

FOOD AND THERAPEUTIC USES OF SIDDHA HERBAL DRUG CARDIOSPERMUM HALICACABUM

Dr.ELAVARASIA,

Sir issac Newton Siddha Medical College and Hospital, Nagappatinam.

ABSTRACT:

Siddha medicine is based on Pancha bootha theory and 6 taste, "Food Is Medicine & Medicine is a Food" it is a basic concept in Siddha System. Siddhar Agasthiyar considered as Father of Siddha Medicine. Agasthiyar was born in Ayilyam Star in the Tamil Month of Marghazhi. So in the every year Agasthiyar Birthday Celebrated as a Siddha day. In this year Siddha Day Celebrated in 9th January 9, 2023. "Siddha diet and Nutrition for Healthy Life" is a theme of this year Siddha Day Celebration. The main aim of this Article to explore the Siddha Food made from *Cardiospermum halicacabum* as medicine to the world. This siddha food is highly nutritive and help to built a healthy body and healthy mind. Fast food have many adverse effect to the body but the traditional siddha food has a many benefits to Human. Therapeutic use of this Siddha Drug as a Food *Cardiospermum halicacabum* explained in this article.

KEY WORD :Siddha medicine, *Cardiospermum halicacabum*, Ballon –Vine, Siddha food, Therapeutic use.

INTRODUCTION :

The traditional Siddha Drug *Cardiospermum halicacabum* is called as Muddakkaruthan in tamil. "Muddakku –Aruthan" the term means that relieves the body from the disease that arrest or Restrict the movements of the body in Tamil. This plant belongs to the Family Sapindaceae, In English it called as Ballon –Vine. All parts of The *Cardiospermum halicacabum* is used as medicinally. The leaf and root of this plant have many therapeutic value traditionally used in Siddha System of Medicine. *Cardiospermum halicacabum* is grown as a Climber and this plant uses a tendrils to Climb. It grown all over the World. Ballon –Vine (*Cardiospermum halicacabum*) leafs can be used as Ancient Recipies Adai (Dosa) and soup (Decoction), Grevy (Curry), Rasam, Side dish (Poriya & Thuvayal). This forms of Foods traditionally used in India and Many Country as a wonderfull food and have many benits to the Body have Preventive and Therapuetic benefits . Adai and Decoction is one type of Siddha medicine used as Internally and Expiray Time were within 3 hours from the preparation [3]. Ballon –Vine (*Cardiospermum halicacabum*) has Diuretic, Laxative, Stomachic, Rubifacient, Nutritive and Anti vaatha Action. In siddha it was used as Decoction in the Treatment of Piles, Chronic Cough, [1] Leaf Decoction Used to induce the Normal Labour [2] . *Cardiospermum halicacabum* Leaf Powder with Dried Aloe vera milk & Lead Wort root bark used to treat the Amenorrhoea in the women. Roasted *Cardiospermum halicacabum* leaf tied in Stomach externally to increase the menstrual flow in scanty

Menstruation. Leaf Juice used to treat the Earache and Pus Discharge. *Cardiospermum halicacabum* (Ballon –Vine) root used to Treat the Piles. Stem Decoction with Castor oil used as Purgative. The Oil Prepared with *Cardiospermum halicacabum* Leaf used as pain killer[1]. Leaf Cooked as food consumed to treat the Pain and Stiffness of the Joint.

Therapeutic Uses of *Cardiospermum halicacabum*

Phyto chemical constituents

Ballon –Vine *Cardiospermum halicacabum* contains Tannins, Flavonoids, Saponins, Cardiac glycoside, Steroids, Terpenoids and Anthroquinones. *Cardiospermum halicacabum* leaves contain sitosterol, Glucoside, An alkaloid, Oxalic and amino acids. The presence of a saponin and quebrachitol is reported in the whole plant. The seed oil of *Cardiospermum halicacabum* contains 43% of Erucic acid, 30% of Oleic acid, 12% of Eicosonic 4.57% of Octanoic acid and 4.57% of n-hexadecanoic acid and rich Tri terpenoids.[4-8]

Pharmacological activity

Cardiospermum halicacabum act as Diaphoretic, Diuretic, Emetic, Laxative, Refrigerant and Stomachic. *Cardiospermum halicacabum* has antibacterial, Anti-diarrheal, Antiulcer, antipyretic, Analgesic, Antiparasitic, Antimalarial, Antifilarial and Antioxidant activities. It also used in rheumatism, Severe bronchitis, Snake-bite. It Suppresses TNF production, Exhibits anti-cancer activity and It act as a Immuno modulator it also have a Vaso depressant effect.[9-23,42-44]

ANTIPYRETIC ACTIVITY

Cardiospermum halicacabum exhibited antipyretic activity against yeast-induced pyrexia in rats [44]

ANTIBACTERIAL ACTIVITY

Cardiospermum halicacabum extract shown antimicrobial activity against the pathogens viz. *Escherichia Coli*, *Pseudomonas aeruginosa* and *Streptococcus sp*[24].

ANTIFUNGAL ACTIVITY

The extract of *Cardiospermum halicacabum* shown antifungal activity against human pathogens like *Aspergillus niger* and *Candida albicans*. [25]

Anti-Viral Activity

The plant *Cardiospermum halicacabum* extract show significant anti-HIV, anti-HBV. [26].

Anti-Diabetic Activity

Ethanol, methanol and aqueous leaf extracts of *Cardiospermum Halicacabum*. In suggests that, methonolic extract has significantly suppress the glucose diffusion in vitro thus validating the traditional claim of the plant .

Ethanol extract of *Cardiospermum halicacabum* have Antidiabetic effect against streptozotocin-induced diabetic rats. Presence of flavonoids in this plant response as the antidiabetic principles. The leaf extract of *Cardiospermum halicacabum* help to increase the activity of glucokinase and decrease the activity of glucose 6-phosphatase and fructose 1,6 phosphatase in the liver[27].

ANTIOXIDANT ACTIVITY

Methanol extract of *Cardiospermum halicacabum* shown antioxidant activity in vitro . The extract of *Cardiospermum halicacabum* indicates good potential and good source for natural antioxidants. This prevent the free radical-mediated oxidative damage.

This anti oxidant activity reveals the drug is usefull as food stuffs as well astraditional medicine. It also used as Rhumatism, Lumbago and orchitis

Investigated the antioxidant potency of methanol extract of *Cardiospermum halicacabum* employing various established in vitro systems such as the β -carotene-linoleate model system, 1,1-diphenyl-2- picrylhydrazyl (DPPH)/nitric oxide /superoxide/ radical scavenging, reducing power, and iron chelating activity. The multiple antioxidant activity of *Cardiospermum halicacabum* was evident for reducing power, superoxide, scavenging ability, Nitric oxide scavenging activity and also ferrous ion chelating potency [28].

ANTIARTHRITIC ACTIVITY

A topical herbal gel formulation with *Cardiospermum halicacabum* and *Vitex negundo*, which shown good results in the treatment of arthritis.

The anti-arthritis effect of *Cardiospermum halicacabum* in oral administration of ethanolic extract of leaves at the dose of 125 mg/kg and 250 mg/kg on Freund's complete adjuvant induced arthritis has been studied in rats. The results suggest that the ethanolic extract of *Cardiospermum halicacabum* leaves exhibits significant anti- arthritic effect significantly ($p < 0.001$) with 250 mg/kg dose [29-32].

ANTI-CONVULSANT ACTIVITY

The study was to evaluate the anticonvulsant, Sedative and anxiolytic effects of alcoholic root extract of *Cardiospermum halicacabum*, on the various murine models of epilepsy. The root extract of this plant was administered in to male Swiss albino mice at doses of 30, 100 and 300 mg/kg before evaluation. *Cardiospermum halicacabum* at doses of 100 and 300 mg/kg significantly delayed the onset of clonus and tonus in isoniazid and picrotoxin-induced convulsions. These results suggested that *Cardiospermum halicacabum* possesses a significant anticonvulsant activity with a low motor toxicity profile. [33-38].

Anti-Diarrheal Activity

The alcoholic and aqueous extracts of *Cardiospermum Halicacabum* have antidiarrhoeal activity in all the three experimental models by reducing the frequency of defecation, Decrease intestinal secretion, Decrease the total weight of wet faeces, decreased the propulsion of charcoal meal through the gastrointestinal tract. [39,40].

Fertility Effect

Aqueous extraction of *Cardiospermum halicacabum* leaves increased fertility in male rats by increasing testosterone levels in the serum and through increasing sperm motility, sperm count and the females rat aqueous leaf extract help the implantations and number of viable fetuses. It also possesses a significant hepato-protective effect. It increased fertility due to saponin components increase in serum tepresence of testosterone level[41].

Conclusion

Altration in the diet habit and Synthetic drug usage may influence the health of the people. Properly followed traditional diet and Drugs important in the influence of Nutrition and Prevention of disease. The Traditional Siddha text clearly mention about the Diet and habit of the human influencing the Disease. Avoiding a Junk food and processed food in terms of Prevention of diseases is important one. Ancient siddha Text clearly mention the advantage of *Cardiospermum halicacabum* and Pharmacological and Biochemical and Anti microbial study also reveals the *Cardiospermum Halicacabum* medicinal value and Uses of the Drug. The Siddha system of medicines not only provides that alternative, but also scores over the side effects and cost factor of Synthetic medicine. Traditional medicine has profile to the extent in drug development from natural source is concerned. The foods making from the *Cardiospermum halicacabum* is good for health and highly Nutritive.

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