

A CLINICAL CASE STUDY ON EFFECT OF PATTRU (POULTICE) IN CRIPPLINGLY PAINFUL LUMBAR RADICULOPATHY

L. Janani^{1*}, G. J. Christian², S. Elansekaran³, M. Ramamurthy⁴ and S.P. Shanmugapriya⁵

^{1*}Siddha Consultant, Ayush Wellness Clinic, President Estate, Rashtrapati Bhavan, New Delhi, India.

²Associate Professor.

^{3,4,5}Lecturer.

^{2,3,4}Department of Noi Naadal.

⁵Department of Nanjunool, National Institute of Siddha, Chennai, Tamil Nadu, India.

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*Corresponding Author

Dr. L. Janani

Siddha Consultant, Ayush
Wellness Clinic, President
Estate, Rashtrapati
Bhavan, New Delhi, India.

ABSTRACT

The Siddha System of medicine, which had its presence in the ancient Tamil land, is a complete holistic medical system has been practiced in India 2000 years and above. *Pattru* (Poultice) is one of the 32 types of external medicine mentioned in Siddha literature. Here, in single based study *Aavarai ulunthu pattru* (poultice) was used externally for cripplingly painful lumbar radiculopathy patient. Lumbosacral radiculopathy occurs in approximately 3-5% of the population and men and women are affected equally, although men are most commonly affected in their 40s, whereas women are most commonly affected between ages 50-60. In Siddha, Lumbar radiculopathy is considered as

Thandagavatham. *Aavarai Ulunthu Pattru* (Poultice) which is used for the healing of Fractures traditionally is found to be working excellently in relieving the Painful bone and Joint conditions and even neurological problems associated with it. In this single case study of 40 year old male patient *Aavarai ulunthu pattru* (poultice) was applied externally for 48 days. The results of this case study showed promising changes from cripplingly painful to easy walking which is evident from the examination of lumbar spine and MRI - Lumbar spine done before and after treatment.

KEYWORDS: Siddha, Poultice, Lumbar radiculopathy.

INTRODUCTION

Lumbar refers to the low back region. Nerve roots exit the back to enter the legs. Nerve roots branch out from the spinal cord and carry messages to and from the brain and the lower extremities and pelvis. If one of these roots is sick or injured in the area where it leaves the spine, it is called a radiculopathy. Symptoms usually arise in people between the ages of 30 and 50 and may follow an injury or occur with no warning. Sciatica is pain that radiates from the back down the back of the leg and is a common manifestation of lumbar radiculopathy. Other common symptoms are numbness and tingling of the leg or foot, weakness and muscle spasms. Many disease states can cause lumbar radiculopathy, but most often it is a structural problem like a herniated disc, bone spur, or mechanical stretching or traumatic event. Discs may be damaged from strenuous activity, a congenital defect, or by injury. When the disc is damaged, material in the disc leaks and squeezes the nerve root. This can cause the numbness, tingling, pain and weakness.^[1] Lumbosacral radiculopathy occurs in approximately 3-5% of the population and men and women are affected equally, although men are most commonly affected in their 40s, whereas women are most commonly affected between ages 50-60.^[2]

Siddha system of medicine is a vast repository of external therapies particularly, administration of drugs through routes other than oral. These procedures are as important as the internal medicines in the management of health and disease. Poultice (*Patru*) is one of the 32 types of external medicine. A poultice, also called cataplasm, is a soft moist mass, often heated and medicated, that is spread on cloth over the skin to treat an aching, inflamed, or painful part of the body. The word "poultice" comes from the Latin *puls*, *pultes*, meaning "porridge." Aavarai - Ulunthu Patru (Poultice) which is used for the healing of Fractures traditionally is found to be working excellently in relieving the Painful bone and Joint conditions and even neurological problems associated with it. Poultices are successful as the skin, the largest organ of the body, and one of the first line of defense against disease, has the ability of absorption. Applying herbal poultices to the painful area of the skin absorbs the medicinal benefits of the substance almost immediately which is non-invasive, cost effective and easy to apply. A 40 year old male patient of lumbar radiculopathy was treated successfully with this non invasive, cost effective Aavarai ulunthu patru.

MATERIALS AND METHODS

A 41 years Old male euglycemic, came with the complaints of pain over the hip radiating to left lower limb, numbness over left lower limb, pain aggravates during walking and standing, Walking became difficult and painful, relieved on rest present for 3 months. Not a known case of DM/ HT/ TB/ BA/IHD/Seizures. No history of Truama.

Place of Study

In patient Department, National Institute of Siddha, Chennai, Tamil Nadu.

Personal history

No H/O alcoholism/ smoking

Occupation – Jeep driver

Socio economic status – Middle class

Diet – Mixed diet

Sleep – Normal

Bowel and bladder habits - Normal

Family history

Married

No relevant family history

General examination

Pulse rate	72/min
Heart rate	72/min
Respiratory rate	18/min
Blood pressure	120/80 mm.Hg
Pallor	No
Jaundice	No
Cyanosis	No
Lymphadenopathy	No
Pedal edema	No
Clubbing	No
Jugular venous pulsation	Not visible

Examination of lumbar spine

Inspection: No Scoliosis, Gibbus observed

Palpation: Tenderness over the lumbosacral spinal region

Range of spine movements

Flexion of Spine: Affected

Extension of Spine: Affected

Lateral flexion of Spine: Normal

Physical signs before treatment

Signs	Right	Left
SLR Test (To detect any common Hip/Spinal Pathology)	+ 40degrees	+ 30degrees
Lassegue's sign: (To elicit Nerve root pain below the level of L4)	+	+
Femoral nerve stretch test (To elicit nerve root pain above the level of L4)	-	+
Faber test: (To elicit Hip/SI joint Pathology)	-	-

MRI – Lumbar spine done before treatment dated on 8-3-2011

Diffuse disc bulge with left posterolateral disc protrusion at L4-L5 level effacing the left lateral recess compressing the left preexisting L5 nerve root and indenting the thecal sac.

Diffuse disc bulge with posterocentral protrusion at L5-S1 level compressing the bilateral preexisting S1 nerve roots.

Bilateral L4-L5 and L5-S1 facet arthrosis.

Routine investigations dated on 11.4.2011

Blood Investigations	Value
Hb	13.3 gms/dl
Total WBC count	7000 cells/cumm
Differential count	P-52%, L-43%, E-5%
Total RBC count	4.4 million
ESR	2/4 mm/hr
Blood sugar(F)	76 mg/dl
Blood sugar(PP)	105mg/dl
Blood Urea	26 mg/dl
Sr.Total creatinine	0.8 mg/dl
Sr.Total cholesterol	174mg/dl

Routine Urine Investigations

Urine Investigations	Value
Sugar (F)	Nil
Sugar (PP)	Nil
Deposits	1-2 pus cells 2-4 epi cells

Treatment given

Daily 20gms of Aavarai Ulunthu poultice applied externally for 48 days. The ingredients of Aavarai uluthu pattru are as follows

Aavarai leaves (*Cassia auriculata*) – Powdered form - 10 parts

Veliparuthi leaves (*Perugularia daemia*)- Powdered form – 10 parts

Murungai leaves (*Moringa oliefera*) – Powdered form- 10 parts

Ulunthu (*Vigna mungo*) – Powdered form – 10 parts

Kadugu (*Brassica juncea*) - Powdered form – 3 parts

Method of application

Preferably with murungai leaf juice or with egg white or water.

Duration of application

Overnight application for 10 to 12 hours, According to our experience 10 to 12 hours continuous application with frequent hydration with *Moringa oliefera* leaf juice/ bark juice is effective.

Area of application

Lumbosacral region, lower limb for lumbar radiculopathy.

Preparation of Aavarai ulunthu pattru/poultice

Dried leaves of Aavarai (*Cassia auriculata*), Veliparuthi (*Perugularia daemia*), murungai (*Moringa oliefera*) - are ground to a powder using a mortar and pestle. Place the ground powder in a bowl and add equal quantity of Ulunthu (*Vigna mungo*) grinded along with kadugu (*Brassica juncea*) add enough water or egg white or preferably with *Moringa oliefera* leaf juice to make a thick paste that can be easily applied. Make a quantity sufficient to cover the affected area. The ratio of ground herbs to water or egg white or *Moringa oliefera* leaf juice will vary according to the herb being used. Add the water or egg white or *Moringa oliefera* leaf juice in small increments, just until the mixture is thick but not stiff.

Preparation of Poultice



Application of Poultice over Lower back



Range of spine movements after treatment

Flexion of Spine: Normal

Extension of Spine: Normal

Lateral flexion of Spine: Normal

Physical signs after treatment

Signs	Right	Left
SLR Test	Negative	Negative
Lassegue's sign:	Negative	Negative
Femoral nerve stretch test	Negative	Negative
Faber test:	Negative	Negative

MRI – Lumbar spine done after treatment dated on 1-12- 2011.

L4-L5 diffuse disc bulge indenting on thecal sac, left L5 nerve root and associated facet hypertrophy causing bilateral neural foraminae & spinal canal narrowing.

L5-S1 focal posterocentral disc protrusion indenting on thecal sac, traversing S1 nerve roots.

On comparison with previous MRI dated 8-3-2011, there is no significant interval change at L4-L5 level & mild reduction in the disc protrusion at L5-S1.

Patient progress 48 Days After treatment

Pain fully reduced in the Lumbosacral Region, Numbness reduced in the region. Walking around became easier and normal. Duration of Numbness in the lower limb on standing and walking greatly reduced.

DISCUSSION

In this single case study of 40 years old male of lumbar radiculopathy, application Aavarai uluthu Patru (Poultice) for 48 days showed marked response. SLR test, Lassegue's Sign, Femoral nerve stretch test became Negative After treatment. On comparison with previous MRI dated 8-3-2011, there is mild reduction in the disc protrusion at L5-S1. Post status treatment of patient – Patient is walking around with no Pain, Numbness reduced to a negligible minimum even on walking. Low back ache, Cramps and Shooting pain absent. Affected range of spine movements became normal after treatment. Lumbar radiculopathy which affects 3 to 5% of population can be easily treated by Aavarai Ulunthu Poultice which is very simple, cheap, patient friendly, non-invasive cost effective. Since only Oral drugs cannot control the disease, certain nonpharmacological therapies such as Poultice play a vital role for the treatment of Lumbar radiculopathy. Applying herbal poultices to the painful area of the skin absorbs the medicinal benefits of the substance almost immediately. In skin, Mostly drug absorption is transcellular. It is unlikely that noticeable absorption occurs between cells or through sweat pores and hair follicles. It is a passive diffusion process, the magnitude of which will depend on the integrity and efficacy of the epidermal barrier but

which will be influenced by the drug itself. Drugs with low molecular weight (below 800 daltons) with a high water and lipid solubility shows the greatest penetration. The vehicle that contains the applied drug is important. Hydration of the stratum corneum: occluding the epidermis increases its water content, enhancing drug absorption. Poultices are successful is that the skin, the largest organ of the body and one of the first line of defense against disease, has the ability of absorption. In some cases oral drugs in Siddha such as Amukkara Chooranam, Arumuga chendooram, Kungiliya parpam can also be administered along with poultice depending upon the severity of patient.

CONCLUSION

The combination of Aavarai and ulunthu is exclusively used by traditional physicians of Tamil nadu for fracture healing. The idea of above external applications stemmed from their valuable experiences in the arena of bone setting. From this Single case study, Aavarai - Ulunthu Patru which is used for the healing of Fractures traditionally is found to be working excellently in the treatment of Lumbar radiculopathy which is evident from the examination and MRI – Lumbar spine report done before and after treatment.

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