ROLE OF AGNIKARMA IN PROLAPSED INTERVERTEBRAL DISC – A CASE STUDY

1Dr. Shweta Siddhartha Dethe*, 2Dr. M. J. Qadri and 3Dr. Piyush Mathariya

1PG Scholar, Dept. of Shalyatantra, Govt. Ayurvedic College, Osmanabad Maharashtra, India.
2Professor and HOD, Dept. of Shalyatantra, Govt. Ayurvedic College, Osmanabad Maharashtra, India.
3PG Scholar, Dept. of Shalyatantra, Govt. Ayurvedic College, Osmanabad Maharashtra, India.

ABSTRACT
A prolapsed intervertebral disc is term used for slipped disc or herniated disc. Prolapse of intervertebral disc is commonly noticed in the cervical and the lumbar spine. These intervertebral discs are placed in between each of the vertebrae of the spine for shock absorber. 80% cases of Prolapsed Intervertebral Disc are traumatic in origin, 15% cases are degenerative and remaining is due to increased tension in disc. When the fibrous outer part of the disc breaks down it allow the gel like core to bulge outwards. The disc which is damaged puts pressure on the spinal cord or a single nerve fibre. These result into pain in the area of disc or the region such as arm or a leg supplied by suppressed nerve. Prolapsed disc can be a reason for severe lower back pain. The symptoms seen on lower back referred sciatic pain, paraesthesia, tingling numbness in lower limbs. The modern line of treatment is mainly surgical consisting of laminectomy, discectomy; which is expensive and has chances of recurrence. Method: A case of 30 year male patient approached us with low backache radiating pain to bilateral leg having tingling sensation and numbness. Patient having history of heavy weight lifting after that he had above complaints. MRI spine was done s/o disc prolapse at L4-S1 with annular tear of L4-L5 nerve root compression. He was treated with Agnikarma done with Panchadhatu Shalaka. Result: Improvement was seen regarding symptoms low backache, tingling and numbness.
KEYWORDS: Agnikarma, Panchadhatu Shalaka, prolapsed intervertebral disc.

INTRODUCTION
The intervertebral disc consists of three distinct components – the cartilage end plates, nucleus pulposus and annulus fibrosus. The cartilage plates are thin layers of hyaline cartilage between adjacent vertebral bodies and the disc proper. The nucleus pulposus is a gelatinous material which lies a little posterior to the central axis of the vertebrae. It is enclosed in annulus fibrosus, a structure composed of concentric rings of fibro-cartilaginous tissue.\[1\]

‘Prolapsed disc’ means the protrusion or extrusion of the nucleus pulposus through a rent in the annulus fibrosus. A herniated disc may occur when too much force is exerted on an otherwise healthy intervertebral disc.\[1\]

Sequences of changes in the disc lead to its prolapse.

a) Nucleus degeneration: Degenerative changes occur in the disc before displacement of nuclear material.

b) Nucleus displacement: When the annulus become weak, either because a small area of its entire thickness has disintegrated spontaneously or because of injury, the nucleus tends to bulge through the defect. This is called disc protrusion. Finally, the nucleus comes out of the annulus and lies under posterior longitudinal ligament; though it has not lost contact with parent disc. This is called disc extrusion. The extruded disc may lose its contact with the parent disc, when it is called sequestrated disc.

c) Stage of fibrosis: The residual nucleus pulposus becomes fibrosed. The excruded nucleus pulposus become flattened, fibrosed and finally undergoes calcification.

The commonest level of disc prolapse is between L_4-L_5 in the lumbar spine and C_5-C_6 in the cervical spine.\[1\]

Most minor herniation heals within several weeks. Anti-inflammatory treatments for pain associated with disc herniation may not heal of their own accord and require surgery.\[1\]

Diagnosis: CT scan and MRI scan may be done confirm the diagnosis.\[2\] Agnikarma have been proved to be effective in Ruja Pradhaan Vatavyadhis.\[3\]
In present study though the case was diagnosed as prolapsed vertebral disc (PID) L4-L5, L5-S1 patient had symptoms of low backache, tingling sensation over bilateral legs. Hence patient was administered with Deepan, Pachan, oral medication with analgesic property and Agnikarma therapy was given.

MATERIAL AND METHODS

Case presentation: A 30 year male patient was registered in OPD with registration no. 10023, Department of Shalyatantra, Government Ayurveda Hospital, Osmanabad. The patient had complaint of low backache since 2 month starts after heavy weight lifting. Pain becomes worse since 1 month. Paraesthesia occurs after sitting for long time. Patient had no complaint of claudication; sleep is normal; appetite is normal; bowel or bladder normal. Any bulge or herniation in Ayurveda called as stransa is one of the first and major sign of Vatavrudhi. Drugs having Deepan, Pachan properties were prescribed- Lashunadi vati 500mg, Kaishore Guggul 500 mg, Triphala churna 3gm at bed time for Vatanulomana, Sthanik Sehana Swedana for 15 days, Agnikarma with Panchadhatu Shalaka 4 setting at 7th day interval.

History of present illness

Patient states that he was quite well 2 month back. Then he has been suffering from low backache following tingling sensation after heavy weight lifting. Pain becomes worse since 1 month. Paraesthesia occurs after sitting for long time. Doctor diagnosed as PID and started conservative treatment. Patient underwent treatment but could not get relief.

Past history of patient

Patient is known case of Asthma under treatment- Foracort-200 inhaler. He had no h/o DM, HTN.
General examination

**VITALS**

- Pulse: 80/ min
- BP: 110/70 mmHg
- Temp: Afebrile
- RR: 24/ min
- Built: fatty
- Weight: 74 kg
- Height: 5.4 feet

**BP:** 110/70 mmHg

- CVS: S1S2 Normal
- CNS: Conscious, Oriented
- RS: AEBE Clear
- P/A: Soft, nontender

**Blood investigation**

- Hb% 11.7g/dl
- ESR: 30mm
- BSL(R):84 mg/dl
- Sr. creatinine: 0.85/dl HBsAg: Non-Reactive Urine: pus cells (5-6)

**MRI of Lumber spine:** mild posterior disc bulges at L4-S1 levels with annular tear of L4-L5 disc without nerve root compression.

**EXAMINATION**

- **Movements:** Patient is unable to bend forward any attempt initiates lumbar Para spinal muscles spasm early morning.
- **Tenderness:** Diffuse tenderness in the lumbo-sacral region. A localised tenderness in the midline and lateral to the spinous process is found.
- **Straight Leg Raising Test (SLRT):** Negative Lasegue test: Negative.
- **Neurological examination:** Paraesthesia occurs after sitting for long time.

**Therapeutic intervention**

*Shodhan chikitsa*

**Step1:** Snehana Karma was done with *Tila taila* and Swedana Karma done with Nadisweda at kati region for 15 days.

**Step2:** Kati-vasti was done *Tila taila* for 7 days.

**Step3:** Agnikarma was done with *Panchadhatushalaka* by Bindu type of *Dahan* at lumbo sacral region and advised to apply aloeveera pulp after *Dahan.*
Oral medication
3. Triphala churna 3gm at bed time.
4. Ashvagandha and shatavari each 2gm with milk.

OBSERVATIONS AND RESULTS

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<th>Clinical feature</th>
<th>Grading</th>
<th>Before Treatment</th>
<th>After Treatment</th>
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<tr>
<td>Pain</td>
<td>No pain</td>
<td>0</td>
<td>4-6</td>
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<tr>
<td></td>
<td>Mild pain in undisturbed level</td>
<td>1-3</td>
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<td>(no need of NSAID)</td>
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<td></td>
<td>Moderate pain disturbed daily</td>
<td>4-6</td>
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<td>routine relived by NSAID</td>
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<td>Severe pain intolerable not relived</td>
<td>7-10</td>
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<td></td>
<td>by NSAID</td>
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<td>Tenderness</td>
<td>Mild tenderness to palpation</td>
<td>1</td>
<td>4</td>
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<td>Mild tenderness with grimace and flinch to</td>
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<td>moderate palpation</td>
<td>2</td>
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<td>Severe tenderness with withdrawal</td>
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<td>Severe tenderness with withdrawal</td>
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<td></td>
<td>from noxious stimuli</td>
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<tr>
<td>Muscle spasm</td>
<td>Present</td>
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<td>Absent</td>
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<td>Absent</td>
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RESULTS

Besides the above mentioned improvement in symptoms, the other features of tingling sensation and numbness were also improved. Patient was able to do his routine work.

DISCUSSION

Any bulge or herniation in Ayurveda called as stransa is one of the first and major sign of Vatavrudhi. The general principle of vata dosha is adopted in case of kati-vata. Swedana was done to remove stiffness in kati region. Kati-vasti helps in nourishing the superficial deep and deep muscles and makes the joint stable. Agnikarma relieves pain and lumbar Para spinal muscle spasm.\[^5\]

The medicine was used in shaman chikitsa like Kaishore Guggul, Lashunadi vati, Ashvagandha, shatavari are potent vata nashak.
In modern view mechanism of agnikarma\cite{6}

Gate control mechanism\cite{6}
When a painful stimulus alone is applied the pain is more intensely felt than the stimulus of same intensity is applied concomitantly with the tactile stimulus e.g. heat application in the form of Agni Karma.

In Ayurvedic view
Two theories are postulated
According to 1\textsuperscript{st} theory, it works by giving external heat there by increasing the Dhatvagni (tissue fire) which helps to digest the aggravated Doshas and hence cures the disease. In 2\textsuperscript{nd} theory, Ushna guna (hot properties) of Agni is exactly opposite to Sheeta guna of Vata and Kapha Dosha which pacifies Vata and reduces Kapha, therefore reduces the pain.
MRI OF LUMBAR SPINE

Scan Protocol: T1SE, T2 FSE sagittal, T1SE and T2 FSE axial.
*Images are stored in the memory for 30 days only.

LUMBAR SPINE:
Lumbar lordosis is maintained with normal alignment.
Lumbar vertebrae reveal normal marrow signal intensity.
Variable desiccation of L4-S1 discs is seen.
Conus medullaris and filum terminale appear normal.
Psoas & Paravertebral soft tissues appear normal. Psoas muscles are normal.
Bilateral sacro-iliac joints appear normal.

Findings at specific level:
L1-L2: No disc bulge is seen. Bilateral traversing L2 and exiting L1 nerve roots appear normal.
L2-L3: No disc bulge is seen. Bilateral traversing L3 and exiting L2 nerve roots appear normal.
L3-L4: No disc bulge is seen. Bilateral traversing L4 and exiting L3 nerve roots appear normal.
L4-L5: Mild posterior disc bulge. Annular tear is seen. Bilateral traversing L5 and exiting L4 nerve roots appear normal. Bilateral facet joint hypertrophy is seen.
L5-S1: Mild posterior disc bulge is seen causing mild narrowing of bilateral neural foramina. Bilateral traversing S1 and exiting L5 nerve roots appear normal. Bilateral facet joint hypertrophy is seen.

IMPRESSION:
- Mild posterior disc bulges at L4-S1 levels with annular tear of L4-L5 disc without nerve root compression.
CONCLUSION
The Ayurvedic treatment modalities were found quite effective and reliable for the treatment of PID which can be well co-related to Kativata and stransa.

The procedure was simple, economical and required no hospitalization and could be done at the OPD itself. Agnikarma had a significant effect in relieving the pain.

REFERENCES