

IJACT 24-9-20

A Successful Approach to Non-Pharmaceutical Treatment of Neck Disc Patients

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Abstract

The neck disc is a disease in which the nucleus of the cervical spine escapes between the cervical vertebrae and the intervertebral disc, pressing on the nerve. The neck disc has a high recurrence. If the neck disc is left untreated, the symptoms will worsen and cause inconvenience to life. Therefore, this study is to carry out a successful approach for non-pharmaceutical treatment of neck disc patients. The paper conducted a survey of 102 people who visited the orthopedics of a general hospital at K area from January 15 to March 28, 2024. Symptoms and changes in practice of neck disc were analyzed by t-test. The results of the research are as follows. Firstly, in the case of incorrect sitting posture, 74.5% of the case group was significantly higher than 33.3% of the control group ($X^2=3.79$, $p<.01$). Secondly, neckache was significantly higher than the control group's average of 12.73 points, with an average of 39.86 points in the case group ($t=3.14$, $p<.01$). Thirdly, leg numbness tended to decrease from 7 days after non-drug application compared to before non-drug application. Therefore, the application of this non-drug management was found to be effective in relieving neck disc. The findings derived will contribute to providing valuable insights into the prevention and treatment of neck disc.

Keywords : Neck disc, Non-pharmaceutical treatment, Patients, Sitting posture, Neckache

1. INTRODUCTION

The neck disc is a disease in which the nucleus of the cervical spine escapes between the cervical vertebrae and the intervertebral disc, pressing on the nerve[1],[2]. In the past, neck disc was mainly caused by aging. However, recently, the use of smartphones and computer has been prolonged, more and more young people are complaining of neck pain. Keeping people's neck bent or out for a long time increases the burden on their neck[3],[4]. It can cause neck disc if people pass by lightly with continuous neck pain. The number of degenerative neck disc patients is on the rise every year, and more than 80 percent of those 50 years old. The main cause of neck disc is incorrect posture, trauma, and degenerative changes. It be aggravated by alcohol, overwork and stress. Symptoms include neck pain and gradually numbness in the fingertips. If the nerve is severely compressed due to a ruptured neck disc, it may cause paralysis as well as numbness in arms and fingers. The neck disc has a high recurrence[5]. If the neck disc is left untreated, the symptoms will worsen and cause inconvenience to life.

Previous studies have mainly studied surgery for neck disc pain, In this study, it is necessary to treat neck

Manuscript received: June 4, 2024 / revised: June 28, 2024 / accepted: July 27, 2024

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disc with non-pharmaceutical therapy[6],[7]. In a non-drug treatment method to prevent neck disc, this study dealt with the effectiveness of eating food. Pineapples have the effect of reducing digestion and inflammation. it helps relieve pain caused by neck disc and maintain neck flexibility[8]. The research attempted to treat neck disc through various intervention methods that can be used in everyday life. Therefore, the paper is to carry out a successful approach for non-pharmaceutical treatment of neck disc patients. This is to provide basic data for preventing and treating the incidence of neck disc patients. The findings are expected to provide valuable insights into the treatment and prevention of neck disc.

2. MATERIAL AND METHOD

2.1 Effectiveness of intervention information for the treatment of Neck Disc

Figure 1 applies intervention information such as self-recognition, methods, exercise, and food for neck disc patients. It measures whether it is effective in treating neck disc. Figure 1 presents a framework for non-pharmaceutical treatment of neck disc. 1) Checking symptoms, cause and treatment methods in neck disc patients 2) Survey and application of non-pharmaceutical treatment of neck disk to subjects 3) Effect of neck disc mitigation through the derivation of results.

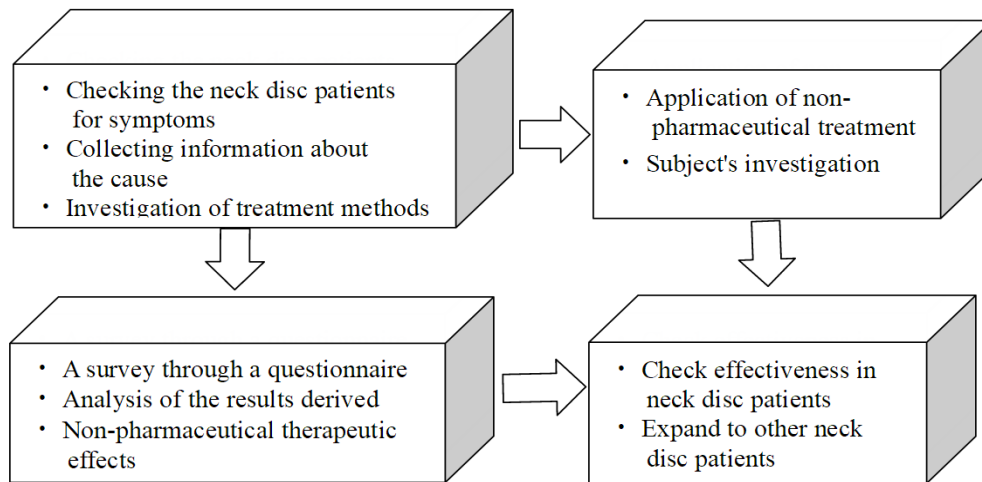


Figure 1. Effectiveness of intervention information for the treatment of Neck Disc

2.2 Material

This study conducted a survey of patients who visited the orthopedics of a general hospital at K area from January 15 through March 28, 2024. Only those who received consent after the trained person sufficiently explained the purpose of the study to the participants. The final questionnaire was analyzed as 102 copies excluding 11 copies of insufficient questionnaires such as omissions.

2.3 Methods

The basic information of the study subjects was based on the chi-square test. Symptoms and changes in practice of neck disc were analyzed by t-test. The effect of the neck disk condition was measured before and after non-pharmaceutical application and 7, 14, 21 and 28 days of application over time.

3. RESULTS

3.1 Basic information of study subjects

Basic information of the subjects is shown in Table 1. When sleeping high in the pillow, 64.7% of the case group was significantly higher than 47.1% of the control group ($X^2=1.83$, $p<.05$). In the case of incorrect sitting posture, 74.5% of the case group was significantly higher than 33.3% of the control group ($X^2=3.79$, $p<.01$).

Table 1. Basic information of study subjects

Variables	Case group	Control group	X^2
	N(%)	N(%)	
Age			
≤49	19(37.3)	8(15.7)	7.25
50-59	14(27.5)	19(37.3)	
≥60	18(35.3)	24(47.1)	
Height of a pillow			
Height	33(64.7)	24(47.1)	1.83*
Low	18(35.3)	27(52.9)	
Sitting position			
Straight	13(25.5)	34(66.7)	3.79**
Wrong	38(74.5)	17(33.3)	
Media machine usage time/hrs.			
>7	10(19.6)	19(37.3)	6.48*
7-11	18(35.3)	23(45.1)	
≥12	23(45.1)	9(17.6)	
External shock			
Yes	12(23.5)	8(15.7)	3.52
No	39(76.5)	43(84.3)	
Total	51(100.0)	51(100.0)	

3.2 Neck disc symptoms and health practice for treatment

Table 2 shows symptoms of neck disc and health practice for treatment. The time of intervention for health practice is based on 7 days after notification of application to patients with neck disc. Neckache was significantly higher than the control group's average of 12.73 points, with an average of 39.86 points in the case group ($t=3.14$, $p<.01$). In terms of physical stretching, the average of 29.82 points in the control group was significantly higher than the average of 14.71 points in the case group ($t=-4.16$, $p<.05$).

Table 2. Neck disc symptoms and health practice for treatment

Variables	Case group	Control group	X^2
	Mean±S.D.	Mean±S.D.	
Decrease in muscle strength	31.72±1.69	24.31±1.85	0.53
Paralysis symptoms	19.54±3.83	8.69±2.47	7.25
Neckache	39.86±1.57	12.73±1.51	3.14**
Numbness in arms and legs	31.50±4.62	10.64±3.87	0.61
Neck disc	39.71±0.45	15.81±0.53	4.57**

Acupressure	12.84±1.93	17.65±1.84	-1.93
Physical stretching	14.71±0.26	29.82±0.53	-4.16*
Eating pineapples	29.58±3.59	37.68±3.26	-3.04

* p<.05 ** p<.01

3.3 Measurement of changes in neck disc symptoms over time

Figure 2 is to measure the change of neck disc symptoms over time. Leg numbness tended to decrease from 7 days after non-drug application compared to before non-drug application. However, it showed an increasing trend again from the 14th. Neck pain continued to decrease from the 8 days after application compared to before non-drug application.

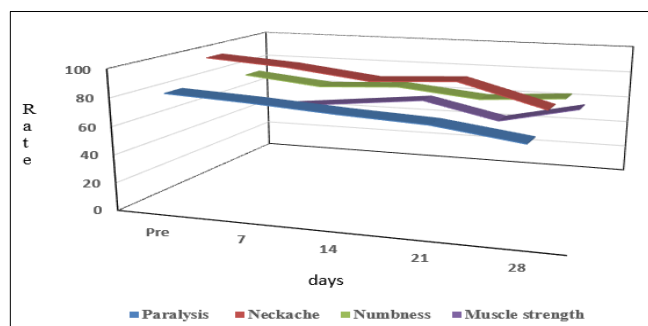


Figure 2. Measurement of changes in neck disc symptoms over time

4. DISCUSSION AND CONCLUSION

This study is to carry out a successful approach for non-pharmaceutical treatment of neck disc patients. As a result of the study, neck disc was significantly lower after application than before application of the non-pharmaceutical management. This was similar to the results of lumbar disk in previous studies[8],[9]. Taking the same posture for a long time causes neck disc pain and causes recurrence. Correct posture, stretching and acupressure should be done to prevent neck disc from developing. Chiropractic stimulates the body's energy channels, thereby gaining a balance between the body and mind to enable healing. Chiropractic pressure is applied along the blood spot to treat the neck disc.

According to this study, pineapples intake is good for bone health and is effective for neck disc. It completely alleviates the pain in the neck disc. This was similar to previous studies showing that fruit intake is effective for back pain[10],[11]. Consumption of pineapples are effective for neck disc because it relieves inflammation. Therefore, the application of this non-drug management was found to be effective in relieving neck disc. Health practice methods such as stretching, acupressure, and pineapple applied to neck disc patients were confirmed to be effective. The intervention of health behavior information resulted in alleviating the neck disc after the experiment than before the experiment. In other words, experiments have shown that the results of the study can treat neck disc in a real clinical setting. However, there is a limit to its application to the entire population because it has limited targets. This work presents the results of this study are meaningful in that they showed hope for the possibility of non-pharmaceutical treatment without surgery. Therefore, the findings derived will contribute to providing valuable insights into the prevention and treatment of neck disc.

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