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Pain and disability management through individualized homoeopathic treatment in lumbar spondylosis: A prospective observational study

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Abstract
Background: Lumbar Spondylosis is an age-related degenerative disc disease of the lumbar spine. It is almost universal with increasing age. It is considered to be related to low back pain and disability. Conventional treatment for lumbar spondylosis commonly includes anti-inflammatory medications, analgesics, muscle relaxants, and Non-steroidal anti-inflammatory drugs.
Objectives: The objectives of the present study were to assess the effects of individualized homeopathic remedies in the pain management of lumbar spondylosis based on the Visual Analogue Scale (VAS) and the disability management using disability assessment by Oswestry Low Back Pain Disability Questionnaire and Oswestry Disability Index (ODI).
Materials and Methods: A prospective observational study was conducted from October 2015 to October 2016 with a sample size of 30.
Results: Out of 30 cases enrolled 93.33% of patients showed improvement in pain and disability with decreased VAS and ODI scores. The mean score for pain, assessed using the VAS reduced from 78.33±10.75 (at baseline) to 47.1±18.24 (in the end), and the mean ODI score reduced from 47.63±12.87 (at the baseline) to 25.67±13.36 (at the end). Among the most used medicines were Lycopodium (n=6) 20% and Phosphorus (n = 4) 13.33%.
Conclusion: Homoeopathic medicines are effective in the management of pain and disability due to lumbar spondylosis.

Keywords: Lumbar spondylosis, visual analogue scale, oswestry disability index, lower back pain

Introduction
Lumbar spondylosis is an age-related degenerative disease of the discs of the lumbar spine [1]. It is a degenerative process defined radiologically by joint space narrowing, osteophytes, and subchondral sclerosis [2, 3]. The clinical outcome is neurogenic claudication, which may include lower back pain, leg pain, as well as numbness, and motor weakness of the lower extremities, which worsens with upright posture and walking and improves with sitting and lying down [4]. Symmons *et al*. [5] study of individuals aged 45–64 identified osteophytes in the lumbar spine in 85.5% of participants. Degenerative changes can also appear in young individuals without decades of stress on the spine. Lawrence [6] found that 10% of women aged 20–29 showed signs of disc degeneration. Although lumbar spondylosis affects 80% of patients over 40 years of age, in one study it was found in 3% of individuals aged 20–29 years [7].
Conventional treatment for lumbar spondylosis commonly includes anti-inflammatory drugs, analgesics, muscle relaxants, and non-steroidal anti-inflammatory drugs (NSAIDS). Epidural steroid injections (ESIs) have become a common interventional strategy in the treatment of chronic axial and radicular pain caused by lumbar spine degeneration [8].
In Homeopathy, we do not treat based on the name of the disease, *i.e.* lumbar spondylosis, but we treat the patients as a whole using constitutional medicines based on a summary of symptoms [9]. These drugs reduce pain and limit disability. There have been many studies on lumbar spondylosis in other areas, but not much work has been done in homeopathy. There are very few publications on the effectiveness of homeopathy in low back pain (LBP) [10, 11, 12], but there is a paucity of studies specifically regarding the homeopathic treatment of lumbar spondylosis [13]. In one of the studies, it was concluded that Homoeopathy is ineffective for any type of low back pain [14]. A prospective series of consecutive cases of lumbar spondylosis demonstrated significant improvement in back pain and stiffness [15].

In one study, homeopathy was shown to be effective in significantly reducing the Oswestry score of LBP compared to standardized physiotherapy, and in another study, classical homeopathic treatment was seen to be an effective treatment for low back pain and improved health. It improves the quality of life and reduces the use of other health services. One other study showed that homeopathic medicines can potentially improve low back pain by reducing pain, and disability and can be safely used as complete social care therapeutic.

This study presents cases clinically and radiologically diagnosed as lumbar spondylosis and their response to individualized homeopathic medicine in the context of pain via visual analogue scale (VAS) [16] and disability management using the Oswestry Disability Questionnaire [17-19].

Materials and Methods

Study Design and Study setting

The study was a prospective observational study, conducted on the patients attending IPD and OPDs of Nehru Homoeopathic Medical College and Hospital, Defence Colony, New Delhi, who were suffering from lumbar spondylosis. The study was conducted from October 2015 to October 2016. The sample size was 30.

Ethical clearance

Ethical clearance for the study was obtained from the Ethical Committee of Nehru Homoeopathic Medical College and Hospital, before starting the study. Also, informed consent was obtained from each patient to participate in the study.

Participants

Inclusion Criteria: Patient above 20 years of age, both sexes, both acute and chronic cases, the patient presenting with clinical features of lumbar spondylosis, and the patient who will give consent to participate in the study.

Exclusion Criteria: Cases with congenital lumbar anomalies, patients unwilling to give consent for participating in the study, and patients below 20 years of age.

Intervention

Medicines prescribed were procured from the pharmacy of Nehru Homoeopathic Medical College & Hospital. Based upon the severity of symptoms, susceptibility of the patients and seat of the disease, miasmatic background, and previous treatment of the disease; indicated medicines were used in 30C, 200C, and 1M potencies, administered orally. Repetition of the medicines was done depending upon the severity of the symptoms and susceptibility of the patients.

Selection of tools and Data collection

Case-taking of each patient was done using the case-taking proforma. Repertorisation was done using RADAR software version 10.0.028 license no. 201. Follow-up was done at an interval of approximately 30 days. Pain and disability in every case were assessed using the Visual Analog Scale and Oswestry disability index respectively at baseline and every 30 days for 6 months.

Outcome assessment and Data analysis

The outcome was assessed using Visual analogue scale scoring and Oswestry low back pain disability questionnaire. VAS (Visual Analog Scale) on a scale of 0 to 100 mm (‘0’score indicates no symptom whereas 100 mm indicates the worst possible symptom) was used to assess pain. Oswestry's low back pain questionnaire was used to assess disability which enables you to understand how much your low back pain has affected your ability to manage your everyday activities. In this questionnaire, there are 10 sections with 60 questions for pain intensity, Personal Care, Lifting, Walking, Sitting, Standing, Sleeping, Social life, Travel, and Changing of Pain. Each of the 10 sections is scored separately (0 to 5 points each) and then added up, with a maximum of 50 marks and a minimum of 0 marks. The more the score towards the minimum side more the patient is improving. ODI scoring that is % disability is calculated as total points in the Oswestry low back pain questionnaire / 50 * 100= % disability in ODI scoring.

Statistical analysis

For statistical analysis, paired “t” test [20] was used to analyze the changes that occurred in the values of the VAS scoring system and Oswestry's low back pain disability questionnaire scores as a result of the homeopathic intervention.

To assess the pre-and post-treatment status of the patients as per ODI score and VAS score, paired t-test was applied and the value obtained was 8.587 and 8.31 respectively which was higher than the tabulated value of 3.659 at p=0.001. So, the difference in the mean was statistically significant.

Observation and Results

Among the patients enrolled in the study, the maximum belonged to the age group 51-60 years (30%) shown in (Table 1) with an average age of 48.93±12.88. Females were affected more (56.67%) than males (43.33%). BMI of 53% of patients fall under the obese group (Fig. 1). Among the symptomatology, all 30 patients had pain in the lower back, 50% complained of sciatica, 20% had numbness in extremities and 26.67% had tenderness of the lower back (Fig 2). Among the most used medicines were *Lycopodium* (n=6) 20% and *Phosphorus* (n = 4) 13.33%. (Table 2). Out of 30 cases enrolled 93.33% of patients showed improvement in pain and disability with reduced VAS and ODI scores. The mean score for pain, assessed using the VAS reduced from 78.33±10.75 (at baseline) to 47.1±18.24 (in the end), and the mean score for disability, assessed using ODI score reduced from 47.63±12.87 (at the baseline) to 25.67±13.36 (at the end). Improvement in patients according to the ODI before and after treatment is shown in (Fig. 3) and according to VAS is shown in (Fig. 4). Interpretation of disability score according to ODI scoring before and after treatment is shown in (Fig. 5). The course of mean values of VAS and ODI score of the patient over 6 months is shown in (Fig. 6).

Table 1: Distribution of cases as per age groups

Age group	No of cases	Percentage
21-30 years	3	10.00%
31-40 years	5	16.67%
41-50 years	6	20.00%
51-60 years	9	30.00%
61-70 years	7	23.33%

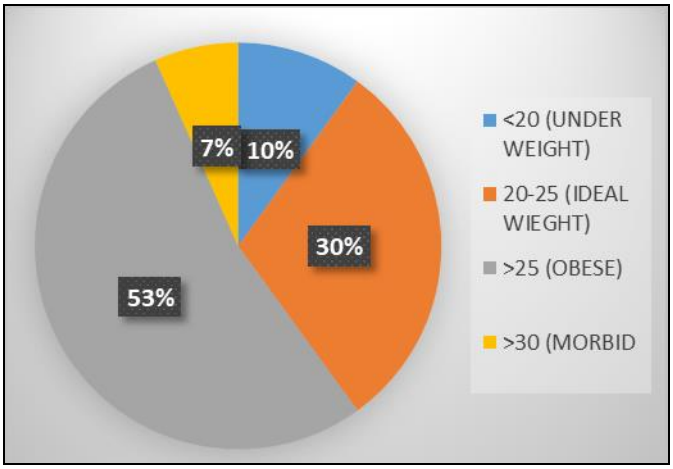

Fig 1: Pie chart showing Distribution according to BMI

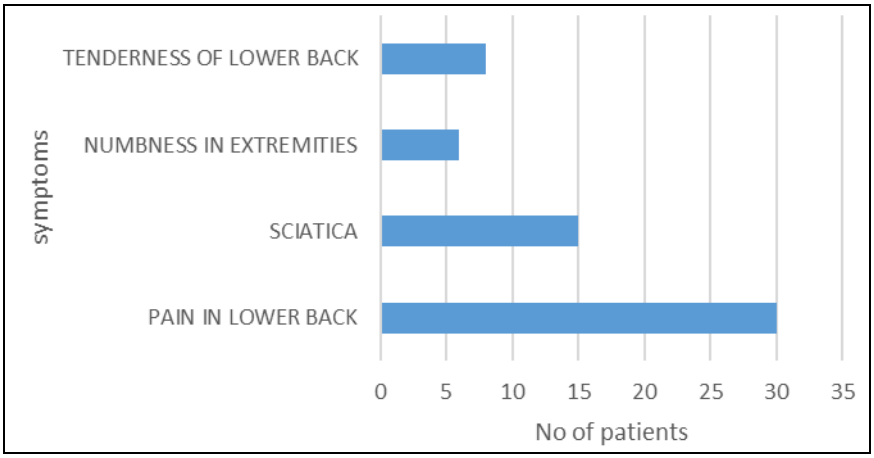

Fig 2: Bar chart showing the distribution of presenting complaints among 30 patients

Table 2: Distribution of medicines used in different cases

Remedy	Total no. of cases treated	Percentage (%)
ARNICA	1	3.33%
ARSENIC ALBUM	1	3.33%
BRYONIA	2	6.67%
COLOCYNTHIS	2	6.67%
LACHESIS	3	10%
LYCOPODIUM	6	20%
NATRUM MUR	1	3.33%
NUX VOMICA	2	6.67%
PHOSPHORUS	4	13.33%
RHUS TOX	3	10%
SEPIA	3	10%
SULPHUR	2	6.67%

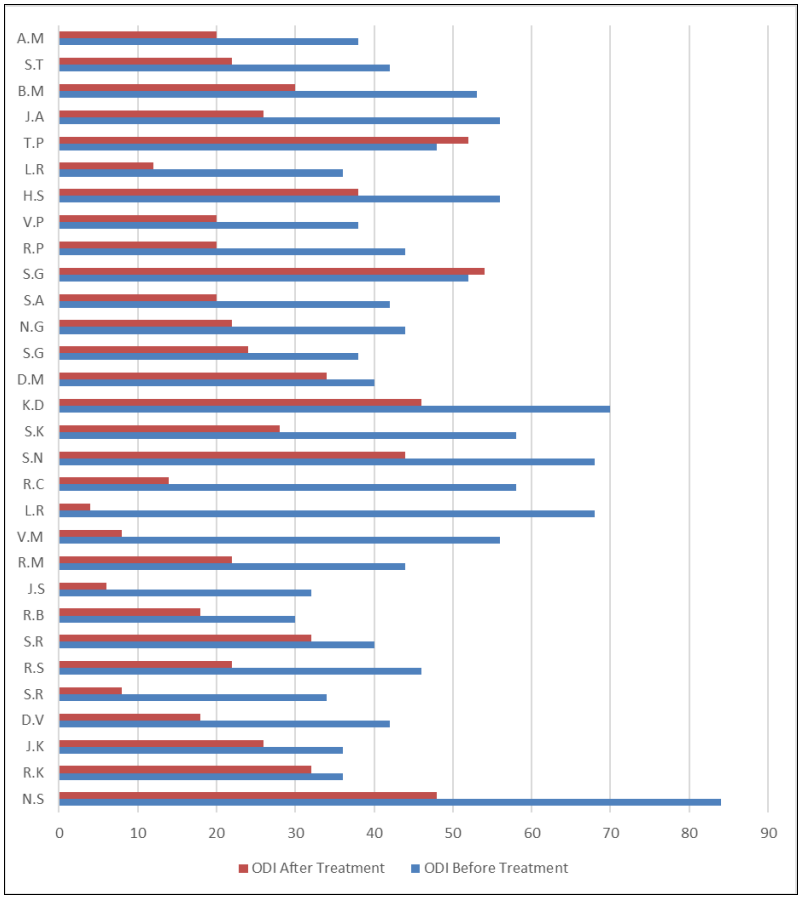

Fig 3: Bar graph showing ODI % before and after treatment in each case.

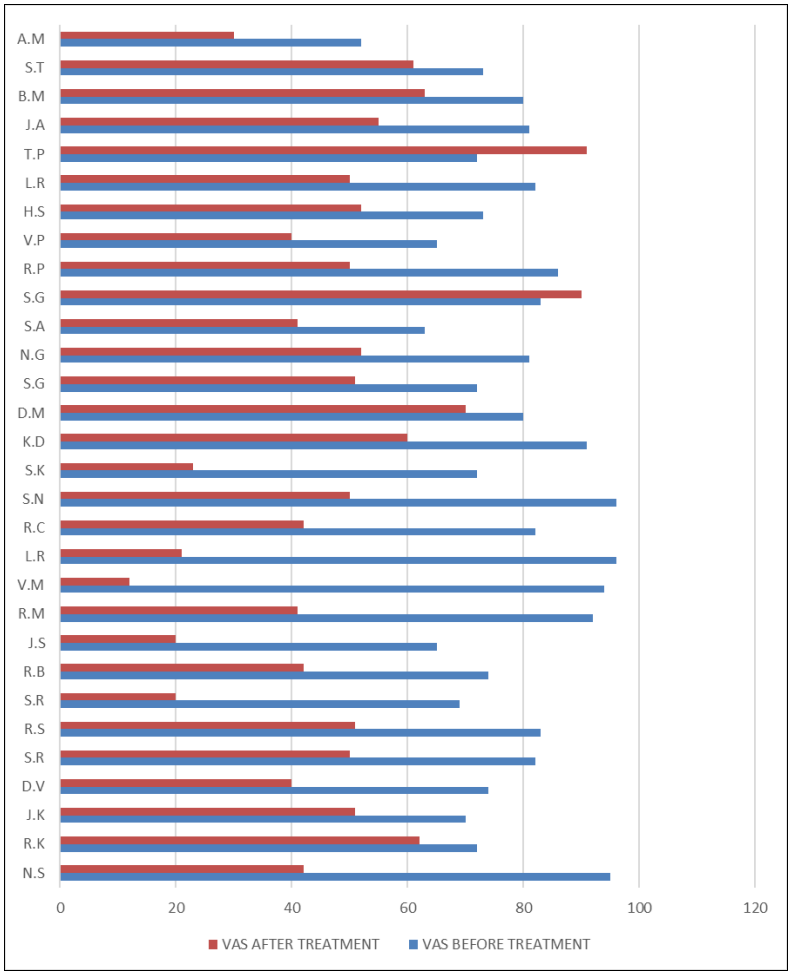

Fig 4: Bar graph showing VAS before and after treatment in each case.

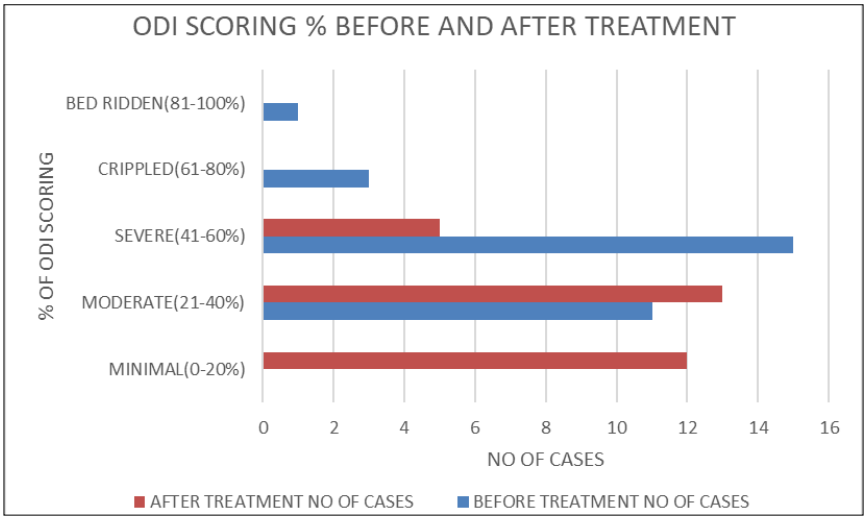

Fig 5: Bar graph showing interpretation of disability score Before and After Treatment

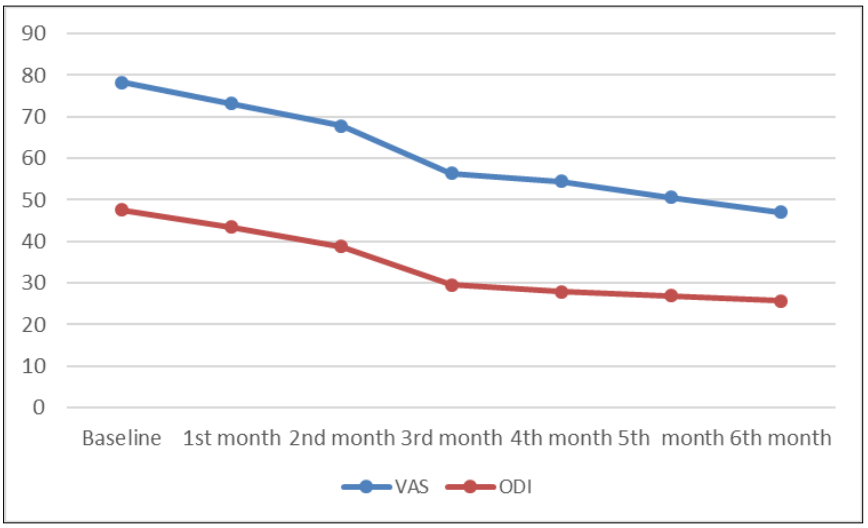

Fig 6: The course of VAS Mean values (for pain) & ODI mean values (% disability) of Lumbar Spondylosis over 6 months

Discussion

In this study, the highest incidence of lumbar spondylosis occurred in the age group 51-60 years. In this study, females were more affected. Among 30 patients selected for the study 16 patients were obese (BMI >25), 9 were having ideal weight (BMI 20-25), 3 were underweight (BMI <20), and 2 were morbidly obese (BMI>30).

Among the symptomatology, all 30 patients had lower back pain (100%), 15 complained of sciatica that is pain radiating from the lower back to extremities (50%), 6 patients had complaints of numbness in extremities (20%) and 8 patients had tenderness in the lower back (26.67%). *Lycopodium* was the most effective medicine prescribed to six patients, next was *Phosphorus* given to four patients. Other medicines prescribed were *Lachesis* (n=3), *Sepia* (n=3), *Rhus tox* (n=3), *Bryonia* (n=2), *Sulphur* (n=2), *Nux vomica* (n=2), *Colocynthis* (n=2), Arnica (n=1), *Arsenic album* (n=1) *and Natrum Mur* (n=1). In the overall assessment of ODI and VAS scores, 28 out of 30 patients have an improvement in both the scores after the treatment which is an improvement in the intensity of pain and disability respectively.

The study has given a platform for future studies, but with a longer follow-up period. The time limit of one year was insufficient for the study as lumbar spondylosis is a degenerating disease usually having a lingering course and is chronic in nature which requires a longer duration of study to ensure lasting relief after treatment withdrawal. Another limitation of the study was that a large sample size was not available for the study. This study could have been better if blinding was done, but due to the time constraint and small sample size, it was not done. The study could be more reliable in presence of a control group, but again because of the small sample size, it was not included.

Conclusion

This study revealed that Homoeopathy is effective in dealing with patients suffering from lumbar spondylosis. The results were positive and gave a lot of satisfaction to the patients because not only were they relieved of the distress caused by pain but also the disability caused due to lumbar spondylosis was improved as well as they were no more dependent on painkillers or conventional treatment. The patients have been taken care of most effectively and gently and of course, cost-effectiveness cannot be disapproved.

Lumbar spondylosis is emerging as a threat to the day-to-day life of people of increasing age and even young due to inadequate lifestyle. Although this study produced good results in treating the cases of lumbar spondylosis, still then, randomized control trials with a greater sample size are

recommended to establish the credibility of the study.

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Conflict of Interest
Not available

Financial Support
Not available

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