Effect of Health Management to Prevent Recurrence of Lumbar Disc Herniation

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요추추간판 탈출증의 재발 방지를 위한 보건관리 적용 효과

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Abstract

This study is to measure the effectiveness of health management application to prevent recurrence of lumbar disc herniation. The subjects of this study were 82 patients who visited orthopeidcs at a general hospital in the K area from July 8 through September 26, 2025. The comparison of back pain and mobility in patients with lumbar inter vertebral disc herniation before and after health management application was analyzed by a t-test. The symptoms of recurrence of lumbar intervertebral disc herniation over time were 10, 20, 30 and 40 days, and before and after health management application was measured. The results of this study are as follows. Firstly, lumbar muscle spasms were significantly lower than the average of 41.82 points before applying health care, with an average of 25.63 points after applying health management($t=2.57$, $p<.01$). Secondly, low back pain significantly decreased after 10 days of practice compared to before stretching($p<.05$). These findings confirmed that the application of health management is effective in preventing recurrence of lumbar intervertebral disc herniation.

1. Introduction

Lumbar intervertebral disc herniation causes a crack in the fiber ring due to a degenerative change in the lumbar intervertbral disc, and the nucleus pulposus flows through it, compressing or stiumlating the nerve root, causing pain. Lumbar intervertebral disck herniation causes leg pain, paralysis of the lower extremities, numbness, sensory abnormalities, and back pain[1],[2]. The specific risks of neglecting herniated disc herniation are worsening symptoms, the need for surgery, and nerve damage.

Lumbar intervertebral disc herniation requires fundamental treatment that goes beyond pain reduction, increases the body's resilience and prevents recurrence.

The previous studies foucused on the analysis of lumbar disc herniation. Therefore, this study is to measure the effectiveness of health management application to prevent recurrence of lumbar disc herniation.

2. Material and Methods

2.1 Materials

The subjects of this study were 82 patients who visited orthopedics at a general hospital in the K area from July 8 through September 26, 2025.

2.2 Methods

The comparison of back pain and mobility in patients with lumbar intervertebral disc herniation before and after health management application was analyzed by a t-test. The symptoms of recurrence of lumbar intervertebral disc herniation over time were 10, 20, 30 and 40 days, and before and after health management application was measured. The experimental group is classified as the group that applied health management, and the control group is classified as the group that did not apply health management.

3. Results

3.1 Comparison of pain and mobility in patients with lumbar disc herniation before and after health management application.

Table 1 presents a comparison of pain and mobility before and after health management application in patients with lumbar disc herniation. Lumbar muscle spasms were significantly lower than the average of 41.82 points before applying health management, with an average of 25.63 points after applying health management(t=2.57, p<.01).

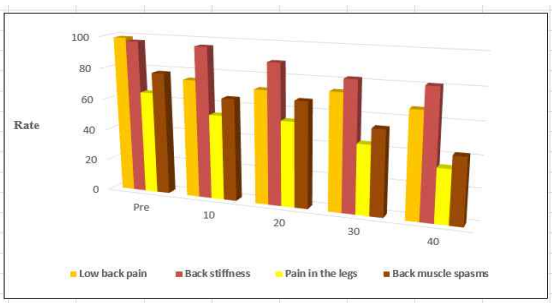
[Table 1] Comparison of pain and mobility in patients with lumbar disc herniation before and after health management application

Variables	Before	After	t
Symptoms			
Lumbar muscle spasms	41.82±3.73	25.63±3.15	2.57**
Back sprain	38.57±1.69	31.42±2.84	4.13
Low back pain	49.83±0.81	37.26±1.52	1.85*
Stiffness of the back	47.19±3.25	25.38±2.43	3.62**
Numbness in one's leg	41.65±0.36	29.51±0.72	1.57**
Pain around the back	35.27±1.92	27.43±1.85	3.28
Flexion and extention	42.06±3.28	29.15±3.27	2.94**
Obesity	33.48±0.59	30.42±0.53	4.25
Restriction of movement	47.96±3.14	26.75±3.81	3.81**
Pain in the leg	35.71±0.43	29.63±0.66	1.59*
Practice			
Back and leg accupressue	24.52±3.91	36.27±0.48	2.63*
Stretching	28.35±4.65	45.27±0.48	4.15**
Eating garlic	29.14±0.37	41.56±0.65	1.97**
Pineapple intake	17.52±1.83	28.19±1.84	3.24*

* p<0.5, ** p<.01

3.2 Symptoms of recurrence of lumbar intervertebral disc intervertebral disc herniation over time

Figure 1 presents symptoms of recurrence of lumbar intervertebral disc herniation over time. Low back pain significantly decreased after 10 days of practice compared to before stretching(p<.05). After 20 days of back stiffness, it was significantly lessened after application it than before health management application(p<.05).



[Fig. 1] Symptoms of recurrence of lumbar intervertebral disc herniation over time

4. Discussion

The purpose of this study is to measure the effectiveness of health management application to prevent recurrence of lumbar disc herniation. As a result, back stiffness was significantly decreased after application compared to before health management application. This study was found to be similar to previous studies on the preventive application of spinal stenosis[3],[4].

Herniated disc is caused by heavy lifting, wrong posture and prolonged stitting. Therefore, waist disc is a way to prevent and treat lumbar disc such as bending the knee of lifting things, ocrrect posture, and frequent stretching.

The numbness of the legs tended to decrease significantly after the application of the health management than before the application of the health management. This was similar to the lifestyle of previous studies on degenerative arthritis patients using non-surgical methods[5],[6].

Lumbar intervertebral disc patients are encourgaged to sit in chairs while maintaining the correct posture. People relax their back muscles by stretching regularly. So, small changes in daily life are important to prevent lumbar intervertebral disc herniation. Proper posture and frequent stretching in everyday life are the ways to prevent and treat lumbar disc herniation. These findings confirmed the effectiveness of health management application in preventing recurrence of lumbar intervertebral disc herniation.

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