

External Therapies For Karabaasoolai (Peripheral Neuropathy) An Literary Review

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ABSTRACT:

Katabhadasoolai profoundly known as peripheral neuropathy characterised by

Siddha logistics porul explain karam = hand and fingers badam literal meaning toes and legs , and soolai lamceolating pain as the disease has , pin and needle senaation in both extremies and burning sensationsidebars ate unsung heroes of ancient tamilnadu who fight for social injustice and empowerment of human beings , socially economically , medically , sage yugi classified karabada Soolai among 15 Soolai

Several etiology are found with karabada Soolai
1. Metabolic including diabetes mellitus , hypertensive
2. Toxic 3. Alcoholic 4. Post partum 5. Chemotherapy

Methodology : several journal like EMBASE , SOPUS , PUBMED, NCBI Siddha online materials , manuscripts , books , dictionaries , I have totally made 40 books for literature review but only among them 22 book have description of karabasoolai

This article unravel the some easiest ways of external therapeutic measures for treatment of peripheral neuropathy (karabada Soolai or karavata Soolai) and several forms of complication

Keywords : karabada Soolai , peripheral neuropathy , diabetic peripheral neuropathy in siddha , external therapies for vadha disease

INTRODUCTION

SIDDHA Medicine aguments yoga gnana vadham vaidhyam , treatment modalities are emphasised in 3 subdivision like asuramarunthuvam , Maanudamaruthuvam , vinnavar maruthuvam , it also cateterogised Medicines in 32 internal and 32 externforms of therapeutic measures , external medicine will the primary care in palliative management of disease where comorbid and associate , chronic , geriatric , diseases where there is emotional support will be necessary , Here karabada Soolai is often

negligible disease occurs in Mullai and palai land scape where there is aggration of pithavatam in , external therapies are easiest manipulation for both physician and patient , especially varma , leech therapy , suttigai and other forms where there is difficulty to treat a disease of long term , or where there is not necessary to internal medicine consumption which is hazardous some times , where the patient needed to given care for continously where there is no absolute treatment at all . siddha external therapies are, well flourished in olden days , Now gaining importance of its unique in treating the diseSes herapeutic procedures ;

There are 32 types of siddha external me since application are available includes 1. Kattu(bandage)2. Pattern (poultice or paste or liniment 3. Ottradum (fomentation)4. Poochu (anointing 5. Vedhu (steaming) pottanum (7.thokkanam (massage 8pugai (fumigation) 9.Mai (corrilium)(10. Podichimirthal (dusting / massage with dry powder)11. Kalikkam (eye application 12. Nasiyam (nasal application) 13. Nasigabaram (nasal application) 14. Oothal 15. Kalimbu 16. Selaiherbal plaster 17. Neer (infusion/ juice 18. Varuthi (Medicated wick 19 suttigai (hot application / cuterization) 20.Salagai (probe) pasai (liniment) 22. Kali 23. Pori (powder) 24. Murichal (artificial bone setting) 25.Keeral (incision 26. kaaram (corrosive application) 27. Attaivaldal (leech therapy) 28. Aruvai (surgery) 29. Kommbukattal (bone setting) 30 urinal (sucking) kuruthivangal (blood letting) 32. Peach u (enema) external application used for treating kara bada soolai If left untreated leading to several complication like kumba badam , saganavadham , malaithakambam , pathithavadam vadhakarshanam , karasthambam , thalasthambam patchavadham and so and so of vali noigal external therapies are very necessary for treating vadha diseases

Peripheral neuropathy occurs, a result of damage to the nerves located outside of the brain and spinal

cord (peripheral nerves), often causes weakness, numbness and pain, usually in the hands and feet. It can also affect other areas and body functions including digestion, urination and circulation. peripheral nervous system sends information from your brain and spinal cord (central nervous system) to the rest of your body. The peripheral nerves also send sensory information to the central nervous system.

Peripheral neuropathy can result from traumatic injuries, infections, metabolic problems, inherited causes and exposure to toxins. One of the most common causes is diabetes.

People with peripheral neuropathy generally describe the pain as stabbing, burning or tingling. In many cases, symptoms improve, especially if caused by a treatable condition. Medications can reduce the pain of peripheral neuropathy.

Signs and symptoms :

Gradual onset of numbness, prickling or tingling in your feet or hands, which can spread upward into your legs and arms

- Sharp, jabbing, throbbing or burning pain
- Extreme sensitivity to touch
- Pain during activities that shouldn't cause pain, such as pain in your feet when putting weight on them or when they're under a blanket
- Lack of coordination and falling
- Muscle weakness
- Feeling as wearing gloves or socks
- Paralysis if motor nerves are affected

If autonomic nerves are affected,

- Heat intolerance
- Excessive sweating or not being able to sweat
- Bowel, bladder or digestive problems
- Drops in blood pressure, causing dizziness or lightheadedness

Peripheral neuropathy can affect one nerve (mononeuropathy), two or more nerves in different areas (multiple mononeuropathy), or many nerves (polyneuropathy). Carpal tunnel syndrome is an example of mononeuropathy. Most people with peripheral neuropathy have polyneuropathy.

Diabetic peripheral neuropathy

India estimates DPN prevalence vary widely from **9.6% to 78%** in different populations. The prevalence of DPN was found to be 39.3% Diabetic peripheral neuropathy (DPN), the most common chronic complication of diabetes, has become an important public health crisis worldwide. Given that DPN is extremely difficult to treat, determining its risk factors and controlling it at an early stage is critical to preventing its serious consequences and the burden of social disease. Current studies suggest that the risk factors for diabetic peripheral neuropathy are the duration of diabetes, age, glycosylated hemoglobin A1c (HbA1c), diabetic retinopathy (DR), smoking, and body mass Index (BMI).

Diabetic neuropathy is a type of nerve damage that can occur if there is diabetes. High blood sugar (glucose) can injure nerves throughout your body. Diabetic neuropathy most often damages nerves in your legs and feet. that combining hypertension, a risk factor for neuropathy in diabetic patients, with insulin-deficient diabetes produces a more pertinent model of peripheral neuropathy. Numbness or reduced ability to feel pain or temperature changes

- Tingling or burning sensation
 - Sharp pains or cramps
 - Increased sensitivity to touch — for some people, even a bedsheet's weight can be painful
- Serious foot problems, such as ulcers, infections, and bone and joint pain

DIABETIC AMYOTROPHY

1 % of diabetes mellitus patient suffers peripheral neuropathy this is rarest form and difficult form of presentation

Autonomic neuropathy

The autonomic nervous system controls your heart, bladder, stomach, intestines, sex organs and eyes. Diabetes can affect nerves in any of these areas, possibly causing:

- A lack of awareness that blood sugar levels are low (hypoglycemia unawareness) with shaky
- Bladder or bowel problems
- Slow stomach emptying (gastroparesis), causing nausea, vomiting and loss of appetite
- Changes in the way your eyes adjust from light to dark
- **Dizziness and fainting** a sudden drop in blood pressure.
- **Urinary problems**, such as difficulty starting urination, incontinence, difficulty sensing a full bladder and inability to completely empty the bladder, which can lead to urinary tract infections.

Sexual problem

(erectile dysfunction) or ejaculation problems in men. In women, problems include vaginal dryness, low libido and difficulty reaching orgasm.

- **Difficulty digesting food**, such as feeling full after a few bites of food, loss of appetite, diarrhea, constipation, abdominal bloating, nausea, vomiting, difficulty swallowing and heartburn, all due to changes in digestive function.

- **Sweating abnormalities**, such as sweating too much or too little

Sluggish pupil reaction, difficulty in night

Proximal neuropathy (diabetic polyradiculopathy)

This type of neuropathy — also called diabetic amyotrophy — often affects nerves in the thighs, hips, buttocks or legs. It can also affect the abdominal and chest area. Symptoms are usually on one side of the body, but may spread to the other side. You may have:

- Severe pain in a hip and thigh or buttock
- Eventual weak and shrinking thigh muscles
- Difficulty rising from a sitting position
- Severe stomach pain

Mononeuropathy (focal neuropathy)

There are two types of mononeuropathy — cranial and peripheral. Mononeuropathy refers to damage to a specific nerve. Mononeuropathy may also lead to:

- Difficulty focusing or double vision
- Aching behind one eye
- Paralysis on one side of your face (Bell's palsy)
- Numbness or tingling in your hand or fingers, except your pinkie (little finger)
- Weakness in your hand that may cause you to drop thing

ALCOHOLIC PERIPHERAL NEUROPATHY

- Nerve tissue. Chronic consumption of alcohol induces pain and tingling in their limbs. This is known as alcoholic neuropathy. In people with alcoholic neuropathy, the peripheral nerves have been damaged by too much alcohol use.

- . However, some alcohol-induced nerve damage is permanent.

Symptoms of Alcoholic Neuropathy

Alcoholic neuropathy can affect both movement and sensation. Symptoms range from slight discomfort to major disability. Although the condition is not life threatening, it can decrease your quality of life. Some areas of the body affected by alcoholic neuropathy include:

Arms and Legs

- numbness
- tingling and burning

- prickly sensations
- muscle spasms and cramps
- muscle weakness and atrophy
- loss of muscle functioning
- movement disorders

Urinary and Bowel

- incontinence
- constipation
- diarrhea
- problems starting urination
- feeling that the bladder hasn't been emptied fully

Other

- sexual dysfunction
- impotence
- impaired speech
- difficulty swallowing
- heat intolerance, particularly following exercise
- vomiting and nausea
- dizziness or ligh

CANCER INDUCED PERIPHERAL NEUROPATHY

The incidence of cancer and long-term survival after treatment is increasing. CIPN affects sensory, motor and autonomic nerves and is one of the most common adverse events caused by chemotherapeutic agents, which in severe cases leads to dose reduction or treatment cessation, with increased mortality. The primary classes of chemotherapeutic agents associated with CIPN are platinum-based drugs, taxanes, vinca alkaloids, bortezomib and thalidomide. Platinum agents are the most neurotoxic, with oxaliplatin causing the highest prevalence of CIPN. CIPN can progress from acute to chronic, may deteriorate even after treatment cessation

NUTRITIONAL PERIPHERAL NEUROPATHIES

Nutritional neuropathies manifest either acutely, subacutely, or chronically. They can be either demyelinating or axonal. Caused vitamin deficiency of B1, B6, B12 of

A unique class of peripheral neuropathy with coexistent myelopathy, also called myeloneuropathy, can also been seen with nutritional neuropathies. Myeloneuropathy has been described with deficiencies of vitamin B12 and copper.

Patients with myeloneuropathy will present with both upper motor neuron and lower motor neuron signs. Peripheral neuropathy may mask the symptoms and signs of the myelopathy presenting a diagnostic challenge

SEPSIS INDUCED PERIPHERAL NEUROPATHIES / CRITICAL ILLNESS POLYNEUROPATHIES

sepsis-mediated disorders of the peripheral nerves and the muscle, called critical illness polyneuropathy (CIP) and critical illness myopathy, are **responsible for weakness and muscle atrophy occurring de novo in intensively treated patients.**

SARS COVID19 INDUCED PERIPHERAL NEUROPATHY

At 1 Mid of December 2019, a rapidly transmitted unknown cause of viral pneumonia, soon named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) throughout the world As the virus spread, the initial primary symptoms included fevers, myalgias, fatigue, and dry cough presented with neurological symptoms, rather than the typical respiratory symptoms, including headache, unsteady gait, cerebral infarction, cerebral hemorrhage, and other neurological diseases

There are several forms of peripheral neuropathies associated with severe coronavirus ddeveloping from compressive neuropathy, mixed central and peripheral nervous system disorders, symmetric polyneuropathy, and systemic effects from critical illness neuropathy Many patients develop severe disease, requiring ICU admission and extended hospitalization With the advent of prone positioning for patients with COVID-19 acute respiratory distress syndrome (ARDS), intubated patients are put at risk for compressive neuropathies due to malposition of extremities In addition, neurologic symptomatology has been attributed to neuroinvasion, neurotropic characteristics of COVID-19, and neuroinflammatory events following infection With the myriad of neurological phenomena associated with COVID

POST PARTUM INDUCED PERIPHERAL NEUROPATHIES

Compression neuropathies commonly affect the following peripheral nerves after birth:

The incidence of postpartum peripheral nerve injuries varies **0.3 to 2% of all deliveries.** The common peripheral nerve injuries found postpartum lateral femoral cutaneous nerve and the femoral nerve.

AUTOIMMUNE PERIPHERAL NEUROPATHIES

Autoimmune neuropathies present with a broad range of symptoms, including subacute progression, asymmetric or multifocal deficits, and selective involvement of motor, sensory, or autonomic nerves.

The overlapping of symptoms among syndromes often leads to difficulty in diagnosis Presumptive diagnosis is based on patient history and clinical presentation. Initial laboratory testing aims to rule out underlying etiologies, including potential infection, metabolic disturbances, and brain tumors; nerve conduction studies, and cerebrospinal fluid (CSF) analysis necessary for confirmation of disease

Autoimmune neuropathies can also arise as paraneoplastic disorders in cancer; Paraneoplastic Neurologic Syndromes and Associated Disorders morePeripheral axons are susceptible to agents that interfere with axonal transport or energy metabolism. Toxic exposure causes axonal degeneration, which primarily affects distal nerve segments. However, certain agents primarily affect the proximal nerve segment.

Autoimmune Neuropathies which includes

- 1.. Guillain Barre Syndrome
 - 2. Chronic Inflammatory Demyelinating Polyradiculoneuropathy (CIDP)
 - 3. Vasculitic Neuropathy
 - 4. Paraproteinemic Neuropathy
 - 5. Paraneoplastic Neuropathy
 - 6. Other Autoimmune Neuropathies
- Postpartum induced peripheral neuropathy
- Toxic neuropathy refers to neuropathy caused by drug ingestion, drug or chemical abuse, or industrial chemical exposure from the workplace or the environment. Distal axonopathy, causing dying-back axonal degeneration, is the most common form. Hypohidrosis or hyperhidrosis
 - Diarrhea or constipation
 - Urinary incontinence or retention
 - Gastroparesis
 - Sicca syndrome
 - Blurry vision
 - Facial flushes
 - Orthostatic intolerance
 - Sexual dysfunction
 - Cramping
 - Tachycardia
 - Rapid alterations in blood pressure

PATHOPHYSIOLOGY of PERIPHERAL NEUROPATHY

The precise mechanism for the development of the neuropathy is often unclear. There are different

proposed neurotoxicity mechanisms depending on the drug.

- Dorsal root ganglion toxicity
- Microtubular axon transport function abnormalities
- Voltage gated
- Sodium channel abnormalities
- Demyelination

Disease course

Most symptoms have an insidious onset or occur very shortly after exposure with few exceptions. Organophosphates and cisplatin may take many weeks post administration to develop symptoms.

In CIPN, most symptoms plateau and show gradual improvement

Frequently it is difficult to attribute a subclinical neuropathy to prolonged, low-level toxic exposure. Specific secondary or associated conditions and complications

Sensory deficits can lead to balance difficulties and increased fall risk. Along with insensate skin can lead to burns, wounds, and pressure ulcers that indirectly increase the risk of infections. Motor deficits can decrease activity levels increasing the fall risk and development of contractures. Autonomic impairments from neuropathy can also cause dizziness and falls.

2. Essentials Of Assessment

History

- Positive or negative sensory findings including numbness, tingling, neuropathic pain, and stocking glove pattern sensory loss.
- Distal motor weakness potentially leading to foot drop, gait abnormalities, hand weakness, and muscle atrophy. (e.g. lead toxicity often resembles radial motor neuropathy with wrist drop and weak finger extension)
- Autonomic dysfunction (e.g. orthostatic hypotension)
- Drugs causing toxic neuropathies can lead to other systemic manifestations such as fatigue,

NCI-CTC Grading Criteria

GRADE	SENSORY	MOTOR
0	NONE	NONE

anemia, renal failure, gastrointestinal symptoms, seizures, and cognitive changes.

Physical examination

- Impaired monofilament testing
- Impaired vibratory sensation and proprioception
- Impaired balance testing
- Coordination/dexterity deficits
- Impaired ability to discern temperature differences
- Depressed or absent distal symmetric tendon reflexes

Distal motor weakness **Neurological examination.** Deep and superficial tendon reflexes, muscle strength and tone, ability to feel certain sensations, posture and coordination Peripheral neuropathy has many potential causes. Besides a physical exam, which may include blood tests, diagnosis usually requires:

The long-term diabetes damage large and small blood vessels, which can lead to heart attack and stroke, and problems with the kidneys, eyes, feet and nerves. Regular screening is important to detect diabetes-related health problems early. It's also important to keep your waist measurement, blood pressure, blood glucose levels, HbA1c and cholesterol within recommended ranges.

Clinical functional assessment: mobility, self-care cognition/behavior/affective state

Grading Systems for Neuropathies Multiple grading systems in assessing for CIPN exist.

- National Cancer Institute Common Toxicity Criteria (NCICTC) Most commonly used grading system
- 5 grade scale²⁸
- Total Neuropathy Score Primarily used in clinic research with electrophysiological and clinical components
- Chemotherapy Induced Neurotoxicity Questionnaire
- Neuropathy Symptom Score
- Neuropathy Impairment Score
- Patient Neurotoxicity Questionnaire

1	ASYMPTOMATIC OR LOSS OF DEEP TENDON REFLEXES OR PARESTHESIAS; NO FUNCTIONAL IMPAIRMENT	ASYMPTOMATIC, WEAKNESS ON TESTING ONLY
2	SENSORY ALTERATION OR PARESTHESIA INTERFERING WITH FUNCTION BUT NOT ADL	SYMPTOMATIC WEAKNESS INTERFERING WITH FUNCTION BUT NOT ADL
3	SENSORY ALTERATION WITH ADL LIMITATIONS	WEAKNESS INTERFERING WITH ADL; BRACING OR
4	SEVERE SENSORY LOSS, DISABLING	LIFE-THREATENING; DISABLING

Laboratory studies

Standard workup of peripheral neuropathies include hemoglobin A1C, fasting glucose, TSH, BUN, creatinine, vitamin B1, vitamin B6, and vitamin B12. Heavy metal screening should be performed if a toxin is suspected. However, this is usually not helpful unless obtained immediately after an exposure.²⁵

Supplemental assessment tools

Diagnostic Testing

1. Electrophysiology

The most common finding is a length dependent sensorimotor axonopathy with the NCS being the most informative with SNAP and CMAP potential amplitudes being reduced or absent. Needle EMG abnormalities may reveal a length dependent distribution with typical neuropathic findings including abnormal spontaneous activity, large amplitude motor units, and reduced recruitment. A limitation of nerve conduction studies is that they do not detect small fiber abnormalities.

ELECTROPHYSIOLOGICAL FINDINGS	TOXIC AGENT
MOTOR MORE THAN SENSORY FINDINGS	ORGANOPHOSPHATES, LEAD, VINCRISTINE, DAPSONE, NITROFURANTOIN, DISULFIRAM
SENSORY MORE THAN MOTOR FINDINGS	CISPLATIN, ARSENIC, THALLIUM, PYRIDOXINE, THALIDOMIDE, POLYCHLORINATED BIPHENYLS, METRONIDAZOLE, MERCURY, ISONIAZID
SEGMENTAL DEMYELINATION	AMIODARONE, PERHEXILINE, DIPHTHERIA OR TETANUS TOXIN

ADMINISTRATION, PHENYTOIN

2. Quantitative sensory testing (QST)
QST can test small fiber neuropathies.

3. Histopathology and intradermal nerve fiber density assessment
Skin biopsies provide a detailed view of neuropathology.
Punch biopsy assessment of nerve fiber density is considered a reliable technique to diagnose small fiber neuropathy.
Siddha medicine conveys that pithathil vadham the manifestations are pain in occipital region or neck, pain in both extremities, slurring speech, dryness of all naadies (Muscles, tendons, ligaments, blood vessels, Nerves) i.e muscle wasting, wrist drop, foot drop, siddha algorithms explains that Saa ram, chenner, oon affected with deranged vayu, and pitham theekshakkini which destroys 7 udalthathu leading to poor formation of oon causing oon thervu valarchi that is demyelination

- CAUSATION OF KARABADHASOOLAI(food, habits, karma,)
- naadi idakaliai, pinkalai,
- saram affected (Nutritional peripheral neuropathy (pandu noi, nanju, traumatic, Madumega noi)
- saaram affected (s Nutritional peripheral neuropathy, surasoolai,
- Chenner affected (varala kaamalai)
- Oon thathu affected (vali madhume ga Avathaigal, vatapitha noin)
- Deranged vata (viyanan and samana) joint pain
- Increased theekshakkini causes Rearranged pitham (sathapitham) manifested as burning sensation in eyes, giddiness, dryness of peripherals, increased body temperature
- Derangement of kabam (santhigakabam)

SIDDHAPHARMACOGENOMICS A
CONCEPTUALIZATION

Rearranged vata(viyana) olation Therapy is performed

For redirecting lymph pothu thadava muraigal sarathadaval muraigal athara adangal can be performed

For correcting saram and 7 udal thathus samana therapy like head massage (thokkanam) and oil bath standard procedured as mentined by siddhars to be adhered with seasons and land

should be performed for better appreciation of treatment and prevention, management

IEnvagai thervu (SIDDHA DIAGNOSTIC FINDINGS

Naa: (Tongue examination)pale (deficiency anaemia / coated (diabetic Neuropathy)/ geographical tongue (kudiverinoi (alcoholic diseases)

Nirram; (skin examination) palour ness (Mathumega noi)

Dark complexion (in alcoholic neuropathy Moz Hi (slurred speech) in kurithiazhal noi(hypertension, chronic diabetes (Madumegam avathai be dam)

Vizhi : (eye examination)

Niram (muddy conjunctiva in alcoholic)

2. Thanmai : Dryness, xerosis

3.pulan(irritation, burning sensation)

Malam: Dark, with constipation (due to vadha pitham), Madumegam avathai (gastroparesis diarrhoea)

Sparism: burning, tingling, pins and needles sensation, increased (varies for saganavadham, vadhakarshanam, kumbavadham, vadha pitham) temperature, and dryness, varatchi vatam, thudivatam, oduvatham,

Moothiram: (urine examination)

Niram : Dark coloured, or high coloured,

Adarthi : thin, thick

Manam: tamarind taste

Nurai: Decreased froth

Enjal: Absent

Neikkuri : snake with ring, fast dispersal

Parisam: Altered sensation, sweating, burning sensation

Naadi thervu :

Th anmai : slow and regular

Nadai : vadha pitham

Manikkadai nool examination reveals 7 finger breathExternal Therapeutic procedures ;

Among the 32 types external therapies of siddha e
1. Kattu(bandage)2. Patu 3. Thokkanam 4. Vethu 5. Neer 7. Selai 8. Podithimirthal 9.attaival 10. Suttigai 11. Nasiyam are documented for treating karabadasoolai

Thokkanam

Pidhithal method may be given with medicated oil

- 1. Mezhugu thylam
- 2 Vadhakesari thylam
- 3 Arks sheerathylam
- 4.ulunthu thylam

- 5.sittramutti madakku thylamoleation:
6. lahu vida mutti thylamj
7.arkku thylam
8..sittramutti madakku thylam
9.lagu sabthanathi thylam
10.keezha nellio thylam
11.sabthanathi thylam
Thokkanam (Whole body medicated oilmassage)
• Kombarakku thylam
• Chukku oil
• Milagu oil
• bala madakku thylam
• notch thylam
• ulunthu thylam
• keezha nellio thylam
thokkanam ; oleation
1.Mezhgu thylam (for convulsion too)
2.Vadhakesari thylam(thimir vadha)
3.Arks seirathi thylam
4.Kukil thylam
5.Siru etti kottai thylam
6.Vishamusti thylam
7.Myil ennai for atrophy and wasting of muscles
8.karunkozhi thylam
9.Meganatha thylam (useful in treating wrist drop and foot drop)
10.Milagu thylam (parenthesis and hyperasthesia)
11.Saga devi thylam(external manipulation)
12.Ramabana thylam
13.Avaraiyathi thylam
14.Megathylam
15.Thalaivali thylam
16.Vepputhylam
17.Mayura kesari thylam
18.Seethevi shenkazhaneer thylam 19.Kayyan thylam
19.Seeraha thylam
20.Kizhanelli thylam
21.Lagusanthanathithylam
22.Arasiku thylam
23.Thiripala thylam
24. Sirukumari thylam
25.Keezh Kai nellio thylam
26.Kulirthamarai thylam
27.Thalisabaththi thylam
28.Neichetti keerai thylam
29.Kandavallathy thylam
30.kavadhasarvngam
31.mahanarayanathylam
32.vishamusthithylam
33.vadha rajanga thylam
34.sooriya vantha thylam
35.chitra mooli thylam
36.lakshmi narayana thylam
37.raja sanjeevi thylam (for all types of udal)
38.maha karunchoorai patti thylam (thonda udal)
39.visha must I thylam
40.ulunthu thylam
41.chitra mooli thylam
42.ayilyapattai thylam (vadha udal)
43.kaalavayiri thylam
44.asavathi thylam
45.Kayyan thylam
46.Seeraha thylam **Thokkanam**
47.Kizhanelli thylam
48.Lagusanthanathithylam
49.Arasiku thylam
50.Thiripala thylam
51.Sirukumari thylam
52.asavathi thylam
53.vannavsarvanga
54.vedan darvanga
55.ulunthu thylam
56.Moola nirgundi thylam,
57.Chitra mutti maddaku thylam
58.Keezha hello thylam
59.Kudachall thylam
60.Kulirthamarai thylam
61.Seragathylam
62.Illaneerkuzhambu
63.Aamanakku Nei
- Nasiyam**
Chirukurinji ennai (used in treatment of all types of pain, vali , lightening pains
Poochu (Anointing)
Milagu mezhugu
Karumkungiliya poochu
Seems I : Medical plaster
murivuennai
- Patru (herbal paste appliivation)**
1.kudaivelam leaf and tamrind paste
2.kudaivel patru
Thappalam (siddha herbal hair mask)
parpadagam (mulloago cerviana) and milk is grounded and applied over head
chiravidhi (oleation therapy)
ottradam)Fomentation : leaves are boiled with water and applied externally
1.Clerodendrum phlomidis (thazhudhazai) for reducing pain
2.Cardiospermum halicacabum (mudakkran) for mobility of the joints
3.vitex negundo (Notchi) for joint pain and soothing effect
Appiyangam)Head bath oil bath
Apply oil and wash with herbal powders like accacia sps)
podithimirdal (dusting)
accacia sps dusting all over the bod
Kattu(Herbal plaster)

An paste is formed by pounding, illanthai illa(ber leaf), kuruvaiillai, sigaikaiillai Nellikai, musumusukkai illa, ferment overnight with watertthen make a butter from the herbal juice applied over the peripherals

Bramhi (leaves of bacopa moneri)

Murungai (leaves of moorings oleifera)

Vellai kerai (leaves of chrome viscous)

Thera (leaves of Cumbria parviflora)

Vidamoongil (crinum asiaticum)

Muthuerukkanchevi(ellytra acaulis) is grounded and applied all over the body

Thavalai

Mayura kesari thylam (manipulated in epileptiform convulsion,)

Thokkanam : villa ver ennai, murukkal and irukkal for toxic neuropathy (Nanjuvali)

Bandage; Ieethevi shenkazhaneer thylam

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Nasiyam

Chirukurinji ennai (used in treatment of all types of pain, vali , lightening pains and shooting pain)

Thavalai

Mayura kesari thylam (manipulated in epileptiform convulsion,)

Thokkanam : villa ver ennai, murukkal and irukkal for toxic neuropathy

Bandage;

Mayan thylam for wrist drop and foot drop

Patru: (medicated paste)

Kudaivelam leaf and tamarind paste

Kiliooral bark paste

Kavikal paytru(for burning sensation , paresthesia)

Kalarchipatru (for alleviating pain)

Moosambara patru(for pain)

Vannavsarvanga

vedan sarvanga

ulunthu thylam : for demyelination

Moola nirgundi thylam,

Chitra mutti maddaku thylam

Keezha hello thylam

Kudachall thylam

Kulirthamarai thylam

Seragathylam

Illaneerkuzhambu

Aamanakku Nei

Narivengayam(Crinum deficium)leaves are burnt int ashes placed on cheeks and hands

Visha moongil leaf (Pancratum latifoium)dried powder smeared for pain

Kattu vazhai (canna india) root juices smeared for pain with diabetes applied on navel

Vallaikeerai (Ipomea aquatica) plant oil made heels pain from login to groin

Pulinagam(pomea pescarpa)fomentation for arthritic pain

Morasankodi(Diplocelusa glaucenscens)leaf wi)th turmeric root cure joint pain

Meeriimia tridentata (ammayar koondhal)leaf juice with cow urine cure allcartgritic pain

Janakipoondu (Onosmabracteatum) infusion relived pain

Karuvali(Caccinia glauca) infusion relived pain

Ipomea battatus plant oil relives pain

Milagai thylam(Capsicum frutens and mustard oil relieves pain to promote blood vessels curculation

Neer (infusion)

Datura factuosa leaf infusionp wased to reduces pain

Asystasia geneticsleaf juice smeared for relieving pain

Karu notch(Justica gerundosa) leaf juice smeared for pain , paralysis

Thavasurungai (Runjia parviflora) (leaf juicrle smeared for reducing pain

Unnai (lantana cammerana) leaf juice reduces pain

Nasiyam : Illupai pinnaku for hyperasthersia (burning sensation)

Appiyangam and pidi nai, (below oils can be used as head oil bath, external application

1.Seeraha thylam

2. Agirkattai thylam

3.Koddupai thylam

4. Bringamala thylam

5.Mezhgu thylam

6.Vadhakesari thylam(

7.Arks seirathi thylam

8.Milagu thylam

9.Saga devi thylam

10.Ramabana thylam

11.Avaraiyathi thylam

12.Megathylam

13.Thalaivali thylam

14.Vadhakesari thylam(

15.Arkaseirathi thylam

16.Kukil thylam

17.Siru etti kottai thylam

18.Vishamusti thylam
19.Myil ennai
20.karunkozhi thylam
21.Meganatha thylam
22.Milagu thylam
23.Saga devi thylam
24.Ramabana thylam

25.Avaraiyathi thylam
26.Megathylam
27.Thalaivali thylam
Varma manipulation: kundri, payaru , Kavali, kalkavali adangal , manibandam, vullangalvellai, thatchanaikaalam, amaikaalam,kudhiraimugavarmam, ,

DISCUSSION

s.No	Medicines	Specific uses
1	Saga devi thylam	For external manipulations like pidithal and ezhuthal
2	Milagu thylam	For treating hyperesthesia and paraesthesia
3	Meganatha thylam	Useful in write drop and foot drop
4	Kanimozhi thylam	For varma induce peripheral neuropathy or radiculopathy
5	Mayil ennai	For muscle wasting
6	Vadhakesari thylam	For seizures
7	Koduppai thylam	For ppheripher Neuropathy

raja sanjeevi thylam (for all types of udal) maha karunchoorai patti thylam (thonda udal) Seeraha thylam for nutritional deficiency

Agirkattai thylam for peripheral neuropathy due to muscle weakness

Koddupai thylam for full fledged peripheral neuropathy

Bringamala thylam for pitha diseases

Varma manipulation ; amaikaalam, pulimuthuadangal , agatharai , puratharai , ,Kalkullachuvarmam, viruthivarmam , kaadikarachoothiram kanpugaichal varma ,kuthikal varma Mannnai varma , uppukutri kalkavali ,kaikulluki adangal, kozhikalunthuvaram , unllangkal vellai varmam

Manjadi adangal, payaradangal, neladangal ,kudhiraimugavarmam , unllangkal vellai , kai , kalkavali stimulation and manipulation as by procedure have to be folowed

Suttigai catheterization and leech therapy can also done nearby adangal or varma located points where most tender regions

Deeply stroke the skin of both feet moving in an upward direction toward your knee. Next squeeze and massage all of the tissue of your feet starting between the toes, include the front and back surfaces of your feet.

“The agents in chemotherapy tend to obstruct the capillaries in the fingers and toes, the furthest points in our circulatory system. Chemotherapy molecules can get stuck and clog up those areas, making blood flow difficult.”

When the nerve endings in the hands and feet don't get enough oxygen nutrition from blood circulation, they become painful, sensitive, or numb, which can indicate neuropathy“T he best way to get the blood moving is massage,” “The whole point is to try to increase circulation in the areas that might experience neuropathy such as knitting and exercise — can stimulate blood flow in the body. This is because the more your muscles are moving, the better they can keep up blood circulation to nourish the nerve endings.

Drugs and toxins should always be considered in evaluation of peripheral neuropathy, and particularly in cases where there is no obvious explanation. These neuropathies can significantly affect quality of life. Covid 19 haven risen the alarm for more severe peripheral neuropathy

In diabetic pheripheral neuropathy, the complication is mentioned as valimadhumegam explain about autonomic dysfunction , includes cyanitic, eye , ears, dryness, with tuberculosis, severe lanceolating pain with burning sensation , with gastroperasisisleading to death

Conclusion

Siddha insights explain about the Pain and symptoms are unbearable for the vulnerable age groups , the diabetic complications are explained as avathai complication) the manifestations are unbearable pain lightening pain which follows the autonomic dysfunction followed by death , this karabatha soolai which terminate as asending neuropathy and followed by sensory neuropathy and unknowling this simpler symptoms are negotiated karabhadha Soolai emerges as eripitham and terminate as vadhakarshanam

kumba vadham , oorushthamba vadham, kurisakirisa vaadham Panikambavatam , karasthambam vali (several forms of segmental Neuropathy. IN covid associated pheripheral neuropathy it manifested as pranalayavadham where there is life threatening emergency there can be significant quality of life issues including problems with activities of daily living , **Regular exercise, such as walking three times a week**, can reduce neuropathy pain, improve muscle strength and help control blood sugar levels. Gentle routines such as yoga and Quit smoking application of light, rhythmic strokes (like pidithal , ezhuthal , saravanga thadaval) to help alleviate various conditions related to the body's lymph system. When lymph circulation stagnates, however, fluid can build up and cause physical problems, such as inflammation, edemas and neuropathies varma manipulation on specific points, pressure using the fingers and hands on these areas to reactivate the saram flow , from the above observation evidently states that the pheripheral neuropathy associated complications of several disease like Madumegam (diabetics mellitus) , vadhapitham(hypertension) Nanju (toxic neuropathy) well managed and treated using the external siddha therapies , in this era of complementary medicine people's are suffering from several disease discussed above the associated manifestation or additional complication will be peripheral neuropathy , pain management is necessary , which can be well handled by siddha external therapies like , oleation, with consistent blood sugar management with a complementary medicine and external therapies of siddha medicine if not adhered with internal siddha Medic also crucial role in minimizing the disabilities and save the qualities of life and increase the life expectancy of the patient , oleation is a vital external therapy for treating katabhafasoolai and it reduces further complications of any form of Neuropathy, arasiku thylam chunky thylam , kumara notch thylam , sabthanathi thylam , karisalithylam , milaguthylam are best for nutrition deficiency peripheral neuropathy kodivelithylam and vishamusti , karunchpolaipatti thylam acts wonderfully in the peripheral nerves and reduces se Nerve pain santhanadhi thylam and lagu santhanathi thylam aromatic oils serves as alleviates pain , provides softening effect

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