



Review Article

PUGAI (FUMIGATION) AS A PURA MARUTHUVAM (EXTERNAL THERAPY) IN THE SIDDHA SYSTEM OF MEDICINE

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ABSTRACT

Siddha Medicine is a traditional system of healing medicine in the southern part of the India and some other nations. This system of Medicine is mainly categorized into two classes, based on the root of admiration of the drugs, which are 32 types of *Aga marunthugal* (Internal medicine) and 32 types of *Pura marunthugal* (External medicine) for treating the 4448 diseases describe in the Siddha texts. The 32 types of External therapies are included in many kinds of external application of treatment procedures. Siddha texts mentioned the *Pugai* is termed as Fumigation is one of the external therapies in this system. This study reveals that the *Pugai* is the effective external treatment procedure to cure some disease condition based on Siddha theory. Fumigation signifies the artificial impregnation of the atmosphere, with the fumes or smoke of any vegetable or aromatic substances. *Pugai* is an application of fumes is administered in different parts of the body, apart from inhalation. Most of these therapies are aimed to maintaining the healthy balance of tri humours of *Vatham*, *Pitham*, *Kabam* and *Saptha thathukkal*, which mean seven tissue types of the body. Main purpose of this procedure is to reduce microbes and to control infections. Fumigation can be effective in inactivating microbes on environmental surfaces.

KEYWORDS: Siddha Medicine, Internal medicines, External therapies, *Pugai*, Fumigation.

INTRODUCTION

Fumigation is termed as *Pugai* in Siddha texts. It denotes the artificial impregnation of the atmosphere, with the fumes or the smoke of any vegetable or aromatic substances. The application of fumes is done on different parts of the body. The purpose of this procedure is control the infections. In ancient times people use fumigation as a preventive measure to protect themselves from epidemic diseases and they are used (*Chunkan* and *Peenakankuzhal*) apparatus for the fume inhalation. It is long neck and a broad base.^[3] A ancient smoke pipe was 40 finger breadth in long, had a small opening at one end (base) to insert the medicated wick and a large opening around 1cm at the another end (top) to generate the fume. The shoots of *Naanal* (*Saccharum spontaneum*), *Ammanaku* (*Recinus communis*) and bamboo stick might be used in olden days. The smoke pipe may have 3 finger breadths long, 7 to 8 mm diameter and have small hole. The diseases related to *Kapam* are easily cured by this treatment. The process of fumigation with medicinal herbs under specific rituals influences widely the persons participating in it as well as the surrounding environment.^[8]

Recently discovered, there are 100 trillions of microbes in human body, millions of microbes around us, in air, cloths and etc. That human micro biome of every healthy individual differs remarkably in the different varieties of microbes. In the body, these microbes are present in different parts such as skin, nasal cavity, oral cavity, gut, and vagina and therefore stay in different habitants. It contributes almost 37% of our house hold dusts. In infected parts of human body commonly with the many pathogenic organisms like, gram positive organisms such as *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, and etc. gram positive *staphylococcus aureus* lives in nostrils of 30% of population.^[16,19] Since ancient times, naturally occurring plants have played an important role in disinfection.

In Siddha system of medicine many herbals, organic, inorganic and animal by-products used in *Pugai* (fumigation) therapy. In fumes of this drugs that contains, anti-microbial, anti-inflammatory, anti-oxidant, anti-bacterial, analgesic and etc. In Phytochemical analysis of fresh and dried leaf extracts revealed the presence of resins, tannins,

flavonoids, anthroquinone, saponin, cardiac glycosides and steroidal trepans. [17]

During ancient times when germ theory of diseases was not conceived it was recommended to ward off evil spirits (unseen, unknown, bad agents causing diseases). *Pugai* has been used recommended for various disorders as well as to maintain health. Various drugs and methods are used in different types of diseases.[9] For examples, in medicated herbal juices or extracts placed over the cloth and allowed to dry then it burnt to inhale the fume called as *Thiri* (eg: *Peenisa thiri* for sinusitis). Roll of dry medicinal herbal leaves called as *Suruttu* (medicated cigar e.g: *Adathodai suruttu* for respiratory illness). Medicated fumes are not only cures the effected site, it is also exposed to the whole body especially in mental illness. In the text, Sage Agasthiyar's *Maanidakkirigai-64* it explains various drugs for *Pugai* to the Psychiatric problems. [9]

Prevention is better than cure it is the aim of Siddha medicine, leaves of *Sathakuppai* (*Anethum graveolens*) fumes is used to patient's surrounding areas for disinfection purposes. Flowers of *Maa* (*Mangifera indica*) fumes ii used for mosquito bite [4] Peacock drooping used for fumes to prevent enter the snake at home. It also an integrate part of the Emergency medicine for unconscious and poisonous patient (e.g: Domestic cock and hen drooping used for Scorpion bite). [5]



Picture 1: Fumigation therapy in ancient Indian medicine (Konark, 13th Century AD)



Picture 2: Fumigation therapy

Method of *Pugai*

Method 1

Herbs in the form of juice (or) paste are placed over a piece of cloth. The cloth is rolled as stick and it is allowed to burn. The smoke coming from this wick is subjected to be inhaled by the patient through nose and exhale by mouth. If they inhale through mouth and exhale by nose it will cause head related diseases.

Method 2

Finely powdered materials are added to tamarind twig charcoal fire and the fumigation is done to the affected part. [18]

Method 3

Roll of dry medicinal herbal leaves to generate the fumes.

Method 4

In this method, we have to collect the needed herbals in a vessel and allow it to burn in that vessel using a burner. The fume coming from the burnt herbals are used to sterilize the place. [18]

Procedure

For preparation, purify the required drugs and crush the drugs into powder to make a smoke. Fill the smoke tube with powder and smoke pipe is fired at one end. For administration assemble all the articles at the room beside and ask the patient to drink the water before starting treatment. Procedure should be explained to the patient. Patient may be performed either in prone, supine or lateral positions and screen them for privacy.

Except the affected areas all other areas should be covered with a cloth. Gently wash the site and clean dry with sterile cloth. The eliminated fumes should be inhaled 3 or 4 times through mouth and exhaled through mouth not by the nostrils. If exhaled through nostrils it will develop few eye diseases. For skin diseases, piles, fistula, ulcerated wound, the fume released from the smoke pipe is allowed to apply on the affected part or skin.

For ano-rectal and vaginal diseases the patient is performed to sit on a stool which has an opening in the top and the drugs are allowed to burn below the stool and the fumes are exposed to the affected part. For the removal wipe the fumigated area with a cloth, gargle the mouth with water or with some herbal decoction if inhaled through mouth. After the procedure dispose the clothing used, then clean the table with soap or antiseptic solution, wash your hands with salt water and leave the patient comfortable. [18]

End of proper therapy

The patient should feel light in head, chest and throat region. The sputum is properly expelled and no congestion is felt

Therapeutic source of *Pugai*

Herbals

Milagu (Piper nigrum), *Kothamalli vithai (Coriandrum sativum)*, Powder of dry ginger (*Zingiber officinale*), *Oomathai (Flower of Datura metel)*, *Manjal (Curcuma longa)*, *Kandankathari* fruit and seeds (*Solanum surrattense*), *Santhanam (Santalum album)*, *Puliyampattai (Tamarindus indica)*, *Erukku (Calotropis gigantean)*, *Thumbai (Leuca saspera)*, *Eluppai (Madhuca longifolia)*, *Kottam (Costus speciosus)*, dry leaves and flowers of *Maa (Mangifera indica)*, *Visha mungil (Crinum asiaticum)*, dry leaves of *Sathakuppai (Anethum graveolens)*, *Vembu pattai (Azadirachta indica)*, Vegetable oils like castor oil, neem oil, Aromatic substances like *Sambirani (Styrax benzoin)*, *Kukkil (Shorea robusta)* and etc.^[4]

Inorganic substance

Rasam, Vellai padanam (Mercurial and Arsenic compounds), *Myil thutham (Cupric acetate)*, *Lingam (Mercuric sulphide)*, *Veeram (Corrosive sublimate)*, *Gandhagam (Sulphur)*, *Gowri (Yellow lumps)*, *Aritharam (Yellow orpiment)* and etc.^[5]

Animal by-products

Snake slough, egg shell, pearl, conch shell, feathers, horns and nails, Birds, Donkey and other animal dung.^[6, 2, 11]

Prepared medicines

Some prepared medicines like *Vida kuzhambu, Agasthiyar kuzhambu, Kousigar kuzhambu*. Fumigation controls the infection up to the deeper area of the organs.^[9, 15]

Eligible criteria

Fumigation with toxic substances is not advised in newborn, infants, pregnant and lactating women, people under influence of alcohol, suffering from head injury or lock jaw or extreme dryness, eye diseases, anaemia, bleeding disorders, sexually transmitted diseases.^[7]

Indications

Fume inhalation therapy is an effective treatment for respiratory conditions such as *Peenisa noi (Sinusitis)*, *Puppasa pinigal (Respiratory illness such as Asthma, Bronchitis)*, *Sevi noigal (Ear diseases)*, *Moolam (Hemorrhoids)*, *Powthiram (Fistula)*, *Yoni puttru (Cervical cancer)*, *Natpatta viranam (Chronic non-healing ulcers)*, *Pal soththai (Dental carries)*, *Kaalani (Corns of the foot)*, *Valippu (Epilepsy)*, *Soothiga vatham (hysteria)*, 18 types of *Kirigai (Psychiatric diseases)*, It is done mostly after

Varmam and Nasiyam, medicated cigar helps in hoarseness of voice. It is considered an integrate part of emergency medicines to given for an unconscious patient and poisonous bites victims.^[8, 11-15]

Duration of the treatment

The entire treatment is usually given for 10-15 minutes for 7 days.^[3,7,9]

Regulations of the treatment

Inhalation by nostrils is recommended in eye and nasal diseases, while for diseases of the oral cavity, dental caries and jaw, fumes are taken in by mouth but should not be pumped into the lungs.^[7]

Fumigation is done with twice a day for three days and once on the fourth day when done with mercurial, arsenic compounds and Cupric acetate.^[7] Fumigation should not done in empty stomach and the patient should be advised to have cooked rice with milk or butter milk when fumigation done with organic substances.^[5]

Most of the fumigation therapy Curd is to be avoided, but in the Siddha text of sage Agasthiyar's Ayurvedham 1200, should be advised with cold water, curd rice for fumigation of wound cases.^[5]

A strict diet restriction is advised during the treatment period the restriction includes avoiding sour foods like tamarind, salt and spicy foods.^[7]

Oil bath with application of *Ajwon* paste on the vertex is suggested after the treatment period.^[3]

Neem oil is advised to apply precaution aspect of *Pugai* therapy for some kind of dental problems.^[3]



Adathodai (Justicia adhatoda)



Adathodai (Justicia adhatoda) dry leaves used medicated cigar for *Eraippu*



Peenisa thiri for sinusitis

PUGAI FOR VARIOUS DISEASES

Fumigation for Sinusitis

Thippili (*Piper longum*), *Manjal* (*Curcuma longa*), *Omam* (*Carum copticum*), and *Milagu* (*Piper nigrum*) are taken in equal quantity and ground well to applied on a cloth and the cloth is rolled up, soaked with *Neem* oil it will be smoldering and the smoke is inhaled by the patient. The smoke cures head ache and heaviness of head in sinusitis. [11]

Fumigation for Respiratory illness

Pavazham (Coral), *Thaalagam* (Yellow orpiment), *Lingam* (Mercury sulphide), *Kadal nurai* (Cattle fish bone) are powdered separately and blended together and triturated with lime juice. The material is dissolved in lime juice, and then a cotton cloth is soaked in it and shade the cloth. This is made into seven wicks. The wick is lit and the emanating fume is inhaled twice a day for three days and once on the fourth day. Food of rice and butter milk is only given as diet during the treatment period. [12]

Fumigation for ophthalmic diseases

Ellu (*Sesame indicum*), *Payaru* (*Vigna radiata*), *Kadugu* (*Brassica juncea*) are powdered and to generates the fume to well expose to the patient's eyes. [13] It cures *Kan noigal*, *Kan sivappu* and diseases of the head.

Medicated Cigar for hiccough

Roll the powders of *Santhanam*, *Sambirani* in a paper and make it into a cigar. The patient suffering from hiccups advised to smoke the cigar. [14]

Fumigation for 18 types of Kirigai (Psychiatric illness)

Egg shell, fecal matter of dog, outer skin of the *Poondu* (*Allium sativum*), *Kattamanaku* (*Jatropha curcus*), *Thulasi* (*Ocimum sanctum*) and *Devadaru* (*Cedrus deodar*) in equal amount makes it to powder form. Smoldered the powder and fumigated by the patient. [9]

Fumigation for epilepsy

Agasthiyar kuzhambu may be used in the dose of 3 to 5 paddy weight to fumigate by the epileptic patient. [9]

Corn of the foot

Fumigation of the Fruits of *Kandakathari* (*Solanum surattense*) smolder is used to the *Kaalaani*. [9]

Fumigation for hemorrhoids

Smbirani, *Kungilium*, *Shiyakai* (*Acasia sinuate*) are taken and add hair then add water and boiled after make it as powdered. This *chooranam* is burnt and the fume is applied to the anal region. It is done two times in morning and evening for three days. It cures rectal prolapse and tenesmus. [7]

Fumigation for non-healing ulcers

Lingam (Mercuric sulphide) is embedded in the paste of the root of *Erukku* (*Calatropis gigantean*) after drying it smoke to indicate in non-healing ulcer. [5]



Pugai for Non healing ulcer

Fumigation for chronic ulcers

Karuvelam pisin (Gum of *Acacia Arabica*), *Roots of Murungai* (*Moringa oleifera*), *Erukan* (*Calatropis gigantea*), *Azhinjil* (*Alangium salviifolium*) and *Sivanar vembu* (*Indigofera aspalathoides*) are made into fine powder and a pinch is added to burning charcoal and the non-healing ulcer is exposed the fumes. [7]

CONCLUSION

The process during therapy cleans the surface Impurities from microbes, protect the topical skin from toxins, It produce anti-septic, anti-inflammatory, analgesic activities and improves the peripheral circulations. External therapies can be done in major measures with locally available resources and therefore is accessible as well as affordable to the entire society. This paper helps the review of *Pugai* towards the traditional external therapies of Siddha literatures. The peculiarity of this therapy is to prevent the diseases and to promote the health.

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