

Comparison of Various Non-Operative Treatment Modalities Available for Treatment of Cervical Spondylosis

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Abstract

*Introduction:*The prime goal in the treatment of Cervical spondylosis is to relieve pain primarily as early as possible and also allow patients to perform their daily activities with an ease.

*Aim:*We aim to compare the various non-operative treatment modalities available for treatment of cervical spondylosis.

*Material and Methods:*This present cross-sectional and questionnaire based study included 150 patients diagnosed with Cervical spondylosis. We used mainly 3 types of nonoperative treatment measures. Based on this we divided our study sample into 3 study groups.

*Results:*Mean age of the population in our study was 42.34 years. Females (57.33%) were seen to be more affected than males (42.66%) in our study. Out of total 150 patients, maximum score of 5 was seen in 19 patients of only group 3, while none of the other group patients reached the highest score of satisfaction. Over all on comparison, Group 3 showed the best results.

*Conclusion:*We conclude that comparisons of nonsurgical treatment options in comparison to surgical interventions are important. Various non surgical approaches are available which would help in clinical decision making, when the primary outcome intention is to reduce pain, improve functional ability, return to work and prevent disability or impairment.

Keywords: Cervical spondylosis, non-operative, physiotherapy, analgesics

Introduction:

Cervical spondylosis incorporates a wide scope of dynamic degenerative changes that influence all parts of the cervical spine. It is a natural process of maturity and can be seen in most of individuals after the fifth decade of life. Cervical spondylosis may be asymptomatic or can present as posterior neck pain, radiation to suprascapular area or to the whole upper limb upto the hand. Radiological evidence of asymptomatic cervical spondylosis is seen frequently, with an incidence of 50% over the age of 40 and 85% over the age of sixty.^{2,3}

There are lot many pathologies that result in cervical pain from both extravertebral to intravertebral cause. Nonsurgical treatment is typically the most proper course of beginning the treatment and in managing such cases. While surgical interventions being held for moderate to severe cases of myelopathy, or for those cases which have chronic and progressive symptoms.^{4,5}

Though the prime goal in the treatment of Cervical spondylosis is to relieve pain primarily as early as

possible and also allows patients to perform their daily activities with an ease. These days operative treatment for such cases are being utilized in early management to get rid of pain, although the outcomes are not satisfactory.^{6,7}

Be that as it may, very few studies have focussed on various nonoperative treatment modalities preceding the above mentioned operative cervical procedures. Therefore, we aim this present study to compare the various non-operative treatment modalities available for treatment of cervical spondylosis.

Material and Methods

This present cross-sectional and questionnaire based study included 150 patients coming to the department of Orthopaedics and diagnosed with Cervical spondylosis. An informed consent was obtained in written from each patient and they were then enrolled in our study based on inclusion and exclusion criteria. An ethical clearance was obtained from the institutional ethical committee to conduct this study.

Inclusion criteria: All those patients within the age group of 30- 70 years, presenting with cervical neck pain from more than 3 weeks with or without radiculitis duration. While those patients who presented with a history of trauma, an underlying pathological conditions like inflammatory, infectious or malignant were excluded from our study.

In our study we used mainly 3 types of non-operative treatment measures. Based on this we divided our study sample into 3 study groups namely: Group 1: Patients who underwent just physiotherapy exercises to strengthen neck muscles (n=50), Group 2: Patients who were given only pharmacological therapy for pain relief (n=50) and Group 3: Patients who underwent a combined therapy including both physiotherapy and pharmacological treatment (n=50).

Further, to evaluate the selected patients for pain relief, we used a questionnaire as that used by Surepally R et al⁸ in their study and all the study patients were asked to answer that according to the degree of their pain relief. Greater the score, better is the pain relief. (Table 1)

Table 1: Questionnaire Used in the Study for Scoring Pain Relief.

	QUESTIONNAIRE	SCORING
Question 1	No relief at all	0
Question 2	Mild relief (Patient is able to perform basic daily activities)	1
Question 3	Moderate relief (Patient is able to reduce the amount and frequency of pain killers taken routinely)	2
Question 4	No Pain Discontinuation of pain relieving drugs	3

Question 5	No pain (Asymptomatic for at least after 3 months of discontinuation of drugs and treatment)	4
Question 6	No pain at all (Asymptomatic even after more than 6 months of discontinuation of drugs and treatment)	5

Statistical Analysis

The results of the grades thus obtained from the answered questionnaire for each group were recorded and underwent statistical evaluation. Percentages were obtained for each group for comparison.

Results

This present cross-sectional study comprised of a total of 150 patients which were categorised under three groups. Group 1 comprised of those Patients who underwent just physiotherapy exercises to strengthen neck muscles without any analgesics. Group 2 included those cases which were treated by using only medications like including analgesics/ pain killers, muscle relaxants and some neuropathic medications for pain relief (n=50) and Group 3 comprised of Patients who underwent a combined therapy including both physiotherapy and pharmacological treatment (n=50).

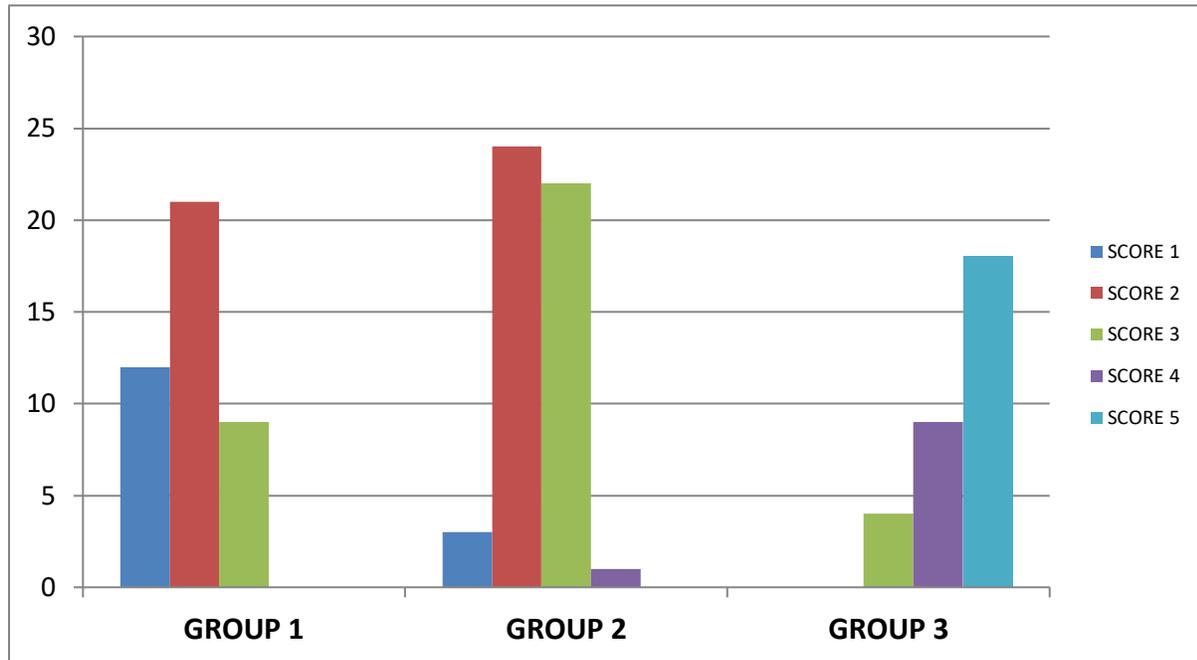
Demographic characteristics of the study population are tabulated in table 1. It was seen that the mean age of the population with Cervical spondylosis in our study was 42.34 years. Females (57.33%) were seen to be more affected than males (42.66%) in our study.

Table 1: Demographic Data of Study Subjects.

PATIENT DATA	FREQUENCY (%)
TOTAL NUMBER OF PATIENTS (N)	150
MEAN AGE OF PATIENTS	42.34 years
GENDER :	64 (42.66%)
Males	86 (57.33%)
Females	
BMI	27.89

Out of total 150 patients, record of 10 patients could not be followed till 6 months, which majorly belonged to group 1. Maximum score of 5 was seen 19 patients of group 3 only, while none of the other group patients reached the highest score of satisfaction. Over all on comparison, Group 3 showed the best results. (figure 1)

Figure 1: Distribution of Study Patients According to Scoring Used After Nonoperative Treatment Modalities



Discussion

Cervical spondylosis/ neck pain is usually idiopathic in nature, is complex to explain both clinically and radiologically. Therefore a standard treatment plan is not available for such cases. The treatment plan for cervical spondylosis relies upon the seriousness of a patient's clinical signs. In the absence of myelopathy, the prime objective of the treatment plan is firstly to relieve pain and discomfort and then secondly recover the functional ability of the patient, so that they can perform their day to day activities. Lastly, we have to prevent any irreversible injury to the neural structures associated.

Our results showed that combined use of muscle strengthening exercises along with a proper pharmacological approach renders best results from the patients satisfaction point of view when compared to other treatment modalities used in our study.

Literature shows that non-surgical treatment includes four- to six-week course of physical therapy. Pharmacologic agents, including nonsteroidal anti-inflammatory drugs (NSAIDs), oral steroids, muscle relaxants, anticonvulsants, and antidepressants can be included for pain relief. Apart from this some medical equipments like soft cervical collar and cervical pillow can be helpful for symptomatic relief.⁹

Surgery is not indicated for the vast majority of neck pain cases. Hurwitz EL et al reported that manual therapy, supervised exercise interventions, low-level laser therapy, and perhaps acupuncture are more effective than no treatment, or alternative interventions, but that none of the active treatments was clearly superior to any other in either the short- or long-term.¹⁰

Conclusion

Treatment of Cervical spondylosis /neck pain is a step wise approach. We can say that comparisons of nonsurgical treatment options in comparison to surgical interventions are important. Various non surgical

approaches are available which would help in clinical decision making, when the primary outcome intention is to reduce pain, improve functional ability, return to work and prevent disability or impairment.

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