



Siddha Perspective of Arathai Chooranam for the Treatment of diphtheria and the General Precautions of communicable disease - A Narrate Review

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Abstract: The ancient Siddha system of medicine has its origin right from the God of mankind. According to this medical system, herbs, minerals, and human life are interconnected, and they proved their inseparable unification time and again all through the ages. The Siddha system of medicine is based on two concepts of treatment i.e. *Mukkuttram* and *Arusuva*. The disease Diphtheria in children and adults was reported as an aftermath of civil wars and social unrest. Incidences of outbreaks of adult diphtheria were reported in the 1990s when they caused widespread epidemics in the Russian Federation and former Soviet Republics. It causes fever, tonsillitis, Swollen lymph nodes, fatigue, weakness, chills, shortness of breath, hoarseness of voice, cough, and swelling difficulties. Arathaichooranam consists of five ingredients including *Arathai (Alpinia officinarum)* which is a chief ingredient of this formulation. In the Siddha system of medicine, there are a lot of cultural methods to the human civilization to prevent communicable diseases. The aim of the review article is to bring out the Siddha aspects of Arathaichooranam for the treatment of Diphtheria and also the general preventive measures for the communicable disease.

Keywords: Siddha, Arathaichooranam, Diphtheria, Tonsillitis, Swollen lymph nodes.

INTRODUCTION

Corynebacteria, morphologically is a gram-positive bacilli which are non-spore forming, non-acid-fast, non-motile rods with the presence of metachromatic granules in some species. They frequently show club-shaped swellings, hence the name *Corynebacterium* (from *coryne*, meaning "club")¹.

Corynebacterium diphtheriae is pleomorphic, measuring approximately 3-6 $\mu\text{m} \times 0.6-0.8\mu\text{m}$. Although gram-positive, they tend to be decolorised easily. They possess polymetaphosphate granules that serve as energy storage granules and are called volutin or Babes-Ernst granules or metachromatic granules. It can be well appreciated by Albert's Staining technique, which shows bluish-black metachromatic granules with green bacilli. They often appear at angles to each other, resembling the letters V or L. This has been called the Chinese letter or cuneiform arrangement due to the incomplete separation of daughter cells after binary fission².

Corynebacterium diphtheriae is the agent responsible for

the highly lethal respiratory infection called diphtheria. It is a disease that can be well managed by massive vaccination programs, it has been mostly eliminated from most of the developed countries yet it remains a threat among school-going children in some countries which lack vaccine programs³.

Even though there is a large development in the field of science and technology, there are some communicable diseases that cannot be prevented by modern medicine. School-age students who are infected with *C. diphtheriae* are often misdiagnosed and if the treatment fails to start earlier may often lead to a high fatality rate, as it is a very old disease there are several management ways and treatment protocols were mentioned in the Indian system of medicine⁴.

According to the Siddha system of medicine, siddhars have said that our body is made up of **96 thathuvass** and **Pancha boothas**. Of these boothas wind, fire, water, and soil act as three senses of humor of our body **Vaadha, pitha, kabam** respectively. It is important to maintain these three humors at an equilibrium state to prevent diseases and lead a healthy life.

The total number of diseases quoted in siddha system of medicine are said to be **4448** this can be observed in the books like **Agasthiyar vaithiya rathna churukam, Therayar vagadam and Yugichinthamani 800**⁵.

Recently, there is a surge among people in choosing alternative systems of medicine, especially Siddha, over modern medicine. Hence, it is very much essential to standardize Siddha drugs as specified by World Health Organisation⁶. In the present study, we carried out to review the Siddha drug formulation Arathai Kudineer Churnam for diphtheria and also the ways to prevent the communicable disease.

Modern Aspect of Diphtheria:

The clinical features and pathogenesis of diphtheria depend on the toxigenic strain of *C. diphtheriae* which produces a powerful exotoxin called Diphtheria toxin. The incubation period in diphtheria is commonly 3-4 days but may, on occasion, be as short as one day.

The site of infection may be

- Pharyngeal – Most common site
- Laryngeal
- Otitic
- Nasal
- Genital-vulval, vaginal or preputial
- Conjunctival

- Cutaneous⁸

Siddha aspects of Diphtheria:

Kabhathondaikattu: It is said that the speech alters in nature and may become voiceless. The etiology of *thondaikattu* is vary but caused by *imbalanced kabham* and affect of Utharavayu. The *ThondaiKattu* is classified into 6 types. The *kaphathondaikattu* is one of that type⁹.

Symptoms of Thondaikattu:

Dryness in mouth, sore throat, progressive cough with sputum, sneezing, running nose and difficulty in speaking.

Preparation of Arathaichooranam:

Take equal quantity of

- Sitrarathai
- Chukku
- Thippili
- Akkarakaram
- Athimathuram Sugar- Equal to the above quantity

Make fine powder of the drugs and add powdered sugar and mix well.

Dose: 15 to 30grams, twice a day with honey.

Indications: Thondaikattu (Laryngitis, Pharyngitis, Tonsillitis), Kasam, etc¹⁰.

Table : 1 Pharmacognastic aspect of Arathaichooranam:

S.No	Tamil Name	Botanical name	Partused	Phytochemicalconstituents	Traditionaluses
1	Sitarathai	<i>Alpiniaofficinarum</i>	Rhizome	Kaempferide, galangin and alpinin	It is used in bronchitis, heart diseases, dropsy, dental diseases, kabha diseases due to pitha and vadha diseases, eczema, flatulence, head disorders, chills, cough, and fever.
2	Chukku	<i>Zingiberofficinale</i>	Rhizome	Phenols, 6-shogaol, 6-gingerol, gingerdiols, 1,8 cineole, 6-gingesulphonic acid; sesquiterpenes, zingiberol, α -zingiberene, α -curcumene, β -bisabolene, α -santalol, β -eudesmol, monoterpenes like β -phellandrene, α -pinene, β -pinene, camphene, sabinene, myrcene; glycerol, ginger glycolipids A, B & C; geraniol glycosides	Useful in Indigestion, heartburn, dyspepsia, inflammations, bronchitis, asthma, vomiting and earaches, facial, head and intestinal disorder. Dried ginger is generally given for digestive diseases, asthmatic complaints, fever and phlegmatic affections, anaemia etc.

3	Thippli	<i>Piper longum</i>	Fruit	Chaviline, piperine, piperidine, volatile oils.	It is used to cure cough, headache, Liver disorder, ear, nose and tongue problems and used in ulcer treatment.
4	Akkarakaram	<i>Anacyclus pyrethrum</i>	Root	Gallic tannins, triterpenes, sterols, mucilage, coumarins, saccharides, holosides.	It cures vadh diseases, sore throat and dryness of mouth, it includes salivary secretion.
5	Adhimathuram	<i>Glycyrrhiza glabra</i>	Root	Glycyrrhizin, glycyrrizic acid, glycyrrhetinic acid	It is used in dry cough, leucoderma, jaundice, sore throat, eye diseases and cough

Table 2: Siddha pharmacological properties of the ingredients of Arathaichooranam:

The following table shows the Siddha pharmacological properties of the ingredients of arathaichooranam¹¹.

S.No	Name	Taste	Panchabootha combination	Part used	Actions
1	<i>Alpinia officinarum</i>	Pungent	Air + Fire	Rhizome	Analgesic, Respiratory ailments, Hepatic protective expectorant.
2	<i>Zingiber officinale</i>	Pungent	Air + Fire	Rhizome	Stimulant, Stomachic, Carminative.
3	<i>Piper longum</i>	Pungent	Air + Fire	Fruit	Analgesic, Respiratory ailments, Hepatic protective expectorant.
4	<i>Anacyclus pyrethrum</i>	Pungent	Air + Fire	Root	Antivada, Respiratory ailments.
5	<i>Glycyrrhiza glabra</i>	Sweet and Bitter	Earth+Water Air+Space	Root	Emollient, Demulcent, Laxative, Expectorant.

COMMUNICABLE DISEASES :

Communicable diseases are diseases which are transmitted from one person to another person through close contact, pathogens, and vectors. There are many communicable diseases that affect our respiratory tract, intestines, etc. Some examples of communicable diseases are whooping cough, cholera, amoebiasis, yellow fever, rabies, malaria, lymphatic filariasis, chickenpox, etc¹¹. Among these diseases, most of them are transmitted through close contact, infected body fluids, and contaminated food and water. Chickenpox was the deadliest disease that killed so many lives in the past. So the people had practiced many techniques from the ancient days to prevent this disease¹².

PREVENTION OF COMMUNICABLE DISEASES:

One of the salient features of Siddha system of medicine is that we follow the saying “**prevention is better than cure**”. This can be understood from a lot of space assigned to “**Pini anuga vidhi**” (rules to keep disease away) in Siddha literature.

Pini anuga vithi :

- ❖ They drank only cow's milk during night time and avoided drinking other milk which causes inert effect to the body.
- ❖ They took an oil bath in lukewarm water only.
- ❖ They avoided deep sleep during the daytime

- ❖ They avoided eating vegetables which causes constipation and piles.
- ❖ They took vomiting medicines at intervals of six months and diarrhea medicine at intervals of four months which kept their body clean.

According to Pini anuga vithi these were the regular habits among the people of ancient India to keep diseases away from them¹³.

Prevention of chickenpox in ancient culture

- ❖ If a person from a village was affected with chickenpox many ritual practices were practised to prevent further spread of this disease. This includes conducting special poojas to specific goddesses.
- ❖ No one is allowed to cross the village border for ten days from the time of inauguration until the end of festival .
- ❖ People from neighbouring villages should not go to that village during the festival.
- ❖ Foods such as kezhvaragu porridge, buttermilk and liquid drinks were served to the people to reduce body heat.
- ❖ Though these were ritual practices, there was a great science hidden behind this¹⁴.

Knowledge about fasting in ancient India

- ❖ They took fasting at the interval of thirty days or fifteen days to calm down the body from inertness.
- ❖ They took only pure water during fasting.
- ❖ They also took amla juice and white pumpkin juice to reduce

pitha from the body.

- ❖ Our forefathers practiced fasting during yegathasi, Shashti, and kiruthigai ¹⁵.

Along with this, the concept of kaayakarpam is also mentioned by Siddhars for the prevention of diseases.

Kaya karpam :

Kaya karpam is one of the special therapies in siddha system of medicine which deals with decreasing the morbidity and increasing the life span of an individual. Kaya karpa drugs are classified into two types

- ❖ General (pothu karpam)
- ❖ Specific (sirapu karpam)

The general karpam drugs can be taken by anyone at anytime for attaining optimum health. Whereas specific drugs are meant for periods of illness and physical imbalance¹⁶.

The general drugs are very much beneficial in boosting the immune system and thereby preventing diseases.

In ancient time prevention of communicable diseases occurs through spiritual path eg. Chickenpox ¹⁷.

CONCLUSION

Based on this fact, it is suitable to note that the polyherbal formulation, 'Arathai Chooranam' one of the versatile drugs used in Siddha medicine possesses an excellent pharmacological properties as well as unreported adverse effects clinically. Hence the review highlighted the pharmacognostical, chemical constituent details of the drug and explained the Siddha concept of herbal properties emphasizing the antibacterial, antiviral and immunomodulator properties of various herbs used in this formulation. So proper clinical evaluation is needed to prove the role, safety, and effectiveness of Arathai Chooranam as an Anti-viral and Immunomodulator. The general precautions in the earlier human civilization can also bring down the spread of communicable disease.

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