging-

The giloy plant is used in several regions of India to improve vision clarity. To apply, bring giloy powder to a boil in water, allow it to cool, and then dab onto the eyelids. This herb has anti-aging qualities that help lessen wrinkles, fine lines, dark spots, and acne. It offers a person's skin to be smooth and radiant.

8. Anti-HIV effects-

It has been demonstrated that TCE reduces the HIV virus's recurrent resistance, increasing the treatment result. The anti-HIV properties of TCE were demonstrated by a decrease in the number of eosinophils, an increase in B cells, macrophages, polymorphonuclear leucocytes, and hemoglobin percentage, indicating its potential for use in the treatment of the illness.

CONCLUSION:-

The supplied information can assist researchers, medical experts, and pharmaceutical businesses in designing and developing medicines, treatments, and health products that efficiently exploit T. cordifolia's many mechanisms of action. It can help promote and popularize this plant, which has promise for treating and preventing various ailments.

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