



EFFECT OF ARTHROTHERMIA ON NARROWING OF AP DIAMETER OF LUMBER DISCS- A CASE REPORT

Ayurveda

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ABSTRACT

Background: Spinal degeneration occurs in 3 stages, viz. dysfunction, dehydration and the beginning of spurring. Spinal degeneration certainly affects ability to go with the normal activities. Unfortunately there is very little that can be done to reverse the effects of spinal degeneration. Narrowing of AP Diameters of spinal discs starting from L1 to L5 and S1 shows significant changes during degeneration of spine. According to Ayurveda, based on resembling clinical manifestation, this condition can be co-related with Vatvyadhis like Katishula, Grudhrasi etc. **Aim:** To understand the efficacy of Arthrothermia - an ayurvedic novel treatment in the narrowing of AP diameters of Lumbar Spinal Discs **Materials and Method:** A 33 years old male suffering from complaints of Katishula (lumbago or lower back pain), radiating to right lower limb, which increased while sitting, standing for long time and walking since past 2 years, reported in the OPD. On the basis of clinical presentation and MRI finding, the condition was diagnosed as narrowing of Lumbar spinal disc. Arthrothermia (A combination of alkaline and an indirect micro-thermal cautery), an unique Ayurveda procedure was prescribed for 6 days. Clinical assessment was done before and after the treatment on the basis of Oswestry disability index questionnaire. **Observation and Results:** Before treatment Oswestry disability questionnaire was 25 (50%) – Severe disability and after the complete treatment patient reported relief in symptoms of pain (shul), stiffness (stambha), tingling (kampanam), distribution of pain significantly reduced and score was only 4 (8%) – No disability. **Conclusion:** The present case study revealed that the “Arthrothermia” has shown significant positive changes on health in very short time, in narrowing of the AP diameters of Lumbar Spinal discs.

KEYWORDS

Ayurveda, Katishula, Lumbago, Low Back Pain, Spinal Disc Degeneration, Alkaline cautery, Thermal cautery, Arthrothermia, Disc bulging, Canal stenosis

INTRODUCTION

Spinal degeneration occurs in 3 stages. First stage is known as Dysfunction. In this stage, as the spine begins to deteriorate, its curvature begins to change and show signs of misalignment. This change in curvature causes a significant change the loading mechanisms of the spine changes causing increased rate of degeneration. Weakness of spinal muscles and ligaments also occur. Often at this stage there will be little to no pain associated with the changes. This makes it very difficult to find and treat at this stage. Often the early signs are found incidentally while looking for more sinister injuries during falls or crashes. Dehydration of spinal discs and beginning of spurring occurs in second stage of spinal degeneration. At this stage of degeneration changes in the spinal loading mechanisms has taken place for several years most likely and spine is responding to that. Discs of spine begin to dehydrate and shrink in size. Vertebrae begin to develop bone spurs responding to the increased pressure loads. Roughening of the joint surfaces begins as well. As a result of all these changes mobility is reduce and often symptoms have usually appeared. Finally stage three is the late stage of spinal degeneration. At this stage severe remodeling of the bones and decrease of joint space causes for a severe loss of mobility. Bone spurs continue to grow and can narrow the spinal canal, which presses onto the spinal cord or nerve roots. This condition, called spinal stenosis, triggers pressure that can cause limb pain, tingling, and numbness. Late stage spinal degeneration will almost certainly affect ability to go about normal activities. Unfortunately there is very little that can be done to reverse the effects of spinal degeneration.

Common cause of diseases is ageing, trauma, disc bulging, spondylolisthesis, arthritis of spine etc. Degeneration of spinal discs often results in backache with restricted or painful movements of the back. Also walking difficulties due to restriction of mobility and flexibility of lower limbs can be there. Tingling, numbness in lower limbs can be other symptoms. Disc bulging, spondylolisthesis, arthritis of spine, Canal stenosis etc. are common disease caused by spinal disc degeneration. According to ancient Ayurveda literature such vyadhis (diseases) are consider as Nanatmaja Vatavyadhi (diseases cause by only vitiation of vata that are 80 in number) in ancient text.(1)

Case Report

A 33 years old male came to Ayulink Ayurveda, OPD, with complaints of (Katishool) lower back pain, pain radiates to right lower limb, pain increases while sitting, over standing and walking over 2 years (since last 15 days more pain and discomfort while doing routine work)

On examination

General condition of patient was good, No pallor seen
Pulse-86/min
BP: 137/85mm
CNS: Conscious well oriented

Medical History

- H/O received allopathy medicines for above complaint with minimal relief.
- NO H/O DM, HTN, Thyroid disorder, IHD.

Personal History

- Diet-vegetarian, Often consuming Fast food – Junk food – Cold food
- Time and frequency of intake-irregular
- Appetite-Normal
- Sleep–Normal
- Addiction-no specific addiction
- Bowel-Normal

Clinical Examination

A) Tests

SLR test- Rt Leg: 75 Degree, Lt. Leg 85 Degree

B) Local examination

- No local swelling, muscle wasting,
- No change seen in curvature of spine.
- Gait: normal,
- No numbness or weakness of muscles of lower limb found

Pre-treatment Radiographic Investigations:

MRI findings shows,

- * Spondylolysis in pars interarticularis of L4 vertebra on either side with grade-1 anterolisthesis of L4 over L5 vertebral body
- * Posterior bulging of L4-L5 intervertebral disc with cranial bulging of disc causing indentation over ventral aspect of dural theca and narrowing of neural foramina with compression over bilateral foraminal exiting nerve roots
- * Early degenerative changes in lumbar spine as described above

Diagnosis

Degeneration of lumbar spine

Assessment Criteria

As criterion of assessment it was decided to use 'Oswestry Disability Index'.(2)

It contains questionnaire for low back pain and disability its important tool to measures patient's functional disability and it is considered as

'Gold standard' scale for low back pain functional outcome tools, this contains 10 sections (questions). Each question is rated on 6 points (0-5) scale measuring daily activities like walking, personal care, pain intensity, sitting, social life etc. Before treatment, assessment carried out by asking questionnaire and after treatment.

Table 1: Shaman Chikitsa

Medicine	Dose	Duration
Yogaraj Guggulu	250 mg - 2 tab BDS	1 month

Table 2: Arthrothermia Treatment

Days	Date	Procedure
Day 1	15/9/2022	Arthrothermia
Day 2	16/9/2022	Arthrothermia
Day 3	19/9/2022	Arthrothermia
Day 4	20/9/2022	Arthrothermia
Day 5	21/9/2022	Arthrothermia
Day 6	23/9/2022	Arthrothermia

Observations Before And After Treatment

'Oswestry disability questionnaire' was 25 (50%) and after the complete treatment patient reported relief in symptoms pain, stiffness, and tingling. Distribution of pain significantly reduced and score was 4 (8%). Improvement of 42% on 'Oswestry disability questionnaire' was seen. Flexibility and mobility of lower extremities have much improved.

AP Spinal Canal Measures

	Before Treatment (MRI dated 23.3.22)	After Treatment (MRI dated 27.12.22)
L1 – L2	17 mms	18 mms
L2 – L3	16 mms	19 mms
L3 – L4	18.5 mms	22 mms
L4 – L5	13 mms	19 mms
L5 – S1	13 mms	14.5 mms

DISCUSSION

The symptoms seen in the present case are similar to that of Vatavyadhi described in the textbooks of Ayurveda.

Taking this into consideration, combination therapy Ayurveda protocol was followed.

Shaman Chikitsa - Yogaraj Guggulu was used as anti-inflammatory and analgesic. It is Rasayan for chronic Vata diseases and it helps to suppress the inflammation, pain and stiffness in joint. It strengthens the musculoskeletal system. It also helps in tissue regeneration.

Arthrothermia

This ayurvedic novel treatment is conceptualized by Dr. Prerak Shah for the management of osteo arthritis and neuro-muscular disorders. It is a combination of alkaline cautery and indirect micro thermal cautery. Ksharkarma and Agnikarma treatments are kind of ancillary surgeries, which are described by Acharya Sushruta (3). It is a parasurgery therapy that doesn't lead to any bleeding. These ancillary surgeries are mostly recommended for fast and effective responses without causing any injury, particularly in conditions where major surgeries are not possible.

Heat generated by combination of these both maneuvers to improve the blood circulation to the ligaments, tendons and muscle involved, pacifies pain and tenderness; and also helps arrest stiffness, and improves flexibility. Combination of ksharkarma and agnikarma processes amalgamating the use of herb chemical and mechanical heat for therapeutic purpose in a precise form. According to Ayurveda, when provoked Vayu is lodges in Asthi-Sandhi-Sira-Snayu, it results in pain and stiffness. So the line of treatment should be the removal of Vayu from that Particular site. Vayu is Sheeta in nature. Heat provided by Arthrothermia procedure, due to its Ushna Guna, pacifies the Sheeta Guna of Vayu and removes it from there. By removal of Vayu from affected site, patient gets pain relief.

CONCLUSION

The present case study revealed that the "Arthrothermia" – a unique Ayurveda treatment approach (combination of alkaline cautery and indirect micro thermal cautery) has shown significant changes in very short time duration, in narrowing of AP diameters of Lumbar Spinal discs.

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