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EVALUATION OF EFFICACY OF RAKTAMOKSHAN BY HIJAMA CUPPING IN PATIENTS WITH LUMBAR SPONDYLOSIS: A SINGLE-ARM LONGITUDINAL STUDY

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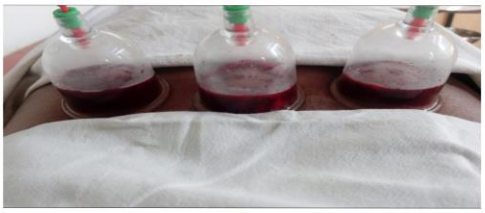
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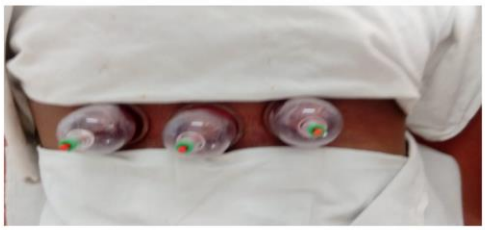
ABSTRACT

Background: Lumbar spondylosis is a common degenerative spinal condition that may be accompanied by low-back pain, paraspinal tenderness, and restricted lumbar movement. The prevalence of Lumbar Spondylosis is found to be between 38% to 85% in previous studies. Hijama Cupping had been studied as an effective, economical, reliable, convenient and safe method for Raktamokshan. This study analysed the efficacy of raktamokshan by hijama cupping in the management of lumbar spondylosis. **Objective:** To describe changes in pain, lumbar tenderness, Schober's test measurement, and straight-leg-raise (SLR) angle over 90 days among participants who received Hijama cupping for lumbar spondylosis. **Methods:** This was a single-arm longitudinal analysis of 60 patients of Lumbar Spondylosis who underwent Raktamokshan with Hijama Cupping. Each participant underwent 4 sessions of cupping at an interval of 7 days. Measurements were recorded at the baseline and Days 1, 3, 7, 14, 30, and 90 after completion of the treatment. Within-participant change over time was assessed using the Friedman test; paired baseline-to-follow-up comparisons used Wilcoxon signed-rank tests. **Results:** Mean recorded pain score decreased from 8.15 (SD 1.04) at baseline to 2.92 (SD 1.01) on Day 1, then rose gradually to 3.95 (SD 0.96) on Day 90. Mean lumbar tenderness score decreased from 3.00 (SD 0.00) to 0.53 (SD 0.50) on Day 1 and was 1.13

(SD 0.39) on Day 90. Mean Schober measurement increased from 3.33 (SD 0.48) at baseline to 6.23 (SD 0.53) on Day 1 and was 5.35 (SD 0.48) on Day 90. Mean SLR angle increased from 42.42° (SD 5.71) to 77.25° (SD 4.64) on Day 1 and was 66.44° (SD 5.65) on Day 90. Overall within-participant changes over time were statistically significant for all four measures (Friedman tests, all $p<0.001$). **Conclusion:** The recorded data show marked early improvement in the measured clinical parameters, followed by partial attenuation by Day 90. Overall, within-participant changes over time were statistically significant.







KEYWORDS: Hijama; wet cupping; lumbar spondylosis; low-back pain; Schober test; straight-leg raise; longitudinal analysis.

INTRODUCTION

Lumbar spondylosis describes degenerative changes affecting structures of the lumbar spine. Clinical presentations vary and may include axial low-back pain, stiffness, tenderness, and, in some patients, symptoms associated with nerve-root irritation. Clinical findings such as pain intensity, lumbar mobility, and straight-leg-raise range can be used to follow symptoms and physical function, although they should be interpreted alongside the patient's history and a complete clinical assessment.

Hijama, commonly described as wet cupping, is a traditional procedure involving suction and superficial skin incisions to draw a small quantity of blood. Cupping has been studied for low-back pain, but the evidence base is heterogeneous in population, technique, comparator,

outcome measurement, and follow-up. A 2024 systematic review and meta-analysis found possible benefits for some pain outcomes while also reporting heterogeneity and uncertainty across low-back-pain subgroups.[1]

This study analyzed the effect of Raktamokshan by Hijama Cupping in the patients of Lumbar Spondylosis.

AIM AND OBJECTIVES

Aim: To describe changes in selected clinical parameters among participants receiving Hijama cupping for lumbar spondylosis.

Objectives

- To summarize recorded pain intensity at baseline and Days 1, 3, 7, 14, 30, and 90 after completion of the treatment.
- To summarize lumbar tenderness scores across the same time points.
- To summarize recorded Schober's test measurements across follow-up.
- To summarize straight-leg-raise angles across follow-up.
- To assess whether each measure changed over time within the trial group.

METHODS

Study design

This was a single arm longitudinal study comprising of 60 participants who were clinically or radiologically diagnosed for Lumbar Spondylosis. The patients were randomly recruited from the OPD of government hospitals in and around Mumbai, Maharashtra between the year 2023 to 2025. Each participant underwent 4 sessions of Raktamokshan with Hijama Cupping, with an interval of 7 days in between.

The observations were recorded at baseline ("Before Treatment") and Days 1, 3, 7, 14, 30, and 90 after completion of the treatment.

Eligibility and diagnosis

The eligibility criteria were diagnosed cases of Lumbar Spondylosis, aged 40–70 years with symptoms of pain and immobility. Exclusions were such as suspected malignancy or cauda equina syndrome, pregnancy, spinal tuberculosis, selected infectious conditions, impaired

clotting/bleeding parameters, haemoglobin below 8 g/dL, vertebral fracture, and other causes of back pain.

Intervention

The intervention was Raktamokshan by Hijama cupping, delivered over four sessions at seven-day intervals. The procedure used three cups: one at the most tender lumbar point and two at paravertebral points. Suction was applied for approximately 10 minutes, followed by superficial incisions and reapplication of suction for approximately 10 minutes or until bleeding stopped; Madhughrita was then applied. No other medications were prescribed.

Outcome measures

The observations were recorded for pain degree and score, lumbar tenderness degree and score, Schober's test degree and score, and SLR angle and score. The pain was recorded on Visual Analogue Scale, lumbar tenderness was assessed by Tenderness Grading Scale, Schober measurement was recorded in centimeters, and SLR angle in degrees using standardized method.

Statistical analysis

Continuous or ordinal measures were summarized as mean and standard deviation (SD), with medians and interquartile ranges (IQR) available in the supplementary analysis if required. Overall change across the seven repeated time points was tested using the Friedman test on complete repeated observations. Paired baseline-to-follow-up comparisons used two-sided Wilcoxon signed-rank tests. Statistical significance was set at $p<0.01$.

Ethics

The ethical clearance was obtained from the Ethical Committee of RAPMC and that written informed consent was obtained from the patients.

RESULTS

Observed outcome trajectories

Table 1 summarizes the mean (SD) for each recorded outcome. For all four outcomes, the largest change from baseline was observed at Day 1. The measures then moved gradually back toward baseline by Day 90, although their recorded values remained improved relative to baseline. For pain and tenderness, lower values indicate less symptom burden; for Schober measurement and SLR angle, higher values were recorded after treatment.

Outcome	Available n	Baseline	Day 1	Day 3	Day 7	Day 14	Day 30	Day 90
Pain intensity	60	8.15 (1.04)	2.92 (1.01)	3.05 (0.98)	3.28 (0.85)	3.47 (0.91)	3.70 (1.08)	3.95 (0.96)
Lumbar tenderness score	60	3.00 (0.00)	0.53 (0.50)	0.62 (0.49)	0.82 (0.43)	0.87 (0.34)	0.93 (0.25)	1.13 (0.39)
Schober measurement	60	3.33 (0.48)	6.23 (0.53)	6.18 (0.50)	6.08 (0.62)	5.90 (0.73)	5.57 (0.65)	5.35 (0.48)
SLR angle	60	42.42 (5.71)	77.25 (4.64)	76.58 (4.74)	73.92 (5.13)	72.33 (5.48)	69.49 (6.55)	66.44 (5.65)

Within-group change over time

Outcome	Complete cases (n)	Friedman χ^2	p-value
Pain intensity	60	249.04	<0.001
Lumbar tenderness score	60	272.73	<0.001
Schober measurement	60	282.10	<0.001
SLR angle	60	297.34	<0.001

The Friedman test indicated statistically significant differences across the seven time points for each measure (all $p<0.001$). Paired Wilcoxon signed-rank tests comparing baseline with each follow-up were also statistically significant at all measured time points (all unadjusted $p<0.001$).

DISCUSSION

In this single-arm analysis of 60 participants, recorded pain intensity and lumbar tenderness scores fell substantially by Day 1 after the completion of the Hijama treatment course. The recorded Schober measurement and SLR angle increased over the same period. Improvements were not fully maintained at their Day 1 level: pain and tenderness rose gradually during follow-up, while Schober measurement and SLR angle declined from their early post-treatment values. At Day 90, group means nevertheless remained different from baseline in the direction generally interpreted as improvement for these measures. The difference between recorded observations was statistically significant indicating that Raktamokshan by Hijama Cupping is extremely effective in the management of Lumbar Spondylosis and the results were still significant at 90 days follow up, although their effect diminished slightly.

CONCLUSION

Among 60 participants in the Hijama trial group, the recorded clinical measures showed marked early changes after treatment, followed by partial attenuation over 90 days. Overall differences across time were statistically significant for pain intensity, lumbar tenderness score, Schober measurement, and SLR angle. This study concludes that Raktamokshan by Hijama Cupping is effective in the management of Lumbar Spondylosis. Further Randomized Clinical Trials are necessary to evaluate it's efficacy in comparison to other established treatment modalities.

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