



**International Journal of Research  
in  
Pharmaceutical and Nano Sciences**  
Journal homepage: [www.ijrpns.com](http://www.ijrpns.com)



**REVIEW ON EXTERNAL MEDICINES IN SIDDHA SYSTEM OF MEDICINE**

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**ABSTRACT**

Siddha system of Medicine, one among the ancient traditional medical system of India that has been practiced for 2000 years and above. Siddha system of medicine is a vast repository of internal and external medicines. These procedures are as important as the internal medicines in the management of health and disease. According to the mode of application, the Siddha medicines could be categorized into two classes: Aga marunthugal/Internal medicine were used through the oral route and further classified into 32 categories based on their form, methods of preparation, shelf - life, etc. Pura marunthugal/External medicine includes certain forms of drugs and also certain applications (such as nasal, eye and ear drops), and also certain procedures (such as leech application). It is also classified into 32 categories. External therapy procedures are as important as in the management of Health and Disease. In several instances only the External therapy without any drug is sufficient and these procedures are already systematized. Most of these therapies are aimed at maintaining a healthy balance of three humours Vatham, Pitham and Kabam and also the seven tissue types of the body. Hence, an attempt was made to recollect information regarding External therapies in Siddha System of medicine.

**KEYWORDS**

Siddha, External Medicines, Classification and Herbals.

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**INTRODUCTION**

Siddha Medicine is a vast repository of External therapies. In several instances, only the procedure without any drug is sufficient and these procedures are already systematized. Most of the therapies are aimed at maintaining healthy balance of the three physiological factors and also seven tissues of the body. There are occasions where administration of oral medicines becomes impossible and hence to

revive the patient, administration of drugs or manipulation through external therapies like thokkanam, pattru, otradam is required. Nasal application including inhalation and ophthalmic applications become important particularly in unconscious comatose patients, epilepsy, stroke patients and conditions like trauma, snake bite. It is very clear that the ancient physicians knew the connections between the brain and the sense organs and chose their routes and drugs accordingly<sup>8</sup>.

Siddha Medicine is classified as Internal Medicines (Aga Marundu 32) and External medicines (Pura marundu 32)<sup>7</sup>. In Siddha system of Medicine The term “Marundhu” is not exactly equivalent to the English ‘drug’. “Marundhu” may be concrete or abstract. The abstract may be physical manipulation, heat or cold application etc., Hence these non oral medicines are listed as External Medicines - ‘Puramarundhu. External therapy procedures are as important as in the management of Health and Disease. According to the mode of application, the siddha medicines could be categorized into two classes. Aga marunthugal/Internal medicine were used through the oral route and further classified into 32 categories based on their form, methods of reparation, shelf - life, etc., Pura marunthugal/External medicine includes certain forms of drugs and also certain applications (such as nasal, eye and ear drops), and also certain procedures (such as leech application). It is also classified into 32 categories<sup>7</sup>. The 32 types of External therapies are as follows.

1. Kattu (Bandage)
2. Pattru (Poultice)
3. Pochu (Liquid application)
4. Kalimbu (Ointment)
5. Seelai (Medicated gauze)
6. Varthy (Medicated wick)
7. Pasai (Cream)
8. Kali (Paste)
9. Podi (Powder)
10. Neer (Medicated Liquid)
11. Nasiyam (Nasal drops)
12. Naasigabharanam (Insufflation)

13. Suttigai (Cautery/Heat application)
14. Ottradam (Fomentation)
15. Pugai (Fumigation)
16. Salaagai (Probe)
17. Oodhal (Blowing)
18. Mai (collyrium)
19. Kalikkam (Eye drops)
20. Urinchal (Suction)
21. Attai vidal (leech application)
22. Kuruthi vangal (Venesuction)
23. Murichal (Bone restructuring)
24. Kombukattal (Fracture splinting/Immobilisation)
25. Thokkanam (Physical manipulation)
26. Podi thimiral (Dry powder massage)
27. Vedhu (Steam therapy)
28. Pottanam (Medicated pouch)
29. Aruvai (Excision)
30. Kaaram (chemical cautery)
31. Keeral (Incision)
32. Peechu (Douche/Irrigation)<sup>7</sup>

#### **Classification of external therapies**

- Topical Application
- Nasal Application
- Ophthalmic
- Blood letting
- Bone setting
- Physical Therapy
- Heat therapy
- Surgical procedures<sup>6</sup>

#### **Topical Application**

- Kattu (Bandage)
- Pattru (Poultice)
- Pochu (Liquid application)
- Kalimbu (Ointment)
- Seelai (Medicated gauze)
- Varthy (Medicated wick)
- Pasai (Cream)
- Kali (Paste)
- Podi (Powder)
- Neer (Medicated Liquid)

#### **Nasal Application**

- Nasiyam (Nasal drops)
- Naasigabharanam (Insufflation)

- Oodhal (Blowing)

#### **Ophthalmic**

- Mai (collyrium)
- Kalikkam (Eye drops)

#### **Blood letting**

- Urinchal (Suction)
- Attai vidal (leech application)
- Kuruthi vangal (Venesuction)

#### **Bone setting**

- Murichal (Bone restructuring)
- Kombukattal (Fracture splinting/Immobilisation)

#### **Physical Therapy**

- Thokkanam (Physical manipulation)
- Podithimirdhal (Massage with dry powder)

#### **Heat therapy**

- Vedhu(Steam therapy)
- Pottanam(Medicated pouch)
- Suttigai (Cautery)
- Ottradam (Fomentation)
- Pugai (Fumigation)

#### **Surgical procedures**

- Aruvai (Excision)
- Kaaram (Chemical Cautery)
- Keeral (Incision)
- Salaagai (Probe)
- Peechu (Douche)<sup>6</sup>

#### **Shelf life of external medicines**

- Pasai, Peechu, Mai, Nasiyam, Kalikkam-12months
- Varthy, Podi, Neer, Nasigabaranam -3 months
- Seelai, Kalimbu -6 months<sup>7</sup>

## **MATERIAL AND METHODS**

### **Kattu (Compress/Bandage)**

The raw drugs and medicines like leaves bran etc are either ground or cooked. This is then tied or bandaged in affected part. The dry stems of *Cissus quadrangularis* with juice of *Calotropis gigantea* can be applied as a compress in small joint swelling (Polyarthritis)<sup>23</sup>. This is probably related to Rheumatoid arthritis. Equal quantity of the leaves of

*Cadaba indica* (Vizhuthi), *Justicia tranquebarasensis* (Thavasurungai) and *Cassia auriculata* (Aavaarai) are crushed with three cloves of *Allium sativum* (Vellai poondu) and are soaked in warm castor oil and used as a bandage for six days in patient suffering from arthritis. If it is chronic and if the patient does not recover in six days the prognosis would be poor<sup>12</sup>. *Cissus quadrangularis* (Pirandai), *Coccinia indica* (Kovai), *Acorus calamus* (Vasambu), *Piper nigrum* (Milagu), *Allium sativum* (Poondu) are crushed and the juice is consumed internally and the remaining material is applied on swelling and bandaged for seven days. This is very helpful in vertebral problems<sup>11</sup>. Saute *Euphorbia tirucalli* (Thirikalli) with castor oil and add crushed leaves of *Clerodendrum phlomidis* (Thazhuthazhai), *Vitex negundo* (Nochi) to it and apply on the heel of the foot as a compress for treating Achilles tendinitis and calcaneal spur. *Gynandropsis gynandra* (Thaivelai) is crushed and applied on the opposite toe and bandaged for three days for treating scrotal swelling<sup>11</sup>. Yellow lumps is triturated with castor oil, subsequently with butter and applied for corn foot<sup>11</sup>. *Gynandropsis gynandra* (Thaivelai) is crushed and applied on the opposite toe and bandaged for three days for treating scrotal swelling<sup>20</sup>.

### **Patru (Poultice)**

The raw materials are either ground or juices of leaf, bark, root etc are either heated or not heated can be applied or pasted on the affected area. (e.g) Neerkovai mathirai patru applied on forehead in case of head ache or sinusitis. Patru of turmeric powder and slaked lime on the forehead and the paranasal region of the face is a common practice in sinusitis. Paste of rhizome of *Acorus calamus* (Vasambu) with *Indigofera tinctoria* (Avuri) root is topically applied on skin rashes. A poultice is made with seeds of *Datura metel* (Oomathai) and seeds of *Elettaria cardamom* (Elam) and applied below the navel region to overcome anuria. Paste is made with *Cardiospermum helicacabum* (Mudakkaruthan), slaked lime and cane jaggery. This paste is applied on the lymphatic swelling. Leaves of *Zizyphus jujube* (Elanthai) are crushed, added to vinegar and

stirred continuously using a wooden stirrer. The emerging froth is applied topically on the region where burning sensation is felt. Egg white yolk mixed with sesame oil and dehydrated. This is applied on the thigh for vatha diseases<sup>11</sup>. Leaves of *Zizyphus jujube* (Elanthai) are crushed, added to vinegar and stirred continuously using a wooden stirrer. The emerging froth is applied topically on the region where burning sensation is felt. Puravalam: This is application of the medicated paste around the orbital cavity. The paste contains *Terminalia chebula*, *Glycyrrhiza glabra*, *Santalum album*, *Aquilaria agallocha*, *Aegle marmelos*, *Pterocarpus santalinus*, Dried *Zingiber officinale*, *Ocimum sanctum*, Elephant tusk, then the Ingredients are powdered and made into a fine paste by triturating with breast milk. This application is indicated in the membranous growth of the conjunctiva<sup>6</sup>.

#### **Poochu (Liquid application)**

Superficial application of herbal juices or Medicated oil on the affected areas is called as Poochu. Applying diluted sandal paste on the body and particularly after tonsuring of head is a classical example of Poochu to reduce pitham. A poultice is made with the root of *Acalypha indica*, *Amaranthus spinosus* and *Acorus calamus*, added to sesame oil and boiled to prepare oil for the topical application of carbuncle<sup>13</sup>. *Myristica fragrans* is charred and the carbon is mixed with the sesame oil and applied in neogrowths. *Glycyrrhiza glabra* is triturated with honey for tumours<sup>24</sup>. The Coconut milk extracted from one half of the coconut kernel is mixed with slaked lime and applied for scabies. After application the patient is advised to take bath only in the evening. This process is repeated for two more days followed by the application of coconut milk alone to heal the wounds<sup>6</sup>.

#### **Kalimbu (Ointment)**

This is a form of medicine used externally in the form of ointment. In this certain mineral compounds, astringent materials like *Terminalia chebula* are powdered, ground with butter and applied over wounds and ulcers. Equal quantity of Mercuric chloride (Veeram) and Molten lead

(Karuvangam) are triturated with clarified butter and applied on the skin for Tinea. Triturate 4.16gms of Calomel (Pooram) with 208gms of butter to fineness and obtain an ointment. This ointment heals non healing ulcers<sup>12</sup>.

#### **Seelai (Medicated gauze)**

This type of external medicine is in the form of medicated plasters. Plasters are prepared by grinding toxic materials in water or herbal juice. A piece of cloth is soaked in this and externally applied over wounds. e.g- Cloth soaked in Turmeric water and applied.

A medicated gauze is an adjunct used for application of wound in order to promote healing and/or to prevent further infection. A dressing is designed to be direct contact with the wound or abscess or a fistula, which makes it different from a bandage, which is primarily used to hold a dressings in place. Dressings can be impregnated with antiseptic inorganic materials, as in borax (Vengaram) or castor oil was first used in the first surgical dressings (Karaseelai). The following gums such as *Shorea robusta* (Vellai kungiliyam), *Commiphora mukul* (Erummaikan kungiliyam), *Feronia elephantum* (Vilaa), *Vateria indica* (Kundrikkam) provides adherence of ingredients to the cloth or gauze and are themselves act as anti-bacterial, anti-inflammatory and antiseptic. Medicated gauze is widely used as a support for broken bones; a bandage impregnated with medicine is moistened and then wrapped around the damaged limb, setting into a close-fitting yet easily removable tube. Dressing was usually a piece of material, sometimes cloth, but the use of medicated oil, leaves and honey have also been described<sup>6</sup>.

#### **Indications**

- To arrest bleeding
- To ease pain
- Wound healing
- Chronic ulcers
- Abscess
- Neoplasm
- Fistula
- Bubo

- Foot corn<sup>6</sup>

#### **Varthi (Medicated wick)**

This type of external medicine is in form of medicated wicks. Caustic substances are ground well with herbal juices or decoctions, a piece of cloth is soaked in this and a wick is prepared. The wicks are applied or inserted into granulomatous tracks in fistula, sinuses and non-healing ulcers. The wicks prepared by corrosive substances increases the size of sinuses and disintegrate the necrosed tissues from the ulcers. Wicks can be prepared from honey and rocksalt and inserted into the anal orifice for purgation. A wick is prepared with the poultice of equal quantity of the leaves of *Achyranthes aspera*, *Curcuma longa* and *Piper nigrum* with castor oil and the wick is introduced into the sinus of the wounds. The excessive flesh and unwanted growth will get reabsorbed and healing hastened. Salt, *Piper nigrum* and tender leaves of *Azadirachta indica* are made into a poultice and applied on abscess. Once the mouth opens a wick made of the latex of *Daemia extensa* and a Neem seed is introduced into the sinus for faster healing<sup>24</sup>.

#### **Pasai (Cream)**

These are semisolid lipid or resin/gum based applications. Usually fats are used as bases, vegetable oil and beeswax; they extract plant constituents well, soften at skin temperature and thus make the extracted material available to the skin. As with creams they are emollient and protective, but stay on the skin longer. This tenacity will have a longing effect locally<sup>8</sup>. Shells of fresh water mussel are heated on charcoal fire and dropped in the fresh juice of *Emblica officinalis*. The process is repeated for 3-5 times. The ash so obtained is triturated with castor oil till it attains waxy consistency. The ointment is useful in crack foot. Powder of White arsenic (Vellai paadanam) is added to molten Bees wax and mixed well. This mezhugu is warmed and applied on abscess and bubo<sup>15</sup>.

#### **Kali (Paste)**

A traditional pharmaceutical formulation becoming rarer in hospitals. Medicinal materials are mixed

with rice flour or flour of any cereals or pulses and cooked<sup>8</sup>. (e.g) In case of abscess, Rice flour and Turmeric are ground well with water, heated made into paste and applied over it. Drugs like *Lepidium sativum* seeds are ground with rice flour by adding milk or water, made into a dough, heated and applied to the affected area for treating abscess. Warm pastes are also used for inducing perspiration. Make a poultice by grinding together with hot water, 20.8gms each of *Sphaeranthus amaranthoides*, *Hemidesmus indicus*, *Cyperus rotundus* and *Curcuma aromaticum*. This paste can be applied in the axillary region as a deodorant<sup>12</sup>.

#### **Podi (Powder)**

Powder of *Alpinia officinarum* is applied on the vertex after oil bath in infants to prevent the increase of Kapham. Thiripala powder is added with vinegar and applied on the soles for peripheral Neuritis<sup>6</sup>.

#### **Neer (Medicated liquid)**

Raw drugs are soaked in water or made into decoction to concentrate or powerfully potent substances are greatly diluted and used to wash wounds. They are antiseptic solutions<sup>8</sup>. This is prepared by either soaking the raw drugs in water and making a decoction of it or diluting the caustic substances. Decoction of thiripala used in washing wounds, Eczema and non-healing ulcers. It is also used as gargle in gingivitis and oral ulcers. This is also used as douche for washing uro-genital system, and anal diseases. Padikaara neer - 35gms of Alum is dissolved in 9litres of water and filtered. This water is used as gargle on Stomatitis, as nasal drops to arrest bleeding. This medicated water is also used for washing ulcers. Vengara neer - Borax is fried and dissolved in water and filtered, used for cleansing wounds. Veera neer - 50 mg of Veeram with 250 ml of water, used for washing wounds<sup>6</sup>.

#### **Nasiyam (Nasal drops)**

It is a process by which the drug is administered through the nostrils. Fresh plants are cleaned thoroughly or blanched, crushed and juice extracted, filtered and instilled into the nostril<sup>8</sup>. Individual oil or herbal juices or flower juices are also used for nasiyam. e.g- Peenisa thylam, Flower juice of

*Leucas aspera*. The leaves of *Ocimum sanctum* (Kattu thulasi), *Leucas aspera* (Thumbai), *Vitex negundo* (Notchi) shall be crushed individually with normal salt and the juice so obtained is instilled into the nostrils. Nasiyam helps in eliminating the excess kapham and cures Headache, Sinusitis and chest congestion<sup>19</sup>. Flowers of *Leucas aspera* are crushed and the juice is instilled in the nostrils for Fever with chills, Rigor and Parkinsonism<sup>14</sup>. Sulphur is triturated with Butter and spread uniformly on a cloth. This cloth is rolled over the tip of an iron rod and literally oil drops dripping from the flame is collected in a porcelain vessel, cooled and stored. 3 drops of this oil is instilled in the nostrils for ten days which heals nasal polyps and wounds<sup>22</sup>.

#### **Naasigabharanam (Insufflation)**

Insufflation is a common route of administration with many respiratory drugs used to treat conditions in the lungs (Asthma or emphysema) and paranasal sinuses (allergy)<sup>8</sup>. e.g- Iluppai podi, Akkarakara podi. Wild cow dung is soaked in the latex of *Calotropis gigantea* and dried. This process is repeated ten times and made into ash by calcination process. Ash is snuffed into nostril for treating Hemocrania, Sinusitis<sup>13</sup>. Naasikabharanam is used in the treatment of derangement of all three dosham, together, deliriums, epilepsy, psychiatric illness and in sinusitis, kapha diseases of the head, glaucoma, tinnitus and sense of body heat<sup>8</sup>.

#### **Suttigai (Cautery/Heat application)**

This is otherwise called heat application. This type of applications are usually done over vertex, forehead, chest, back, hands and legs.

There are 5 types of Suttigai:

1. Kaanthi suttigai- Sunbath
2. Kaatru suttigai- Exposure to blowing hot air
3. Mann suttigai- Suttigai with brick or earthen vessel
4. Mara suttigai- Suttigai with plant parts
5. Uloga suttigai- Metal cauterization<sup>1</sup>

Kaatru suttigai - induces profuse sweating and helps removal of toxins from the body. This brings down excess pittam<sup>1</sup>.

Mann suttigai - After spreading *Vitex negundo* (nochi ) leaf, an earthen pot in which oil was used

earlier and applied on the vertex, forehead, chest, dorsum of torso and foot. This indirect heat application is done on delirium, toxemia, muscular sprain<sup>1</sup>.

Mara suttigai - Among them mara suttigai is done with rhizome of turmeric plant (manjal kombu) and is indicated to treat the diseases like Sanni, vatha noi Sanni with Lock jaw Kapha noigal Virana silethum noigal, peenisam, Anda vaayu, Vidhai veekam, Vidhai veekam, muzhangal vatham and kuthikal Vatham<sup>1</sup>.

Uloga suttigai - For lymph node enlargement and tonsillitis, cauterisation is done with metal probes. The tip of the 1<sup>st</sup> probe made of gold has a ring like shape with a hole at the centre, while the 2<sup>nd</sup> one has a tip resembling a circular plate without a hole at the centre. The wound is healed with the application of Panchakini thylam<sup>1</sup>.

#### **Ottradam (Fomentation)**

Ottradam is one of the 32 types of external medicine. Ottradam is the application of hot or cold packs. It is normally done with materials heated to appropriate temperature. While throwing out waste as toxins through the skin it also helps disperse aggravated doshams, dilating all body channels for cleansing. Otradam is classified into 2 types hot and cold fomentation. It is the application of hot packs of pulses, cereals husk, lime, brick powder, leaves etc.. on or around the affected part for contusion and other swelling.

The substances like lime powder, bran, brick powder, egg- shell, leaves of medicinal plants like *Vitex negundo* (Nochi), *Calotropis gigantea* (Erukku), *Ricinus communis* (Amanakku), *Abutilon indicum* (Thuthi) etc are tied in a cloth as a bundle. This medicated bundle is heated and applied over the affected area. This type of treatment is very effective for Vatham ailments (Arthritis) and painful conditions like muscle cramps, bone disorders etc.

The following materials can be used for fomentation mostly kept in a cotton pouch and warming. Powdered slaked lime, egg shell, ash of cow dung cake, *Tachyspermum ammi* (Omum), *Dolichus lablab* (Kollu), *Calotropis gigantea*

(erukku) spread over pieces of hot red bricks are used for fomentation. Powder of *Curcuma longa* (Manjal), *Vitex trifoliata* (Neernotchi), *Cardiospermum halicacabum* (Mudakaruthan) can also be used in the above process. Forehead, jaw, ear, nose, abdomen, vertebral region, shoulder, sole, vertex, umbilical, intercostals, lumbo-sacral, pelvic girdle are the regions in which fomentation is recommended for warding off pain due to deranged vatham. Usually fomentation is used in Vatha diseases. Equal quantity of the materials are crushed into a coarse powder and taken in a cloth bundle. This is saute with castor oil or medicated oil and fomentation is given<sup>6</sup>.

#### Indications

- Arthritis
- Headache
- Sinusitis
- Scrotal swelling
- Anorectal diseases
- Acute conditions including Bronchitis, Asthma, Muscle spasm, Chest congestion<sup>6</sup>.

#### Contraindications

Do not use hot fomentations over areas of decreased/loss of sensation, haemorrhage, gastric ulcers, malignancy, peripheral vascular disease and conditions aggravated by extreme cold<sup>6</sup>.

#### Pugai (Fumigation)

Fumigation denotes the artificial impregnation of the atmosphere, with the fumes or the smoke of any vegetable or aromatic substance. Fumes are also used as inhalation therapy. The process of fumigation with medicinal herbs under specific rituals influences widely the persons participating in it as well as the surrounding environment. Neem bark and leaves, *Vitex negundo* (Notchi) and turmeric powder can be used without much hassle<sup>8</sup>. The diseases related to Kapham are easily cured by this treatment. In Siddha, mercurial preparations are used for fumigation in case of haemorrhoids, chronic ulcers and fistula in ano. Yellow orpiment (Aritharam) is triturated with the bark and leaf juice of *Cassia fistula* (Sarakondrai) with little addition of water into a fine paste and applied on a cloth and

dried. The cloth is rolled like a cigar and lit. The emanating fume is inhaled to arrest uncontrolled cough<sup>17</sup>. 20.48 gms of charcoal of *Calotropis gigantean* (Erukkan), 5.12 gms each of Mercuric sulphide (Lingam), Corrosive sublimate (Veeram) and Mercury (Rasam), 10.24 gms of *Shorea robusta* (Kungiliyam) are triturated together with roots of *Achyranthes aspera* (Naaiyuruvi) are made into seven pouchs of a cloth soaked in the juice of *Gossypium herbaceum* (Paruthi). The pouch is burnt with charcoal of tamarind twigs and the patient is exposed to the emanating fume. Fumigation is done for seven times. It cures vaatham diseases like crippling aches and pain including colic, restriction of joint movements<sup>18</sup>.

#### Salaagai (Probe)

This is application of a probe which is a slender apparatus made up of a metal used to trace out fistulous tracks. This is an exploratory therapy using a probe which has blunt end. The probe is used in Ophthalmic therapy particularly in the treatment of cataract. The probe is also used to explore deep seated abscess and introduce the medicated wick in fistula and sinus ulcer<sup>1</sup>.

#### Oodhal (Blowing)

Certain leaves or medicines are chewed and the aroma is blown into the nose or ears of the patient. e.g- Chukku powder is blown in case of faintness in varma injury<sup>25</sup>.

#### Mai (Collyrium)

Raw drugs is ground with Anjanakkal and leaf juices, it is then prepared into a mai or waxy form by adding ghee. Mai is nothing but collyrium for the eyes. e.g- Neelanjanamai. Equal quantities of the following materials are powdered separately and triturated with lime juice and rolled into pills, shade dried and stored - *Zingiber officinale* (chukku), *Piper longum* (Thippili), Rock salt (Indhuppu), *Allium sativum* (vellai poondu), *Barringtonia acutangula* (samuthrapazham), *Acorus calamus* (vasambu). This pill is rubbed with the lime juice and applied as a collyrium for treating convulsions as seen in tetanus. Leaves of *Punica granatum* (Maadhulai) is baked with cow's milk and applied around the orbit to reduce the burning sensation of

the eye. Saute *Syzygium aromaticum* (Elavangam) leaves and flower and apply around the orbit for reducing the burning sensation of the eye<sup>11</sup>.

#### **Kalikkam (Eye drops)**

This type of treatment involves the application of eye drops after mixing and dissolving the medicated pills in honey, plant juices, breast milk etc. Dry *Zingiber officinale* (chukku) is triturated with leaf juice of *Piper betle* (Vettrilai) and applied in the eye for Glaucoma. Leaf juice of *Alternanthera sessilis* (Ponankanni) is mixed with candy sugar (Karkandu) and made into a paste by trituration. This paste is applied with the leaf juice of *Piper betle* (Vettrilai) in the eye and exposed to the medicated fumes to relieve Ophthalmalgia, blurred vision and burning sensation of the eye<sup>13</sup>.

#### **Urinal (Suction)**

Drainage of accumulated liquid such as pus, blood etc by suction<sup>8</sup>. This technique is called Urinjal.

#### **Attai vidal (Leech application)**

Leech application over affected areas of inflammations, blocks etc. The leeches which are used therapeutically are not ordinary or dangerous ones. Hence the disease gets relieved. Leech application is usually done for haemorrhoids, contusions, swellings, tumours and ulcers<sup>1</sup>. Leeches for this treatment should be maintained in healthy conditions in animal houses. To prevent cross infection, a separate set of leeches should be used for each patient<sup>8</sup>.

#### **Kuruthi vangal (Venesuction)**

This is a process of bloodletting in the conditions where there is accumulation of toxic blood. In this type of treatment a minor incision is made on the blood vessel and the excess blood is let out.

#### **Murichal (Therapeutic fracture)**

This is a method of physical manipulation in which bone setting is done to correct the dislocation of bones.

#### **Kombukattal (Fracture splinting/immobilisation)**

This comprises of immobilizing fractured bone using splints and bandages - after proper reduction. Fracture management is still a thriving practice among traditional bone setters all over the world. Skilled bone setters identify fractures by simple

touch and bring the fracture ends to position by simple physical manipulation in a fraction of a second, apply paste made of white egg yolk, plant materials mostly of trees such as *Wrightoria tinctoria*<sup>8</sup>.

#### **Thokkanam (Physical manipulation)**

This treatment may be defined as physical manipulation of body or the massage treatment which is either given to the entire body or a particular diseased part. Massage is done in two ways: First is just by using bare hands and second by using oil. There are 9 techniques used in this treatment.

a. Thattal b. Irukkaal c. Pidithal d. Murukal e. Kaikattal f. Azhuthal g. Izhuthal h. Malarthuthal i. Asaithal<sup>1</sup>.

Thokkanam is a method of manipulation and mobilization used primarily in the treatment of conditions related changes in the varmam points leading to mechanical type of problems in joints and muscles<sup>8</sup>.

#### **Podi thimiral (Dry powder massage)**

This type of external treatment involves the rubbing of certain medicated powders either separately or after mixing it with camphor or leaf juice. Substances like horse gram flour, turmeric powder etc are used. Crush roots of *Cassia angustifolia* (nilavagai) and add it into a bowl containing curd (Buffalo curd made with unboiled milk) and apply the paste on the affected part after administering rice with buttermilk in the morning. Allow the paste to be on the affected part till afternoon, rinse it with water and clean using the leaf powder of *Albizzia amara* (*usilam*). This is repeated for four days for treating scabies and itching<sup>24</sup>.

#### **Vedhu (Steam therapy)**

Application or exposing medicated steam over affected part or whole body. This type of treatment is helpful in curing Vatham as well as Kapham diseases. This treatment is helpful in treating Sinusitis, Pain and oedema in any part of body, Muscular pain etc<sup>1</sup>. A special steam apparatus is used to provide steam to the whole body. Crush 416 gms each of the barks of *Ficus benghalensis*, *Ficus religiosa* in a pot and add sufficient quantity of



water. This is boiled and vapour exposed to the ano rectal region and also use the decoction along with the barks for washing the area twice a day in the morning and evening for 12 days to treat external haemorrhoids<sup>12</sup>. *Clerodendrum phlomidis* (thazhuthalai), *Calotropis gigantea* (erukkan), *Vitex negundo* (notchi) leaves are stir fried and added to vinegar. The resultant vapour is applied to the body after oleation and massage to cure vatha diseases of the joints particularly Rheumatoid arthritis<sup>16</sup>.

#### **Pottanam (Medicated pouch)**

The raw drugs are either pounded or leaves of medicinal plants are fried, tied in a cloth piece as bundle. This medicated bundle is dipped in particular medicated oil and then applied over affected area. e.g- Navarakizhi. 670gms of *Brassica nigra* (kadugu) seed is taken in a cloth pouch with a string tied to its mouth. This pouch is soaked in warm neem oil and after squeezing, the oil is pressed on the anterior fontanelle, posterior fontanellae, neck and the spinal joints for convulsive disorders and fever<sup>23</sup>. *Sesame indicum* (ellu), *Terminalia chebula* (Kadukkai), *Aegle marmelos* (Vilvam), *Ricinus communis* (aamanaku) are crushed and taken in a cloth pouch and the pouch is soaked in sesame oil and heated. This is used for fomentation over the eyelids for treating eye diseases with mild warmth<sup>11</sup>.

#### **Aruvai (Excision)**

This is anatomical manipulation of any part of the using specific surgical instruments. The ideal time for surgical procedures is the morning. This is probably because that natural sunlight ensures precise treatment<sup>8</sup>.

#### **Kaaram (Chemical cautery)**

It is the method of application of Medicated Caustic drugs over areas of excision or chronic ulcers. 20gms each of Blue vitriol (neelam) and yellow orpiment (Aridhaaram) and 80 gms of *Shorea robusta* (kungiliyam) are triturated with sesame oil, rinsed with fresh cool water and applied on a cotton cloth. This plaster is used to excise unwanted growth in external haemorrhoids, fistula, non healing ulcers, granulomatous ulcers, abscess, toad skin and tumours with itching<sup>1</sup>.

#### **Keeral (Incision)**

In this method, an incision is made over the boils, abscesses, carbuncles, acne etc so as to drain the accumulated pus, blood, water etc out of them. Incision of boils and removal of accumulated pus, blood etc. The instrument used for this is called Kombu<sup>1</sup>. For Erysipelas of the ear lobe, incision is recommended with the instrument, the tip of which resembles the foot web of the bird (Pulladi karuvi). The instrument should be heated before use to prevent infection.

#### **Peechu (Douche/irrigation)**

Enema using medicated water or medicated oil to evacuate rectum and vagina<sup>8</sup>.

### **RESULTS AND DISCUSSION**

External medicinal applications are Gifts to siddha, which need to be researched and practised with full concentration by all siddha doctors to make siddha well flourished, welcomed and reached into the general population. It is our duty to expose our external therapy specialities like *Varmam*, *Thokkanam*, *Kombu kattal*, *Vedhu*, *Patru* etc. to modern world and other indigenous medicine world, so that the fame of siddha will be protected as well as propagated. It is very clear from the literature that the ancient physicians knew the connections between the brain and the sense organs and chose their routes and drugs accordingly. The physical therapies of Thokkanam, Varmam and most other therapies of Siddha are regaining popularity and efforts are on to validate and standardize the procedures. External therapies can be done in major measure with locally available resources and therefore is accessible as well as affordable.

### **CONCLUSION**

This paper help in giving review towards Traditional therapies of siddha that have tremendous results in various diseases.

## ACKNOWLEDGEMENT

The authors wish to express their sincere gratitude to Ayush Wellness Clinic, President Estate, Rashtrapati Bhavan, New Delhi, India for providing necessary facilities to carry out this review work.

## CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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**Please cite this article in press as:** Janani L et al. Review on external medicines in siddha system of medicine, *International Journal of Research in Pharmaceutical and Nano Sciences*, 6(1), 2017, 16-25.