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TO STUDY THE USEFULNESS OF HOMOEOPATHIC MEDICINES IN TREATMENT AND MANAGEMENT OF CERVICAL SPONDYLITIS IN COMPUTER OPERATORS

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Abstract:

Background-*Cervical spondylitis is a prevalent condition among computer operators which causes neck pain due to prolonged sitting, poor posture, and repetitive neck strain. Homoeopathic medicines have shown good results in relieving pain, improving mobility, and enhancing overall well-being in patients with cervical spondylitis, offering a holistic and non-invasive treatment.*

Aim- *To determine homoeopathic medicine can improve the neck pain in daily living in computer operators.*

Methodology- *This clinical interventional study evaluated the effectiveness of individualized homoeopathic treatment in 100 cases of cervical spondylitis among computer operators aged 20–60 years, from the OPD of Sri Ganganagar Homoeopathic Medical College based on defined inclusion and exclusion criteria. Symptoms were assessed using the Neck Disability Index (NDI) before and after treatment. Remedies were prescribed according to homoeopathic principles, and data were analyzed using SPSS version 29 with a paired t-test.*

Result- *A marked reduction in Neck Disability Index scores were noted down, (t_{99}=15.00 with $p<0.001$ which is greater than its tabulated value 1.98 at 5% level of significance). Clinically, 70% of patients showed significant improvement, while 20% improved moderately. Cocculus indicus was prescribed in maximum cases as indicated remedy, followed by Belladonna and Rhus Toxicodendron.*

Conclusion- *Homoeopathic treatment showed significant improvement in symptoms of cervical spondylitis among computer operators, with a marked reduction in disability and neck pain. These findings support the effectiveness of individualized homoeopathic management, though further randomized controlled trials are recommended.*

Keywords: *Cervical spondylitis, Neck Disability Index (NDI), Homoeopathic remedy etc.*

Introduction:
Cervical spondylitis is a degenerative disorder of the cervical spine that has become increasingly common among computer operators due to prolonged screen time, poor ergonomics, and sustained faulty postures, leading to neck pain, stiffness, and related neurological symptoms. Various therapeutic approaches are employed in its management, including conventional medicine with analgesics and physiotherapy, which mainly offer symptomatic relief and require long-term adherence, and surgical intervention, which is reserved for severe cases with structural or nerve involvement and carries inherent risks. Yoga and lifestyle modification play an important role in improving posture, flexibility, and stress reduction, while traditional systems such as Siddha and Unani focus on restoring internal balance through natural and regimental therapies. Among these approaches, homoeopathy stands out for its holistic and individualized method of treatment, considering the patient's physical, mental, and emotional state. By addressing the root cause of pain and stimulating the body's natural healing capacity, homoeopathy offers gentle, sustained, and comprehensive management of cervical spondylitis, especially beneficial for computer operators.

AIM
To determine homoeopathic medicine can improve the neck pain in daily living in computer operators.
OBJECTIVE
1. To survey and study the efficacy of Homoeopathic Medicine in cervical spondylitis in computer operators.
2. To study the different causes of cervical spondylitis.
MATERIAL & METHODOLOGY
a. Inclusion criteria:
1. Patient between age group of 20-60 years of both genders.
2. Repeated attacks of neck pain with the history of previous episodes were also included.
3. Criteria includes common symptoms such as pain, stiffness, tenderness, loss of flexibility.
4. Consent to use homoeopathic medicine.
b. Exclusion criteria:
1. Male and female suffering from other severe systemic diseases.
2. Severe adverse effects: Participants may be withdrawn from a study if experience severe adverse effects from the medication being tested.
3. Patients with cervical vertebrae abnormality like block vertebrae, old fracture in cervical spine.
4. Pregnant and lactating females.
c. Withdrawal criteria:
1. Patient with grave pathological changes were withdrawn.
2. Patients with any emergency condition during the course of study were withdrawn.
3. Patients who did not provide signed consent.
4. Patients who got affected by another disease during the treatment.
d. Population/Sample: 100 cases of cervical spondylitis were selected for the study from OPD of Sri Ganganagar Homoeopathic Medical College, Hospital and Research Institute, Sri Ganganagar, Rajasthan. Sample selection was done at the study setting on the basis of inclusion and exclusion criteria.
e. Age and Sex: Patients of 20- 60 years, male & female.
f. Informed assent-cum-consent document: Attached in both English and Hindi
g. Duration of study: 1 year
h. Permission to use copyrighted proforma/studies/questionnaire: Duly complied
i. Plan to withdraw standard therapy during conduct of research
(a) Yes ✓ (b) No
(c) If yes, reason there of: it will interfere with the results
j. Study design: Clinical Interventional Study
k. Selection of tools:
1. Case study proforma.
2. Library books as required.
3. Organon of Medicine 5th and 6th edition.
4. Materia Medica books.
5. Encyclopaedia (as necessary).
6. Electronic search tools like Pub Med, Scopus, Ebsco and Google scholar.
8. Statistical software - SPSS version 29 (Free Trial Version)
9. Assessment scale: NDI (Neck Disability Index)
l. Expected outcome: Homoeopathic medicines are effective in the treatment of Cervical spondylitis in computer operators with pain in neck, headache, stiffness, tenderness, loss of flexibility which was assessed using the Neck Disability Index

(NDI), recorded before homoeopathic treatment and after completion of the treatment during the study period.

m. Ethical outcome: Approached Institutional Ethics Committee of Sri Ganganagar Homoeopathic Medical College, Hospital and Research Institute, Sri Ganganagar for ethical guidance.

n. Place of work: Outpatient Department (OPD) and Inpatient Department (IPD) of the Hospital wing of Sri Ganganagar Homoeopathic Medical College, Hospital and Research Institute, Sri Ganganagar, Rajasthan.

o. Record of work: Case taking Performa as per Organon of Medicine and the topic of dissertation and other records were duly maintained with confidentiality.

p. Repertory: Repertory to be used according to the case study.

q. Remedy selection: Individualized homoeopathic medicament was prescribed as per study.

r. Placebo: Placebo was prescribed as indicated in Organon of Medicine.

s. Source of remedy: Pharmacy of Sri Ganganagar Homoeopathic Medical College, Hospital and Research Institute, Sri Ganganagar.

t. Remedy application: Potency selection, application and repetition of medicine(s) were done according to the case and project work.

u. Investigation: All necessary investigations were done at this institute. If special investigations were needed; patients were referred to higher laboratories at the cost of the patient without any reimbursement.

w. Statistical Analysis

Data were entered and analyzed using SPSS version 29. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used.

A paired sample t-test was applied to compare pre- and post-treatment NDI scores.

A p-value < 0.05 was considered statistically significant.

x. Research hypothesis:

1. Null hypothesis (H0): Homoeopathic medicines are not effective in the treatment of cervical spondylitis in computer operators.
2. Alternative hypothesis (H1): Homoeopathic medicines are effective in the cases of Cervical Spondylitis in computer operators.

y. Whether any work on this project has started or not: Not any known.

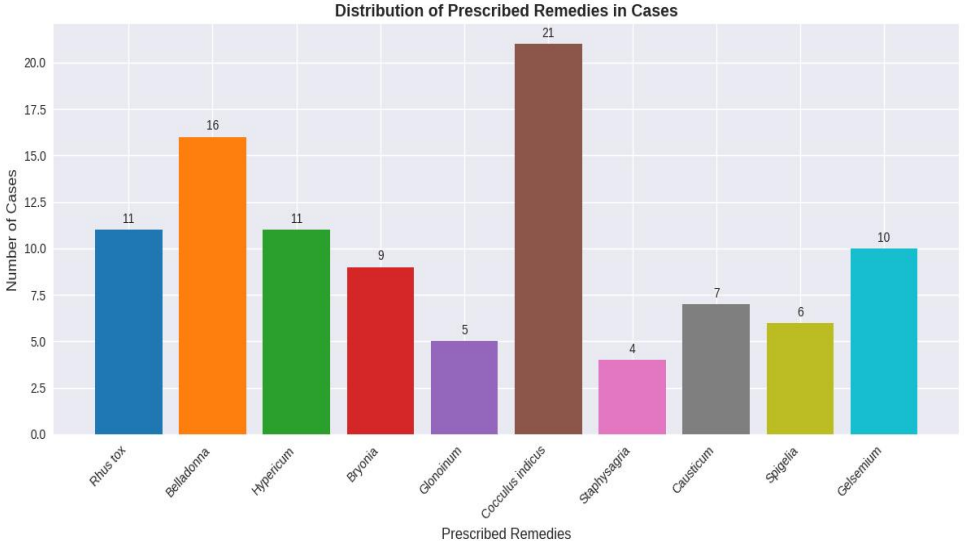
OBSERVATIONS & RESULTS

Distribution of 100 individualized cases of Cervical Spondylitis according to Causes.

S. No.	Cause	Frequency (n)	Percentage (%)
1	Prolonged Static Posture	28	28%
2	Forward Head Posture	25	25%
3	Lack of Movement and Breaks	22	22%
4	Strain and Overuse	25	25%
Total		100	100%

Distribution of 100 individualized cases of Cervical Spondylitis according to Prescribed Remedy

S. No	Prescribed remedy	No. of cases	Percentage
1	Rhus tox	11	11
2	Belladonna	16	16
3	Hypericum	11	11
4	Bryonia	9	9
5	Glonoinum	5	5
6	Cocculus indicus	21	21
7	Staphysagria	4	4
8	Causticum	7	7
9	Spigelia	6	6
10	Gelsemium	10	10
	Total	**100**	**100%**



The distribution of cases based on prescribed remedies for cervical reveals that Cocculus indicus was the most commonly prescribed remedy (21%), followed by Belladonna (16%), and Rhus tox and Hypericum being equally indicated (11%). Other remedies, such as Gelsemium, were also found to be of great use (10%). This indicates a predominant reliance on Cocculus indicus for managing CS cases.

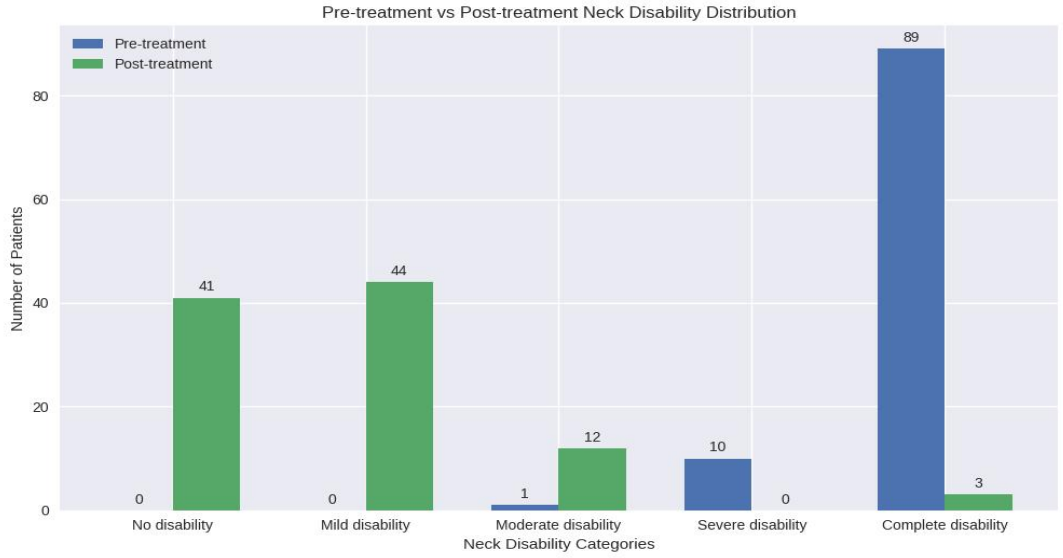
Pre and Post treatment mean NDI scores in 100 cases of Cervical Spondylitis

Measure	Mean
NDI Pre-Treatment	42.07
NDI Post-Treatment	17.57

Pre-treatment and Post treatment NDI categories in 100 cases of Cervical Spondylitis

Category of Neck Disability	Points Range	Pre-treatment	Post-treatment
No disability	0-4	0 (0%)	41 (41%)
Mild disability	5-14	0 (0%)	44 (44%)
Moderate disability	15-24	1 (1%)	12 (12%)
Severe disability	25-34	10 (10%)	0 (0%)
Complete disability	35-50	89 (89%)	3 (3%)
Total		100 (100%)	100 (100%)

Graphical Representation of Pre and Post treatment NDI categories in 100 cases of Cervical Spondylitis



89% pre-treatment scores (35-50 points) fall in complete disability, while 10% had severe disability and 1% with moderate disability indicating a severe baseline neck dysfunction across patients. Post-treatment NDI show 41% patients had no disability (0-4 points), 44% mild (5-14), 12% moderate (15-24), with 3% still showing complete disability.

STATISCAL ANALYSIS & RESULTS

Pre and Post treatment NDI scores were compared statistically as follow and results were drown-

Sample size: n = 100

Standard deviation of paired differences: $s_d = 16.33$

Standard Error (SE)-

$$SE = \frac{s_d}{\sqrt{n}} = \frac{16.33}{\sqrt{100}} = \frac{16.33}{10} = 1.633$$

$$t = \frac{\bar{d}}{SE} = \frac{24.5}{1.633} = 15.00$$

The p-value for a t-test is:

$$p = 2 \times P(T_{99} \geq |15.00|)$$

$$p \approx 2 \times 2.5 \times 10^{-28}$$

$p \approx 5.0 \times 10^{-28} = < 0.0001$

$$t(99) = 15.00,\ p < 0.001$$

Formula for R^2:

$$R^2 = \frac{t^2}{t^2 + df}$$

$$t = 15.00$$

$$df = 99$$

$$t^2 = 15.00^2 = 225$$

$$R^2 = \frac{225}{225 + 99}$$

$$R^2 = \frac{225}{324}$$

$$R^2 = 0.694$$

The analysis studied the effectiveness of homoeopathic medicines in improving outcomes in cases of cervical spondylitis. The participants underwent individualized homoeopathic treatment. The treatment resulted in significant improvements, as indicated by the $t(99) = 15.00,\ p < 0.001$. Mean Difference: The individualized homoeopathic intervention produced the mean reduction in NDI score was 24.5 points (95% CI: 21.26 to 27.74) indicating a substantial improvement representing a clinically substantial improvement from baseline complete disability to predominantly mild and moderate disability levels. This magnitude of change reflects a marked reduction in neck-related functional impairment following treatment.

Effect Size: R^2 value was 0.69, indicating that approximately 70% of the variance in Neck Disability Index scores. The treatment demonstrated a high degree of consistency and predictability, as reflected by an R-squared (R^2). This indicates that approximately 70% of the variance in post-treatment NDI scores can be attributed to the intervention, signifying a very large and reliable treatment effect across the study population.

DISCUSSION

Age Distribution

The majority of cervical spondylitis cases in this study were found in the 30–39 years age group (37%), followed by 20–29 years (27%). However, studies also note that while radiographic changes are common in older adults (over 60), symptomatic cervical spondylitis tends to peak before age 50 and then decline in the elderly, suggesting that middle-aged adults are most affected in clinical settings.

Sex Distribution

In this study, males were slightly more affected (54%) than females (46%). This is consistent with the general trend in cervical spondylitis, where male predominance is often reported in clinical and radiological studies.

Habitat Distribution

The data showed that cervical spondylitis was most prevalent in urban areas (50%), followed by sub-urban (34%) and rural (16%). This reflects the influence of modern, sedentary lifestyles and occupational demands, which are more common in urban and sub-urban populations.

Socioeconomic Status

Most cases (62%) belonged to the middle class, with 25% from the upper class and 13% from the lower class. The higher prevalence in the middle class may be due to occupational factors, as this group often includes office workers and computer operators who are at risk due to prolonged screen exposure and sedentary habits.

Screen Use

The majority of cases (82%) reported spending 6–10 hours daily on desktops, laptops, or mobile devices. This duration is a significant risk factor for cervical spondylitis, as prolonged screen exposure is associated with poor posture, neck strain, and reduced movement

Causes of Cervical Spondylitis

Prolonged static posture (28%) and forward head posture (25%) were the most frequently reported causes, followed by

strain and overuse (25%) and lack of movement and breaks (22%). These findings highlight the importance of ergonomic habits and regular breaks in preventing cervical spondylitis.

Medicines Prescribed

Among remedies prescribed, Cocculus indicus (21%) was most frequently used, followed by Belladonna (16%), Rhus tox (11%), and Hypericum (11%). Potency distribution showed a strong preference for 200 potency (65%), indicating reliance on mid-range potencies for effective management. This pattern reflects individualized prescription strategies in homoeopathy.

Statistical outcomes

Pre-treatment Neck Disability Index (NDI) scores averaged 42.07, with most patients classified under complete disability (89%) and severe disability (10%) and only 1% with moderate disability. Post-treatment scores dropped to 17.57, representing a ~70% reduction in disability. Categories shifted dramatically, with 41% reporting no disability, 44% mild, and 16% moderate, while severe disability was not seen; most complete neck disability was eliminated leaving only 3% unresponsive participants post homoeopathic treatment.

The paired sample t-test demonstrated a t-value of 15 ($df = 99$) and $p < 0.0001$, confirming that the observed improvement was highly significant. The effect size was profound, with a mean reduction of over 24.5 points on the NDI scale, underscoring both statistical and clinical relevance.

CONCLUSION

The study demonstrated that homoeopathic treatment was effective in reducing neck pain, stiffness, functional limitations, and associated symptoms of cervical spondylitis among computer operators. Overall, the findings support the usefulness of individualized homoeopathic management, with scope for further validation through randomized controlled trials. This study should be conducted with large sample size for sufficiently long duration period for more significant results.

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