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Research Article

Comparative evaluation of Agnikarma methodologies in Para Spinal Muscle Spasm

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Abstract

Kaṭīśūla (low back pain) is one of the common symptoms in para spinal muscle spasm. It is one of the lakṣaṇas of vātavyādhi caused by aggravated vātadoṣas. Disease is characterized by radiating pain, tingling – numbness at lower back and legs, which makes the patient difficult to do his day to day activities. There is no specific curative remedy in modern medical science except analgesics and anti-inflammatory drugs. Agnikarma is indicated in vātavyādhi by Acharya. Acharya Sushruta has mentioned agnikarma as superior therapeutic procedure among others as it gives instant longstanding relief. There are two methodologies to perform agnikarma. Direct heat method which is granthokta procedure and indirect heat method which is practiced on vridhha vaidya parampara basis. Thus the objective of the present study was to evaluate the comparative efficacy of agnikarma methodologies in management of para spinal muscle spasm. This comparative assessment was studied at OPD level in Dr. Nikumbh's Proctocare Clinic, Solapur. Data was collected and observations were made before treatment and after treatment on the same day of treatment. Observations were significant showing reduction in parameters like pain, stiffness, tingling, and numbness. Verbal pain analogue scale was used for analysis of effect. Agnikarma gives instant relief in para spinal muscle spasm but other medicines are needed for overall samprāpti bhanga of the disease.

Keywords: Agnikarma, para spinal muscle spasm, kaṭī śūla

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INTRODUCTION

Agnikarma is therapeutic burning on specific sites using special tools. Sushruta has given special importance to agnikarma in pain management and it is believed that disease treated with agnikarma never reoccurs. [i,ii]

Now a day joint pain is one of the main distress causing symptoms after third decade, though modern medical science provides powerful analgesics and new surgical tools for several joint disorders. These are remaining a challenge for the research scholars.

In ayurvedic literature several methods of treatment like snehan, swedan, upanāha, agnikarma, raktamokṣaṇa and panchakarma etc. are advised for vatika disorders. Among these Agnikarma was selected due to the reason that uṣṇa, sūkṣma, āśukāri guṇa pacifies the vāta-kapha doṣa and removes srotorodha. Patient may be efficiently relieved from stiffness, pain and other associated symptoms.

Agnikarma can be performed by two methods –

- Granthokta - direct heat
- Vrudha vaidya parampara- indirect heat

Keeping all this points in mind the study has been conducted to evaluate the efficacy of agnikarma in para spinal muscle spasm by different two methods.

What is para spinal muscle spasm? [iii,iv,v]

Most of the movements of vertebral column are produced by extensive sets of the muscles. Which are running all the way down the back, together called the erector spinae. They keep the spine erect. The longissimus is nearest to the spine and the iliocostalis farther out on the ribs. They merge in the lumbar spine with longissimus muscle fibers terminating on the sacrum with their tendons. They work together in a unit or separately on parts of the spine little like a snake. They are collectively known as Para-vertebral or Para spinal muscles. The highest of them are attached to the base of the skull, the lowest ones arise from the sacrum and iliac crest, some in between are attached to the backs of the ribs, and many are attached to the transverse and spinous processes of the vertebrae. Dysfunction in these postural muscles can cause joint dysfunction at the level where they are tight. Pressure in the joint fibers of the nerve produces pain. Chronic muscle contraction (tension or tightness) can lead to the formation of trigger points. Active and latent trigger points can create satellite and secondary trigger points in their referral zone. The gluteus maximus and gluteus minimus are related directly across the hip bone from the erector spinae and directly connected by the lumbosacral fascia. With the prevalence and postural issues at all age levels these muscles commonly cause low back pain. Lumbar

para spinal muscle spasms are most often clinically diagnosed via a patient history of para spinal cramps or “knots,” or a finding of splinting, tightness, or decreased range of motion on physical examination.

Aims and Objectives –

- To assess efficacy of the agnikarma chikitsa in para spinal muscle spasm.
- To compare two methodologies of agnikarma chikitsa.
- To compare effects of two methods of agnikarma in lumbar pain.

MATERIAL & METHODS

The study was performed at the OPD level in Dr Nikumbh's Proctocare Clinic, Solapur.

We have selected 20 subjects with clinically diagnosed para spinal muscle spasm on the basis of signs and symptoms.

Inclusion criteria:

- Patients having classical symptoms of para spinal muscle spasm with 1. Śūla (pain) over sphik (waist), kaṭī (lower back), ūrū (hip), 2. Stambha (stiffness), 3. Toda (pricking pain), 4. Chimchimayan (tingling) and 5. (Suptata) numbness in limbs, 6. Difficulty in walking etc. is included.
- Age group – 18 to 70 were included

Exclusion criteria

- Patients having multiple wounds, fracture of vertebra, destructed vertebral bodies
- Cases of spondylolisthesis, sacroiliac arthritis
- Known cases of tuberculoma, or cyst compressing the nerve root, diabetic neuropathies etc. were excluded.
- Known Patients with SLR test +ve

Study design:

Open comparative study.

Criteria for assessment:

Symptoms	Grade 0	Grade 1	Grade 2	Grade 3
Pain (Śūla)	No	Mild	moderate	Severe
Stiffness (stambha)	No	Mild	moderate	Severe
Tingling sensation (chimchimayan)	No	Mild	moderate	Severe
Numbness (suptata)	No	Mild	Moderate	Severe

The procedure of agnikarma was conducted in OPD.

Material

- Til tail,
- Swedan yantra,
- Rajat shalaka,
- Spirit lamp,
- Straight artery forceps,
- Ghrita etc

Methodology

Purvakarma -

Patients consent was taken after proper counseling prior agnikarma.

Sthanik snehan karma done at lumbar region using til tail.

Sthanik Swedan karma done using swedan yantra.

Pradhan karma [vi] -

Points having maximum tenderness were marked.

Direct heat conduction method –

A sterile silver rod (rajat shalaka) is heated on burning spirit lamp till it becomes red hot.

Then its tip is touched to the most painful point selected over the spasm area.

This is done till samyak dagdha lakshyanas like twak sankocha, Shabda pradurbhav, daurgandha were seen^[iii].

Agnikarma was done on maximum three different points in single setting.

Indirect heat conduction method -

A sterile silver rod is kept over most tender and painful point over the spasm area by holding in artery forceps. Then heat is transferred slowly by slow conduction method using spirit lamp.

Heat is transferred till patient feels the peak of temperature at the point.

Then shalaka is removed from that point.

This procedure repeated maximum thrice in one setting over different selected points.

Paschat karma-

Ghrita pratisaran done over the dagdha sthana.

OBSERVATIONS

According to demographic data

According to demographic data of this study, it is observed that, maximum patients belongs to age group of 31-40yrs of age, there were 7 female patients and 3 male patients in each group in the study. Can't give specific correlation regarding age and sex coz of small number of subjects.

RESULTS AND DISCUSSION

Effect of agnikarma chikitsa on lumbar para spinal muscle spasm-

By indirect heat method -

Symptoms	N	Mean score		%	SD±	SE±	t	p
		BT	AT					
Śūla	10	3	0.8	73.33	0.91	0.29	7.57	<0.001
Stambha	4	3	1	66.66	1.28	0.64	3.55	<0.001
Pad chimchimayan	7	2	1	50.00	0.48	0.18	5.74	>0.001
Suptata	3	2	1	50.00	0.48	0.27	3.58	>0.10

Overall effect by indirect heat method –

Effect	Number of patients	%
Cured	03	30
Markedly improved	02	20
Improved	05	50
Unchanged	00	00

By direct heat method –

Symptoms	N	Mean score		%	SD±	SE±	t	p
		BT	AT					
Śūla	10	3	1.2	60.00	0.63	0.20	9.00	<0.001
Stambha	4	1.75	0.75	57.00	0.51	0.26	3.80	<0.05
Pad chimchimayan	8	2.5	0.87	65.00	0.82	0.29	5.59	<0.001
Suptata	3	1.33	0.66	50.00	0.42	0.24	2.73	>0.10

Overall effect by direct method –

Effect	Number of patients	%
Cured	01	10
Markedly improved	03	30
Improved	06	60
Unchanged	00	00

DISCUSSION [vii,viii]

Lumbar para spinal muscle spasm is one of the complex criteria includes in kaṭīgat vāta. Also it seems to be a difficult entity from the days of Sushruta and appears to have remained a challenge to physicians. Though the disease is not fatal instantly, but can cause more severe complications in the later stage. It cripples the patient, makes him burden to others, he can't perform the day to day work properly due to severity of pain. It does not cut the years of the life but life of the years.

Agnikarma is simple effective parasurgical procedure for localized vāta kaphaj disorders, so for the management of lumbar para spinal muscle spasm agnikarma is selected. Both methods of agnikarma are effective but indirect heat conduction method is more effective and convenient procedure in muscle spasm to give instant pain relief.

Low back pain, difficulty in forward & backward bending, tingling sensation and numbness in both legs were chief complaints in all patients.

Agnikarma benefited to 70% patients effectively by indirect method where as to 60% patients by direct method in relieving pain. Also back stiffness reduced in 66.66% by indirect method while in 57% by direct heat method. Stiffness is caused by vāta and kapha doṣa. Uṣṇa guṇa of agnikarma might have pacified both vāta and kapha doṣa. In indirect heat method as heat gets transferred through slow conduction method, heat can be pass on to the inner tissues by cell to cell transfer without any external burn to the skin. So heat can be given for more duration and get transferred to the affected muscle and trigger zone. This way we can avoid the complications of burn and can give better results.

Also patient can be convinced comfortably as there is no fear of direct burn.

Effects of Agnikarma:

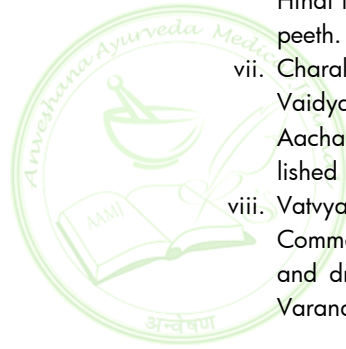
- **Effect on pain:** Due to increased local metabolism, the waste products (metabolites) which are produced gets excreted, which normalize the blood circulation thus resulting in reduction in intensity of pain.
- **Effect on metabolism:** The place where heat burns the local tissue metabolism gets improved according to scientist Dr VenHanff. Thus various metabolic and rejuvenating changes takes places at the site of heat burns, thus it leads to increase demand of oxygen and nutrients of the tissues. It excretes the unwanted metabolites and toxins from affected zone.
- **Effect of heat on body temperature:** There may be dilatation of the blood vessels due to heat conduction. Heating affects the vasomotor centers causing general rise in temperature.
- **Effect on the blood circulation:** After performing agnikarma the superficial sensory nerves gets stimulated which leads to dilatation of local blood vessels, resulting in increased blood circulation. Apart from this it also decreases the viscosity of blood and thus leads to decreased blood pressure.
- **Effect of heat on nerves:** heat appears to reduce the excitability of nerves, provided that the heat is not in excess.

CONCLUSION

Agnikarma therapy proved to be very effective treatment for lumbar para spinal muscle spasm by both direct and indirect heat methods. Indirect heat method relieves pain more effectively than direct method. Also this method reduces spasm instantly. We can avoid direct burn by indirect heat method, so this method is more convenient and comfortable for application.

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