

Prevalence of cervical spondylosis among bike riders in South Indian population – A population-based study

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ABSTRACT

Introduction: Cervical spondylosis (CS) is an age-related issue of the vertebral segment and found wherever in more elderly individuals. It is caused mostly due to bike riding. It depicts the morphological signs of unending and dynamic degeneration of the cervical spine that first influences the intervertebral disc and afterward influences the nearby vertebrae, the joints, the tendons, and in extraordinary cases, the substance of the spinal column. **Materials and Methods:** A total of 100 subjects will be subjected to a list of questions on the effects of riding bike, and the manifestations of the neck pain are correlated with CS among bike riders. All the collected data are analyzed systematically with the normal and affected individuals. The results obtained were analyzed statistically, tabulated, and represented graphically. **Results:** As per the result, it had seen that youngsters are more prevalent toward CS among bike riders in South Indian population. It is seen that 62% of male individuals, 36% of the female individuals, and 2% others are facing CS. About 53% of people between the age ranges of 12 and 18 face CS. About 53% of people do not have any kind of neck pain at present. About 53% of people feel discomfort in the neck region during bike riding. About 59% of individuals do not have pain in the neck after riding bike. **Conclusion:** From the results, it is observed that bike riding has a great impact over the CS. About 48% of people had heard about CS. About 47% of people go for a long ride in motorcycle. About 61% of people do not have any back pain due to long ride in motorcycle. About 42% of people feel that the type of motorcycle has an influence over the neck pain. About 59% of people think that the type of road they are using has an influence over the neck pain.

KEY WORDS: Bike riders, Cervical spondylosis, Intervertebral disc, Neck pain, Nerve compression

INTRODUCTION

The cervical spondylosis (CS) is an age-related problem of the vertebral column and is closely found everywhere in older people. It is caused due to bike riding also. It describes the morphological manifestations of chronic and progressive degeneration of the cervical spine that first affects the intervertebral discs and then affects the adjacent vertebrae, the facet joints, the ligaments, and in extreme cases, the contents of the spinal canal, thus affecting the normal biomechanics of the neck. CS will cause no symptoms but can be accompanied with one or combination of two or all of the three clinical syndromes such as axial neck pain, cervical radiculopathy, and cervical myelopathy.

CS is a degenerative process in the cervical spine. It mainly has worst effect on the vertebral bodies

and intervertebral discs of the neck and paves the way to herniated intervertebral discs, osteophytes, and ligament hypertrophy. It can eventually lead to compression of the nerve roots and spinal cord.^[1] Numbness, weakness, and tingling in the neck or arms, pain on the neck or arms, neck stiffness, and headaches are the common symptoms of CS.^[2] According to the results, pain, numbness, and other symptoms are related to the depression and insomnia.^[3,4] Although many adults have spondylotic changes according to the imaging examination, if CS can cause stenosis of the spinal canal, lateral recess, and foramina and cause clinical symptoms such as neck pain.^[5-7]

Neck pain is the most common symptom of the CS.^[8] From the past survey, the lifetime prevalence of adult population is 48.5%, and the prevalence of the screen using workers is 55%.^[9] CS is the most common problem regarding the cervical spine, along with its neck pain which is noted as the most common problem in clinical consideration. As

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aging, majority of the individuals may develop some degeneration of the vertebrae and discs; however, it may be only a considerable percentage of the population and had reported to experience clinically symptoms. It had been noted that radiographic evidence of CS is mostly seen between 25–50% of population by reaching the age of 50 years and 75–85% by reaching the age of 65 years.^[10] Very few reports are available on the prevalence of CS in health institute and facilities.

Moreover, most of these institute-based study focused on patients suffering with CS along with one or more other disorders associated with it, and thus, it did not actually provide information on the total population of people presenting with CS.^[11] Also these studies were focused mainly on CS associated with cervical vertigo conditions. To the knowledge of the researchers, anyhow, there is hardly any published work from Southeast part on the prevalence of CS on a physiotherapy clinic; the knowledge of which may have an insight into the health effects of CS in the growing population in a physiotherapy perspective.^[12]

MATERIALS AND METHODS

In the present study, a total of 100 subjects will be subjected to a list of questions on the effects of riding bike, and the manifestations of the neck pain are

correlated with CS among bike riders. All the collected data are analyzed systematically with the normal and affected individuals.

RESULTS

As per the result, it had seen that youngsters are more prevalent toward CS among bike riders in South Indian population. It is seen that 62% of male individuals, 36% of the female individuals, and 2% others are facing CS. About 53% of people between the age ranges of 12 and 18 face CS. About 53% of people do not have any kind of neck pain at present. About 53% of people feel discomfort in the neck region during bike riding. About 59% of individuals do not have pain in the neck after riding bike. About 48% of people had heard about CS. About 47% of people go for a long ride in motorcycle. About 61% of people do not have any back pain due to long ride in motorcycle. About 42% of people feel that the type of motorcycle has an influence over the neck pain. About 59% of people think that the type of road they are using has an influence over the neck pain.

The data obtained by survey analysis are represented in Figures 1–4.

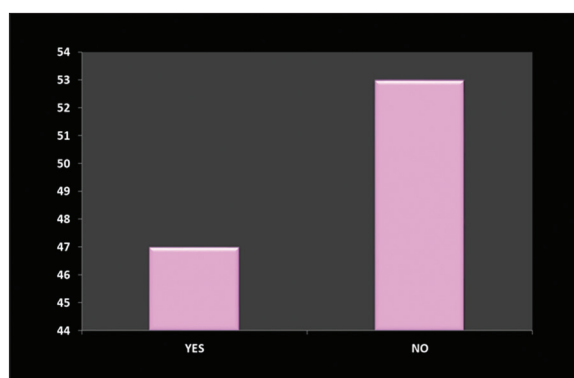


Figure 1: Percentage of bike riders having neck pain

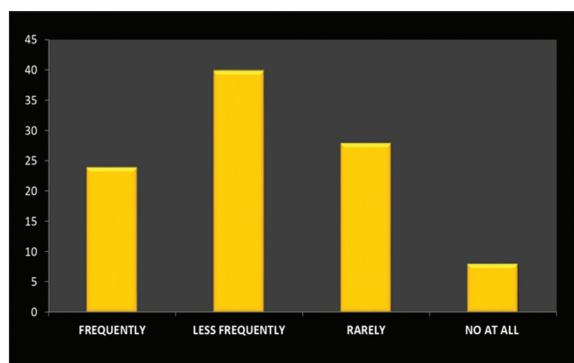


Figure 2: Frequency of neck pain among bike riders

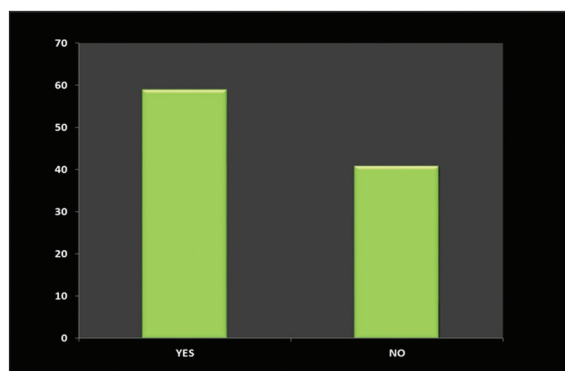


Figure 3: Percentage of bike riders feeling discomfort in neck region while riding

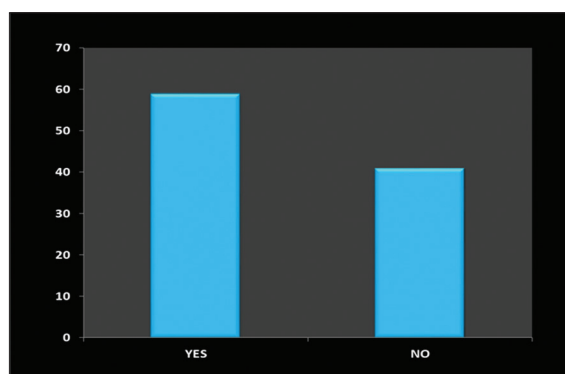


Figure 4: Percentage of response of bike riders having pain due to the type of motorcycle being used

DISCUSSION

This is an epidemiological study of CS on South Indian population. The prevalence of the CS is 13.76%, which was higher than the prevalence of diabetes (9.7%).^[13] According to the data of the population census in 2011, nearly 2.75 million patients suffered from CS in Beijing, with a city having the population of 20 million. The prevalence of the CS is high not only in the South Indian population but also in other areas of the world. According to the cohort study, the incident of CS is 13.1% totally, in a population of 47,560 patients.^[14] A study done in Southwest region of Nigeria found the prevalence of 10.7% for CS,^[15] which is similar to that of the results of the present study. This showed that the CS is a main public health problem that is needed to be seen in a large-scale intervention.

The group aged between 45 years and 60 years had the highest prevalence. This may cause absence from work due to the effects caused by the CS, such as neck pain.^[16-18] Henceforth, this population needed more preventive measures. Many factors might affect the CS. Irrespective of the case-control study, age is the most related factor for the CS.^[19,20]

CONCLUSION

From the results, it is observed that bike riding has a great impact over the CS. About 48% of people had heard about CS. About 47% of people go for a long ride in motorcycle. About 61% of people do not have any back pain due to long ride in motorcycle. About 42% of people feel that the type of motorcycle has an influence over the neck pain. About 59% of people think that the type of road they are using has an influence over the neck pain.

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