

A drug review on potency of *Azhingil Vithai* Thailam, Siddha Polyherbo formulation in the management of Ceganavatham

S.P. Radha ^{1,*}, S Aruldevi ², R. Archana ³ and S Yamini Priyadharshini ⁴

¹ Department of Sirappu Maruthuvam, Excel Siddha Medical College & Research Centre, Komarapalayam, Namakkal, India.

² Department of Physiology, Excel Siddha Medical College & Research Centre, Komarapalayam, Namakkal, India.

³ Department of Biochemistry, Excel Siddha Medical College & Research Centre, Komarapalayam, Namakkal, India.

⁴ Department of Pathology, Excel Siddha Medical College & Research Centre, Komarapalayam, Namakkal, India.

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Abstract

In Siddha system of medicine the diseases are categorized and concluded as 4448 diseases. Among these classification there are Vatha disease, Pitha diseases and Kabha diseases. The common Vatha disease are *Thandaga Vatham* (Lumbar spondylosis), *Vathasthambam* (Sciatica) and *Cegana Vatham* (Cervical Spondylosis). Cervical spondylosis is a disorder characterised by increasing degeneration of the intervertebral disc, with subsequent changes in the bones and soft tissues. Symptoms are usually a manifestation of encroachment on local neural elements. The symptoms and signs appear to be related to the cause and time course of compression as well as the structures being compressed. Many formulations been indicated for the Cervical spondylosis, and one among these is *Azhingil vithai* Thailam. Every drug in the *Azhingil vithai* thailam possess the Anti- Vatha Property, hence this article provides the efficacy of *Azhingil vithai* Thailam on Cervical Spondylosis based on the Siddha literature and Modern science.

Keywords: Siddha; Vatham; *Azhingil vithai*; Thailam; Cervical Spondylosis

1. Introduction

Siddha system of medicine is the science dealing with one mind and body. It helps us to reach the ultimate goal of our life being oneness with the eternal soul. There are 4448 types of diseases as classified in our Siddha literatures. based on Three-Dosha theory. The details of Vaadham have been dealt before reviewing the specific signs and symptoms of Ceganavandham. By such classification there are 80 types of Vaadha diseases and Ceganavandham[1].

Vaadham is one of the three humours (Vaadham, Pitham, Kabam). Among the five elements (panchaboodhas) it is formed by the vayu and akash. The two other dhosas are set in motion by the vaadha dhosam. In a good, proper health the existence of three dhosas are in the ratio of 1: ½ : ¼ respectively. This ratio is altered when there is a disturbance to the Vaadha dhosam by the environmental factors diet, habits, etc., Vaadha dhosam may be increased or decreased. As the three dhosas are in equilibrium state when vaadham is affected the other two are also affected, leading to Vaadha diseases[3].

Ceganavaadham is one of the Vaatha disease described in "*Yugi Munivar Vaidhya Sinthaamani-800*" It is a condition dealing with the involvement of the upper back which is identical to the cervical spine, comprising the symptoms of pain in the neck, radiating pain in the upperlimbs, feeling of heaviness of the body, mental depression, giddiness, burning sensation of the eyes and constipation[4].

* Corresponding author: S.P. Radha

Cervical spondylosis is a disorder characterised by increasing degeneration of the intervertebral disc, with subsequent changes in the bones and soft tissues. Symptoms are usually a manifestation of encroachment on local neural elements. The symptoms and signs appear to be related to the cause and time course of compression as well as the structures being compressed[18].

Cervical spondylosis is very common and histological evidence of degenerative changes are present in virtually even one over the age of 70 osteophytes may form posteriorly with osteoarthritis of the apophyseal joints and also anteriorly in relation to degenerative changes and narrowing of the intervertebral disc with sclerosis of the bony end plates. The osteophytes may cause symptoms by encroaching on the spinal nerve foramina or in the cervical region on the vertebral artery foramen. In the cervical region intermittent pain and discomfort may be followed eventually by stiffness and limitation of movements[18]. In treatment aspect this study drug Azhingil Vithai Thailam helps in to reduce the Vatham which has Anti- Vadha property. The most of the ingredient posses the Anti- vatha property and Anti- inflammatory property.

Aim

To Elucidate the Properties of Azhingil Vithai Thailam through various literatures and articles.

2. Materials and methods

This study is carried out through various literature research and compared with Siddha literatures.

Cegana Vadham is one of the Vadha disease described in “*Yugi Munivar Vaidhya Sinthamani- 800*”

Kaeluma Kazhuthin Keel Araikku Maelum

Kediyana Karamirandum migavae Nonthu

Vaalumae sareeramellam Ganathirukkum

Vaalibarkku manam Kannum Mayakamaagum

Thaelumae Irlandu Kottinathu Pol Kadukkum

Cegana Vali Noiudan theerkanthaanae

- Yugi munivar Vaidhya Sinthamani – 800

As the above poem says that the symptoms of Pain in the neck, Radiating pain to the shoulders and upper limbs, Heaviness over the body, Mental depression, Giddiness, Burning sensation in the eyes, Constipation, Tingling sensation and numbness in the upper limbs which is the symptoms of *Cegana Vatham* and been correlated with Cervical Spondylosis[4].

Azhingil Vithai Thailam a Siddha Herbal formulation quoted in “*Anuboga Vaidhya – Bramha Ragasiyam*. which is indicated for Pain around the neck, Flatulence and swelling[5].

2.1. Azhingil Vithai (*Alangium salvifolium*. Linn)[2]

- Parts used: Seed
- Medicinal uses:

The seeds of *Alangium salvifolium* Linn. have been traditionally reported to exhibit a variety of biological activities, including antidiabetic, anticancer, diuretic, anti-inflammatory, antimicrobial, laxative, and antiepileptic activities. The chloroform, ethanol, and water extracts of *Alangium salvifolium* seeds were obtained and subjected for phytochemical screening and evaluated for their pharmacological activities. From the acute toxicity study it was observed that chloroform, ethanol, and aqueous extracts of *Alangium salvifolium* seeds are non-toxic at a fixed dose of 2000 mg/kg. Among all three extracts ethanol extracts exhibited significant ($p < 0.01$) antidiabetic, antiepileptic, analgesic and anti-inflammatory activities[6].

Alangium salvifolium is used for the treatment of various diseases, namely inflammation, arthritis, diabetes, bacterial infection, etc. We planned to isolate the active constituents of ethanol extract of *Alangium salvifolium* leaves and evaluated their anti-inflammatory and anti-arthritis activity. The petroleum ether, ethanol and aqueous extract were prepared from leaves of *Alangium salvifolium*, and screened for phytochemical analysis. The different flavonoid compound isolated from ethanol extract, and further evaluated their anti-inflammatory and anti-arthritis activity[7].

2.2. Etti (*Strychnos nux vomica*. Linn)

- Parts used: Seed
- Medicinal Uses:

Up to the present day, over 84 compounds, including alkaloids, iridoid glycosides, flavonoid glycosides, triterpenoids, steroids and organic acids, among others, have been isolated and identified from *S. nux-vomica*. These compounds possess an array of biological activities, including effects on the nervous system, analgesic and anti-inflammatory actions, antitumor effects, inhibition of the growth of pathogenic microorganisms and regulation of immune function[8].

By removing most strychnine from TAF, MTAF with significantly reduced toxicity was obtained. After oral administration, the elimination of brucine might be inhibited by other alkaloids in TAF or MTAF and this resulted in increased bioavailability. Significantly increased analgesic and anti-inflammatory activities via the oral route were obtained with MTAF in spite of the fact that the dose of MTAF was reduced to only one fortieth that of NVP. In addition, compared with TAF, the pharmacological activities of MTAF were also found to be increased. It is suggested that MTAF can replace with NVP and TAF in the antitumor, analgesic and anti-inflammatory prescriptions in Traditional Chinese Medicine to obtain much higher therapeutic efficacy[9].

2.3. Thandrikkai (*Terminalia bellarica*)

- Parts used : Seed
- Medicinal uses:

Terminalia bellirica Roxb., known as Bahera or Beleric or bastard myrobalan, belonging to the family Combretaceae of order Rosales, is a large deciduous tree common on plains and lower hills in Southeast Asia, where it is also grown as an avenue tree. Glucoside, tannins, gallic acid, ellagic acid, ethyl galate, gallyl glucose, chebulanic acid are the main active phytoconstituents of medicinal importance. These phytoconstituents are responsible for many of the pharmacological roles. Different parts of the tree have various medicinal activities viz., antisecretory, analgesic, antihypertensive, antidiarrhoeal activity, antimicrobial activity antidiabetic, antioxidant, antiulcer, antipyretic, hepatoprotective, anticancer, angiogenesis, antidepressant-like and anti-urolithiatic activity. This affects the LDL oxidation and macrophage inflammatory response and also nephrotoxic effects. Also having antipsychotic potential helpful in preventing delaying clot formation and have immunostimulant activity. Their traditional uses include relief in a cough, asthma, indigestion, dental problems, sore throat and wounds[10].

The antisecretory and analgesic activities of the crude extract of *Terminalia bellerica*. *T. bellerica* extract at the dose range of 300 - 1000 mg/kg inhibited the castor oilinduced intestinal fluid secretion in mice. The extract also dose-dependently (50 - 100 mg/kg) where it reduced the numbers of acetic acid-mediated in mice. These results indicate that TB exhibit antisecretory and antinociceptive effects, hence justifying its medicinal use in diarrhea and pain[11]

2.4. Kadukkai (*Terminalia chebula*)

- Parts used: Skin of the Seed
- Medicinal Uses:

Terminalia chebula Retz, known as the "king" of Mongolian and Tibetan medicines, is a drug for a wide range of diseases. The main chemical components of myrobalan include triterpene acid, galloyl glucose, anthraquinonoid. The modern pharmacological studies show that myrobalan has multiple biological activities, including antimicrobial, anti-inflammatory, antioxidation as well as anti-tumor[12].

It has been extensively exercised in various indigenous medicine practices like Unani, Tibb, Ayurveda, and Siddha to remedy human ailments such as bleeding, carminative, dysentery, liver tonic, digestive, antidiarrheal, analgesic, anthelmintic, antibacterial and helpful in skin disorders. Studies on the pharmacological effects of *T. chebula* and its phytoconstituents documented between January, 1996 and December, 2021 were explored using various electronic databases. During the time mentioned above, several laboratory approaches revealed the biological properties

of *T. chebula*, including antioxidative, antiproliferative, anti-microbial, proapoptotic, anti-diabetic, anti-ageing, hepatoprotective, anti-inflammatory, and antiepileptic. It is also beneficial in glucose and lipid metabolism and prevents atherogenesis and endothelial dysfunction. Different parts of *T. chebula* such as fruits, seeds, galls, barks extracted with various solvent systems (aqueous, ethanol, methanol, chloroform, ethyl-acetate) revealed major bioactive compounds like chebulic acid, chebulinic acid, and chebulaginic acid, which in turn proved to have valuable pharmacological properties through broad scientific investigations. There is a common link between chebulaginic acid and chebularin with its antioxidant property, antiaging activity, antiinflammatory, antidiabetic activity, and cardioprotective activity. The actions may be through neutralizing the free radicals responsible for producing tissue damage alongside interconnecting many other diseases[13].

2.5. Pungu (*Pongamia pinnata*)

- Parts used: Seed

2.5.1. Medicinal uses

Pongamia pinnata (L.) Pierre is one of many plants with different medicinal properties where all its components have been used in the treatment and prevention of many forms of ailments in many countries as traditional medicine. The plant extract shows anti-diarrhoeal, anti-fungal, anti-plasmodial, anti-ulcer, anti-inflammatory, anti-nociceptive, anti-hyperglycaemic, anti-hyperammonic, anti-lipoxidative, anti-oxidant and analgesic activities[14].

Several different classes of flavonoid derivatives, such as flavones, flavans, and chalcones, and several types of compounds including terpenes, steroid, and fatty acids have been isolated from all parts of this plant. The pharmacological studies revealed that various types of preparations, extracts, and single compounds of this species exhibited a broad spectrum of biological activities such as antioxidant, antimicrobial, anti-inflammatory, and anti-diabetic activities. The results of several toxicity studies indicated that extracts and single compounds isolated from this species did not show any significant toxicity and did not cause abnormality on some rats' organs[15].

2.6. Neem : *Azadirachta indica*

- Parts used: Seed
- Oil extract of the Seed

2.6.1. Medicinal Uses:

Herbal medicines have been used to treat various diseases such as arthritis, but the scientific profiles are not well understood. In this study, we examined, in comparison with ibuprofen, the inhibitory effects on various inflammatory markers of the most commonly used herbal medicines to treat arthritis, boswellia (*Boswellia sapindales*), licorice (*Glycyrrhiza glabra*), guggul (*Commiphora wightii*), and neem (*Azadirachta indica*). To elicit inflammatory response, we exposed mouse myoblast C2C12 cells to lipopolysaccharide (LPS). Tumor necrosis factor-alpha (TNF- α) and monocyte chemotactic protein-1 (MCP-1), which are cytokines activated during an inflammatory response, were determined. The optimal non-toxic concentration was determined by exposing different concentrations of drugs (from 0.01 to 10 mg/mL). Cell death measurement revealed that the drug concentrations lower than 0.05 mg/mL were non-toxic concentrations for each drug, and these doses were used for the main experiments. We found that neem and licorice showed robust anti-inflammatory responses compared with ibuprofen. However, boswellia and guggul did not demonstrate significant anti-inflammatory responses[16].

2.7. Sesame (Ellu) *Sesamum indicum*

- Parts used: Seed
- Oil extract of the Seed

2.7.1. Medicinal Uses:

Sesamum indicum, one of the first recorded plants used for its seeds, is reported to have analgesic, antioxidant, anticancer, anti-obesity as well as hepato and nephro protective activities. The current study evaluated the effects of two doses (400 and 800 mg/kg) of ethanolic extract of *S. indicum* seeds in Freund's complete adjuvant induced arthritis in rats in comparison with diclofenac and methotrexate by the changes produced in body weight, body temperature, paw volume and spontaneous activity, hemoglobin, erythrocyte sedimentation rate, total white blood cells, red blood cells, Interleukin-6 and Tumor necrosis factor- α as well as joint changes in X-ray and histological changes in joint tissue. Unlike the untreated group, the groups treated with *S. indicum* showed significant decrease in

paw volume, body weight, white blood cell count, erythrocyte sedimentation rate, Interleukin-6 and Tumor necrosis factor- α and an increase in body weight, spontaneous activity, hemoglobin level, and red blood cell count. Histopathological examination showed gross reduction in synovial inflammation and cartilage damage. X-ray revealed significant improvement in joint space. The effect of ethanolic extract of *S. indicum* was found to be equivalent to methotrexate and greater than diclofenac[17].

3. Discussion

Ceganavatham is one of the Vadha Disease which carries the symptoms of the Cervical Spondylosis. On the basis of Vadha disease the Siddha herbal formulation "*Azhingil Vithai Thailam* is been indicated for *Cegana Vatham* known as Cervical Spondylosis. Each single such as *Azhingil Vithai* (Seed of *Alangium salvifolium*), *Kadukkai* (*Terminlai Chebula*), *Pungu Vithai* (Seed of *Pongamia pinnatia*), *Thandrikkai* (*Terminlia bellarica*), *Etti* (Seed of *Strychnos nux Vomica*), *Veppam Vitha Ennai* (Oil extracted from the seed of *Azadirachta indica*), *Nallennai* (Oil extracted from the seed of *Sesamum indicum*) are the drugs which present in the *Azhingil Vithai Thailam* has the anti-inflammatory and some of the herbal plant have the analgesic activity Astringent, Laxative and Demulcent activity along with Antioxidant. Hence this Siddha herbal formulation *Azhingil vithai Thailam* potency to act over the disease cervical spondylosis also known as Ceganavatham.

4. Conclusion

Based on various Siddha texts review, the ingredients of *Azhingil vithai thailam* are common drugs used in treating Cervical spondylosis Vathadiseases. In view of the above mentioned pharmacological activities, most ingredients are found to possess Anti inflammatory, Astringent., Analgesic, Laxative and Demulcent activity along with Antioxidant. So it can be decided that the formulation will be helpful in the management of cervical spondylosis also known as Ceganavatham.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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