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A REVIEW OF THE SIDDHA CLASSICAL FORMULATION VALUZHUVAI VITHAI CHOORANAM

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ABSTRACT
Traditional Siddha Medicine (TSM) is an age-old healing system that originated in Tamil Nadu, India. It relies on herbal, mineral, and metal formulations as medicines and also confidences in the use of distinctive approaches like Kaayakarpam, Siddhar Yogam, and Varmam therapy to maintain health and treat a variety of ailments. It is an holistic way of treatment that encompasses treating mind, body and soul as a single entity. *Valuzhuvai Vithai Chooranam* consists of *Celastrus paniculatus* seeds in a powdered form. *Valuzhuvai* seeds have been widely used in many formulations to treat various ailments in the Siddha system of medicine. This review explores the components, traditional uses, and potential benefits of *Valuzhuvai Vithai Chooranam,* while also considering contemporary perspectives on its efficacy.

KEYWORDS: *Valuzhuvai Vithai chooranam, Celastrus paniculatus,* Siddha medicine, Herbal medicine,TSM

INTRODUCTION

Valuzhuvai Vithai Choornam is an herbal formulation widely used in Siddha medicine to treat various health conditions, including digestive disorders and inflammatory diseases [(1)]. The Siddha system of medicine, which originated in ancient Tamil Nadu, emphasizes the use of

natural substances to restore balance and promote overall well-being [2]. In the Siddha system of medicine, many formulations contains Herbs, Metals, and Minerals as components. One such Herbal formulation, *Valuzhuvai Vithai chooranam* is indicated for *Kuruthi kazhichal* (Dysenteric diarrhoea), *Erumal* (Cough), *Paarisa Vayu* (Hemiplegia) *Kaikaal kuththal thimir* (Neuralgia with numbness), *Keelvayu* (Arthritis) [3]. *Valuzhuvai* has been one of the drug mainly indicated in various Siddha formulations treating *Vadha* diseases. Recent studies have validated the anti-inflammatory and antioxidant properties of *Valuzhuvai Vithai Choornam*, highlighting its potential in modern medicine [4, 5]. However, further research is needed to fully understand its mechanisms of action and clinical applications.

MATERIALS AND METHODS:

Selection of the test drugs

The test drug *"Valuzhuvai Vithai Chooranam"* is one of the Herbal formulations for arthritis and neuralgia with numbness which is indicated in the Siddha literature Dr.M.Sowrirajan, Padartha Gunapadam, edition 2006, Pg.no,399.

Collection of Raw drug

The raw drug was purchased in a Country shop in Chennai and authenticated by a botanist and from the Department of Gunapadam, Govt. Siddha Medical College, Chennai.

S. No	Ingredients	Botanical Name	Quantity
1.	*Valuzhuvai Vithai*	*Celastrus paniculatus*	1 kg

Tab.No:1, Ingredient of *Valuzhuvai Vithai*

Purification of *Valuzhuvai Vithai*

After collection, the seeds will be processed in Aloe vera's juice and are allowed to dry completely under the sunshade.

Preparation of *Valuzhuvai Vithai Chooranam*

After the collection of the seeds of Celastrus paniculatus, the purified seeds are made into powder *(Chooranam)*. *Valuzhuvai Vithai Chooranam* was been moistened with cow milk. In a pot, half a portion of it should be filled with cow milk and water. The mouth part of the pot was been covered with white cotton cloth. The moistened chooranam was placed on it and covered with another pot and a moistened cloth covers the edges of the pots. Then the content was boiled till the *chooranam* is fully cooked then it is taken and dried with sun heat. The fine powder *(chooranam)* should be stored in a clean, dry container. The chooranam can be used within months of its preparation [6].

SIDDHA ASPECT OF THE LITERATURE

Valuzhuvai

Synonyms: *Kanguni, Maalkanguni, Athiparicham*
Taste: Bitter
Potency: Hot
Parts used: Leaf, Seed, Oil
Action: Aphrodisiac, Stimulant, Alterative, Diaphoretic, Nervine tonic.

General Property: The following conditions are treated with *Valuzhuvai Vithai, Kuruthi kazhichal* (Dysenteric diarrhea), *Erumal* (Cough), *Paarisa Vayu* (Hemiplegia), *Kaikaal kuththal thimir* (Neuralgia with numbness), *Keelvayu* (Arthritis), *Kudaichal* (Pain related *Vadha* diseases).

Traditional usage

- The seed has been made as a paste with cow urine and paste is used for treating chronic ulcers.
- Seed powder has been taken internally for treating menorrhagia, cough, and dysentery.
- It has been boiled with milk and taken internally for nourishment of the body.
- Decoction of seeds with or without the addition of aromatics is given in rheumatic pains of a malarious character and paralysis**.**
- The seed oil is bitter and it's useful in abdominal disorders, Beri – Beri, and sores [(7)].

Botanical aspect

Botanical Name: Celastrus paniculatus
Syn: C. Paniculatus wild is classified as,
Kingdom: Plant kingdom
Division: Angiosperms
Class: Dicotyledons
Subclass: Polypetalae
Series: Disciflorae
Order: Celastrales
Family: Celastraceae
Genus: Celastrus
Species: Paniculatus

Botanical Description:

Celastrus paniculatus is a small to medium-sized woody plant, which has branches that are either cylindrical or have a slight tapering without noticeable ridges or furrows. The plant becomes softer as a result of the weeping foliage or branching on the young shoots and branches. The leaves are oval, with a point or tapering acuminate shape, and are broadest below the middle. They do not have hair. The blooms are terminal, have a yellowish-green tint, and flower once a year. They are unisex, with either stamens or carpels, but not both. Fruits have three valves, three cells, three seeds, and a capsule-globose form. Brown, ovoid, or egg-shaped seeds with a reddish specialized protrusion covering the entire seed [(8)].

Chemical Constituents

S. No	Parts of the plant	Chemical Constituents
1.	Seeds/Seeds oil	Palmitic acid, Phytol, Erucic acid [(9)], 8β-triacetoxy-9β-benzoyloxydihydro beta-agarofuran 1α, tetra acetoxy-9α-benzoyloxy dihydro beta-agarofuran [(10)], Oleic acid, palmitic acid, linoleic acid, and

		stearic acid, Malkanguinol, Malkangunin [11]
2.	Stem	Wifornine F, Paniculatine A, Paniculatine B [12]
3.	Rootbark	n- triacontanol and pristimerin, benzoic acid, Zeylaseral, zeylasterone [13]
4.	Leaves	alkaloid, a glycoside [14]

The pharmacological activity of *Valuzhuvai Vithai*

Hyperlipidaemic activity

Oral administration of methanolic seed extract (50%) of Celastrus paniculatus at the ideal dose of 65 mg/kg body weight significantly reduced plasma total cholesterol, triglycerides, and LDL cholesterol with results nearly identical to the control group and comparable to the conventional hypocholesterolemic medication. The treated animals showed considerable reductions in their liver weight and atherogenic index when compared to the hypercholesterolemic animals. It markedly raised HDL cholesterol levels in comparison to the control group. Elevated hepatic bile acid production and subsequent breakdown of cholesterol to neutral sterols were caused by increased activity of lipoprotein lipase and plasma LCAT. Moreover, there was a significant decrease in the activities of glucose 6-phosphate dehydrogenase and HMG-CoA reductase. Histological examinations showed that the aortic cholesterol deposits of animals given C. paniculatus seed extract were lower than those of mice produced with hypercholesterolemia [15].

Anxiolytic activity

Celastrus paniculatus plant extract exhibited anxiolytic effects, prolonged the duration of pentobarbitone-induced sleep in a mouse staircase test, and decreased the start of the action. When tested at two dose levels (1 and 1.5 g/kg), Celastrus oil, which is produced from Celastrus paniculatus seeds, had substantial anxiolytic activity and did not cause tolerance. Buspirone is not a sedative, and its ability to reverse the effects of the drug on behavior (in open-field exploration) points to a serotonergic mechanism underlying anxiolysis [15,16].

Analgesic and Anti-inflammatory activity

The flowers of Celastrus paniculatus were extracted using 100% methanol to create a methanolic extract. The tests used in this approach include the carrageenan-induced paw edema in rats and the hot water tail immersion test in mice. The produced extract was evaluated for its potential as an oral analgesic and anti-inflammatory. According to this study, CP has anti-inflammatory and analgesic properties. The oil shows anti-inflammatory properties in rat paw oedema produced by carrageenan [17]. In comparison to the 75.75% demonstrated by an ibuprofen dose of 100 ml/kg, seed oil at doses of 5 ml/kg and 10 ml/kg exhibits a 66.60% and 78.78% inhibition of inflammation.39 Additionally, Ahmad et al.'s 1994 phytochemical screening and research revealed that mice and rats exhibit analgesic and anti-inflammatory

responses to the methanolic extract of C. paniculatus seeds [18].

Wound healing activity

The triterpene component lupeol, which was extracted from petroleum ether extract of CP leaves, was tested for its ability to promote wound healing (8 mg/ml of 0.2 percent sodium alginate gel) in excision, incision, and dead space wound models on Swiss albino rats (175-225 g). Compared to groups treated with nitrofurazone, those treated with lupeol exhibited considerably greater wound-healing activity. The incision wound epithelialized faster and experienced a higher rate of wound contraction compared to the control group. In a dead space wound model, the weight of the granulation tissue of the animal treated with lupeol increased, indicating enhanced collagenation and the lack of monocytes [19].

Gastroprotective and Anti-ulcer activity

Rats treated with Celastrus paniculatus seed oil (CPO) against different stomach ulcer models showed gastroprotective and antiulcer effects. Using pylorus-ligated ulcers brought on by ethanol and indomethacin, the gastroprotective and antiulcer properties of CPO were evaluated. As a control, ranitidine (40 mg/kg per os PO) was employed. The gastrointestinal motility was measured using gastroenteritis. Gastrointestinal motility was evaluated using the gastrointestinal transit ratio and the gastric emptying period. In ulcer models brought about by ethanol and indomethacin, the outcomes of pharmacological investigations of CPO (200 mg/kg, 400 mg/kg) demonstrated that it offered efficient gastroprotection. In rats with pylorus ligation, the seed oil demonstrated gastroprotective action by raising stomach pH and decreasing overall gastric juice volume and acidity [20]

Antiprotozoal activity

A portion of the chloroform extract of Celastrus paniculatus root bark is said to have the strongest antimalarial activity. Pristiminerin, a quinonoid triterpene, was the active hypothesis. Pristimer was comparatively less effective than other antimalarial medicines when tested in vitro against different isolates of Plasmodium falciparum that were resistant to multiple medications [21].

Anti-arthritic activity

It has been reported that when rats were given doses of 200 mg/kg and 400 mg/kg of petroleum ether fraction (PCP, or petroleum ether extract of dried seeds) made from Celastrus paniculatus, the swelling was significantly suppressed in a dose-dependent manner, lowering the arthritic score in the FCA-injected paw ($P < .01$). In terms of immune organ indices, body weight, paw swelling, and arthritic score, it significantly slowed the evolution of arthritic disease. In comparison to arthritic mice not receiving medication, this outcome was linked to a significant decrease of the overproduction of inflammatory cytokines (TNF-α and IL-6), oxidative stress markers (MDA and NO), and cellular enzyme levels (AST, ALT, and ALP) [22].

Antifertility activity

When administered to adult albino rats at a dose of 0.2 ml/48 hours (i.p.) for 30 days, the seed oil is said to have antispermatogenic effects. This is indicated by the exfoliation, loss of germ

cells, and vacuolization of seminiferous tubules, which ultimately results in spermatogenesis arrest. Only Sertoli cells and spermatogonia were visible in the reduced tubules during the last stage of spermatogenesis impairment. Mice's livers displayed localized necrosis after receiving 0.2 ml (i.p.) of seed oil for 30 days, however, these lesions disappeared 45 days later. These results imply that CP oil has antifertility qualities and that liver degenerative changes are reversible [23].

Antioxidant activity

It has been observed that the seeds of Celastrus paniculatus exhibit antioxidant properties when extracted with methanol, ethyl acetate, pet ether, and water. The assays employed to measure antioxidant activity were total phenol and flavonoid content determination, total antioxidant capability, 1,1 diphenyl-2-picrylhydrazil (DPPH) free radical assay, reducing power assessment, Nitric oxide (NO) scavenging assay, and Cupric ion reducing capacity assay. In the DPPH radical scavenging experiment, ethyl acetate extract showed the lowest IC50 value (585.58g/ml) when compared to ascorbic acid. In the nitric oxide scavenging assay, the IC50 values for the water, methanol, ethyl acetate, and pet ether extracts were 122.99g/ml, 320.54g/ml, 601.81g/ml, and 206.37g/ml, respectively, while the reference ascorbic acid extract had an IC50 value of 6.83g/ml. The results indicate that the extracts may be antioxidants [24].

***Valuzhuvai Vithai* in Siddha Formulations**

S. No	Name of the formulation	Dosage	Used as	Indications
1.	*Indhirani thylam*	*Kasu edai* (10.2gm)	Int/Ext	84 types of *vadha* disease, 13 types of *Sanni* [25]
2.	*Karkadakagi thylam*	-	Ext	80 types of vadha diseases [25]
3.	*Kodiveli nei*	-	Ext	*soolai, kiranthi, vadha rogam* [26]
4.	*Seeraga thylam*	*Kazhanchu alavu* (5.1 gm)	Ext	*Vadha* diseases [27]
5.	*Guggulu mathirai*	*Pairalavu* (65 mg)	Int	84 types of *vadha* disease, *viranam* [27]
6.	*Malkingini Thylam*	-	Ext	*Paarisa vadham* [28]
7.	*Neerkundi Thylam*	-	Ext	*Neerkovai, palvali* [29]
8.	*Vidakarappan ennai*	-	Int/ Ext	*Kandamaalai, karappan* [29]
9.	*Sevaganar ennai*	-	Ext	*Erumal, kasam* [30]
10.	*Usirathi kirutham*	4 ml	Int	*Pitham* diseases [30]
11.	*Moorivathi kirutham*	1 spoon	Int/ Ext	*Ratha pitham* [30]
12.	*Magavilvathi ilagam*	2-5 gm	Int	*Arosagam, Veekam, vaanthi, kaikaal erivu* [31]
13.	*Sivanar vembu kuzhi thylam*	20-30 drops	Int	*Kuttam, karappan,*

				viranam [31]
14.	*Rasaganthi mezhugu*	½ -1 gm	Int	*Kandamaalai, thimir, kuzhi viranam*[31]
15.	*Inji kuzhambu*	3 *kazhanchu* (15.3 gm)	Int	*Kirani, gunmam, paandu, veekkam* [30]
16.	*Vallathagi rasayanam*	*Chundai alavu* (500 mg)	Int	*Kiranthi*[32]
17.	*Karuvelampatti thylam*	-	Ext	*Kazhichal,thalai noi* [33]
18.	*Nunakai kadugu*	*Punnaikai alavu*	Int	*Kirani* [30]
19.	*Sowbakkiyachundi ilagam*	2-8 gm	Int	*Vadha noi, vellai noi, pasi inmai* [7]
20.	*Mathanakameshwara thylam*	-	Ext	*Vadha noi* [32]

Tab.2, *Valuzhuvai Vithai* in Siddha Formulations

*Int-Internal, **Ext-External

CONCLUSION

This literature review discusses the ancient significance and recent research on *Valuzhuvai Vithai Choornam*, a Herbal compound used in Siddha treatment. Existing research suggests that it has Anti-inflammatory, Analgesic, Antioxidant, Antimicrobial, Anti-arthritic activity, and Gastroprotective which support its usage in a variety of health disorders. Although the scientific evidence that is now available is encouraging, there are still unanswered questions about the formulation's long-term effects, ideal dose, and mechanisms of action. To completely investigate the medicinal potential of *Valuzhuvai Vithai Choornam*, future research should concentrate on standardization, quality control, and clinical trials. Thus, it will pave the way for the identification of less invasive and cost-effective management strategy of many diseases.

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Conflict of Interest

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