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DEVELOPMENT OF A NEW MEDICAL INFORMATION MANAGEMENT FOR STRENGTHENING PELVIC MUSCLE STRENGTH FOR VAGINAL PROLAPSE

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Abstract

This study is to develop a new medical information management for strengthening pelvic muscle strength for vaginal prolapse. The study was 60 patients who admitted to internal medicine department of a general hospital in the Metropolitan area from April 11 through June 28, 2022. The basic information of the study participants used X^2-test. The comparison before and after the medical information application of patients with vaginal prolapse was performed by the t-test. Changes in health behavior for the treatment of vaginal prolapse were measured as 5, 10, 15, and 20 days. The results of this study are as follows. Firstly, in the case of frequent constipation, 65.6% of the experimental group was significantly higher than 46.8% of the control group (X^2=5.83, p=.04). Secondly, the keckel movement averaged 8.72 points before applying medical information, significantly lower than the average 45.28 points after application (t=-3.72, p<.01). Thirdly, muscle strength strengthening decreased short time after 10 days of application than before medical information was applied, and then continued to increase. The results derived from this study proved to be effective in treating vaginal prolapse. The results of this study can be applied to other vaginitis and urinary incontinence

Keywords: Medical information, Management, Pelvic Muscle, Strength, Vaginal prolapse

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1.INTRODUCTION

Vaginal prolapse is the sewage of the uterus, bladder, and rectum, and the vagina comes out of vagina. That is, as the uterus moves down or up from its normal position, some or all of the uterus escapes through the vagina[1],[2]. The cause of incidence is dysfunction, sacral tubercle and bladder tubercle. The quality of women increases when the fetus in the stomach comes out of the world during childbirth. Women are suffering from vaginal prolapse, vaginal dryness, urinary incontinence, vaginitis and insensitivity due to childbirth and aging. Prolapse from the vagina increases when it frequently raises heavy objects, obesity or constipation [5],[6]. As the pelvic support weakens, the older people get, the more uncomfortable people feel in their daily life. When people squat down and up it decreases.

Recently, vaginal prolapse has increased by 45% in the United States and 13% in Korea. If people have severe vagina, people will not be able to urinate and urinate normally We need to improve the quality of life by treating vaginal prolapse [3],[4]. The severity of vaginal prolapse is classified into stages 1-4. In the case of over 60 years of age, there are many cases where there is a feeling of protruding from the uterus. It is necessary to strengthen through the exercise of the pelvic floor muscles. In order to treat vaginal, prolapse. Kegel exercise, which aims to strengthen the pelvic floor muscles, is famous [5],[6].

Previous studies have shown that there are few ways to treat vaginal prolapse [7],[8]. However, there is no research to strengthen pelvic muscle to treat vaginal prolapse. So experimental measurements for the application of information systems should be carried out to treat vaginal prolapse. Therefore, this study is to develop a new medical information management for strengthening pelvic muscle strength for vaginal prolapse.

2. MATERIAL AND METHODS

2.1. Conceptual framework for the treatment of vaginal prolapse

Figure 1 presents the overall concept of vaginal prolapse. 1) Treatment of vaginal prolapse 2) Cause and symptoms of vaginal prolapse 3) Application of medical information 4) Effectiveness of an experiment 5) Derivation of the results and follow-up

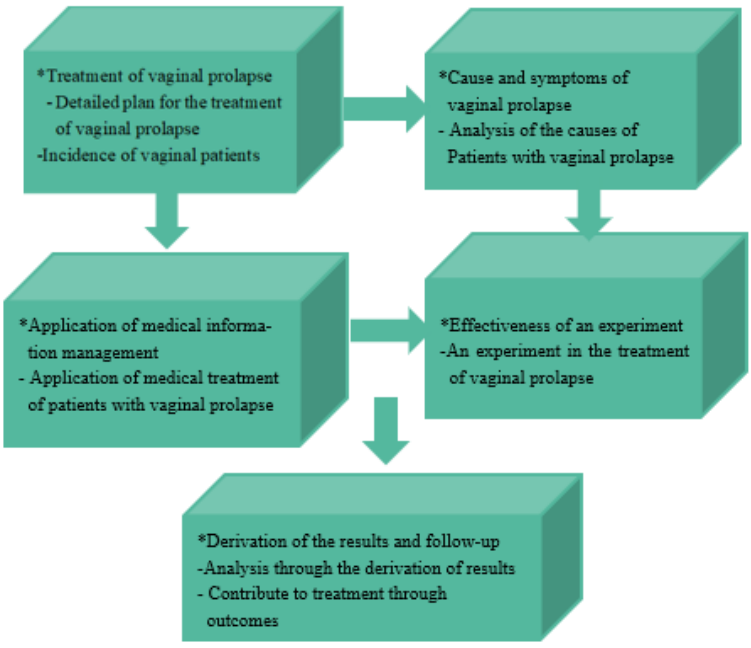

Fig. 1. Conceptual framework for the treatment of vaginal prolapse

2.2. Materials

The study was 60 patients who admitted to internal medicine department of a general hospital in the Metropolitan area from April 11 through June 28, 2022. This study is a tool for strengthening pelvic muscle for the treatment of vaginal prolapse in study subjects. The analysis of this study used a Likert 5-point scale. It is judged that the higher the score, the more positive. That is, it has in treating vaginal prolapse. In previous studies, Chronbach'a was .81.7 points and in this study, it was higher with .84.2 points.

2.3 Methods

The basic information of the study participants used X^2-test. The comparison before and after the medical information application of patients with vaginal prolapse was performed by the t-test. Changes in health behavior for the treatment of vaginal prolapse were measured as 5, 10, 15, and 20 days before and after medical information management application. The experimental group is classified as the group that applied medical information management, and the control group is classified as the group that did not apply medical information.

3. RESULTS

3.1. Basic Information of Study Participants

Table 1 presents the basic information of the study participants. In the case of frequent constipation, 65.6% of the experimental group was significantly higher than 46.8% of the control group(X^2=5.83, p=.04). In the case of frequent lifting of heavy objects, 68.7% of the patient group was significantly higher than 25.0% of the control group(X^2=3.41, p=.02).

Table 1. Basic information of study participants

	Exp. g,	**Con. g.**		
	N (%)	**N (%)**	**X^2**	**P**
Age				
-49	4(12.5)	6(18.7)	12.49	3.65
50-59	6(18.7)	5(15.6)		
60-69	13(40.6)	10(31.2)		
70+	9(28.1)	11(34.3)		
Constipation				
Often	21(65.6)	15(46.8)	5.83	0.04
Hardly	11(34.3)	17(53.1)		
No. of births				
0	8(25.0)	12(37.5)	7.16	1.79
1	10(31.2)	11\(34.3)		
2+	14(43.7)	9(28.1)		
Heavy lifting				
Often	22(68.7)	8(25.0)	3.41	0.02
Hardly	10(31.2)	24(75.0)		
BMI				
<24	7(21.8)	9(28.1)	1.57	2.96
24-25	9(28.1)	11(34.3)		
26	16(50.0)	12(37.5)		
Total	32(100.0)	32(100.0)		

3.2 Before and after the application of medical information for pelvic muscle

Table 2 presents before and after the application of medical information for pelvic muscle strengthening. The keckel movement averaged 8.72 points before applying medical information, significantly lower than the average 45.28 points after application(t=-3.72, p<.01). In terms of seaweed intake, the average score was 28.49 points before the application of medical information, which was significantly less than the average of 47.16 points after application(t=-3.61, p<.01).

Table 2. Before and after the application of medical information for pelvic muscle

Variables	Before	After	T
Kekell movement	8.72±4.19	45.28±5.19	-3.72**
Eating vegetables	39.19±2.74	47.65±1.74	-5.21
Constipation	41.16±1.42	30.42±3.29	1.59*
Strengthening of muscle strength	17.32±5.18	36.46±5.76	-3.26**
Eating sweet potatoes	25.16±0.52	42.19±0.81	-4.73**
Body weight management	34.72±4.16	38.55±4.27	-1.54
Seaweed intake	28.49±0.52	47.16±0.34	-3.61**
Lifting heavy things	39.31±1.85	31.40 ±1.59	1.48
Walking	35.29±3.93	40.82±2.61	-3.91
Squirt movement	12.45±1.28	43.17±1.39	-6.17**

* p<.05 ** p<.01

3.3 Changes in Health Behavior for the Treatment of Vaginal Prolapse

Figure 2 shows changes in health behavior for the treatment of vaginal prolapse. The Keckel movement continued to increase after 5 days of application than before medical information. Muscle strength strengthening decreased short time after 10 days of application than before medical information was applied, and then continued to increase.

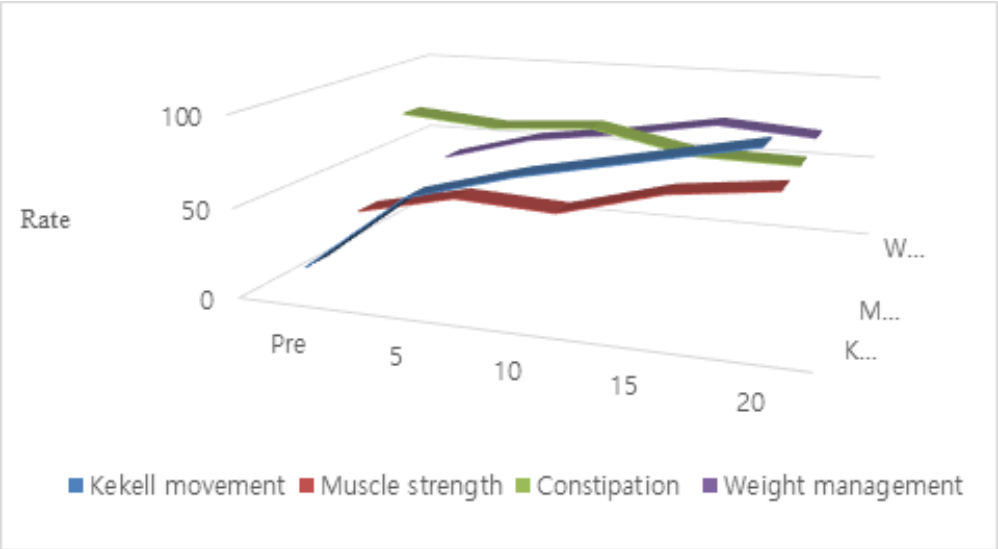

Fig. 3: Changes in Health Behavior for the Treatment of Vaginal Prolapse

4. DISCUSSION AND CONCLUSION

This study is to develop a new medical information system for strengthening pelvic muscle strength for vaginal prolapse. As a result, keckel movement increased significantly after application than before medical information was applied. This was similar to the effect of vaginitis on kekel movement in previous studies[9],[10]. Sphincter is the muscle that is involved in opening and closing certain parts of the body. Kekel or anal sphincter exercises are exercises to maintain sphincter health. Keckel exercises strengthen the weakened pelvic floor muscles by contracting and relaxing the muscles around the vagina Surgery for vaginal prolapse narrows and fixes, but does not produce elasticity. People's pelvis is the area between their hips that holds their genitals in place. The pelvic floor muscles weaken more and more as they give birth or get older, and various diseases can occur. When the pelvic floor muscles become weak, urinary incontinence, pelvic organ prolapse, sexual dysfunction, and vaginal prolapse occur**.** Men may develop erectile dysfunction, premature ejaculation, hemorrhoids, etc. People can strengthen their anus muscles to treat vaginal escapes by applying force and taking it away. Kel exercises can strengthen the pelvic floor muscles by training vaginal muscles from the pubis to the tailbone

As a result of this study, squirt exercise increased significantly after application than before medical information was applied. Strong lower body also increases upper body strength. Previous studies showed similar results for strengthening the lower body[12],[13]. Continuing to do squats can cure vagina by strengthening the hip, thigh and waist muscles.

As a result of this study, weight control decreased after application compared to before medical information was applied. In previous studies, it is similar to that weight control is related to the prevention of vaginal prolapse[14],[15]. Obesity is the cause of vaginal prolapse and can be treated through diet. The results derived from this study proved to be effective in treating vaginal prolapse. The results derived from this study proved to be effective in treating vaginal prolapse. The results of this study can be applied to other vaginitis and urinary incontinence.

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