

ASSESSMENT OF THE DYNAMICS OF QUALITY OF LIFE IN WOMEN WITH INCONTINENCE WHEN USING KEGEL EXERCISES

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Abstract

Introduction. The main reason for the development of urinary incontinence in women is the weakening of the muscles of the fundus pelvis after childbirth, menopause with a sharp drop in the level of female sex hormones (estrogen) and other. Our aim of study was to assess the dynamics of quality of life in women with urinary incontinence when using "Kegel exercise" and "Kegel exercise" with an attached set of individual exercises.

Methods: The study included 18 women aged 46-60 years. Evaluations were performed by questionnaires on the "Questionnaire on the impact of urinary incontinence on quality of life (ICIQ-SF)". All women were informed in advance about the planned scope of the research and agreed to conduct it.

Results: It was found that in addition to "Kegel exercise", an individual set of exercises gave a positive result. As a result, women who had an average grade (6-12 points) according to the results of ICIQ-SF before the start of classes, as a result received a positive trend. In the first group, as of 36 classes, 3 women (33.32%) according to the results of ICIQ-SF passed a mild degree (1-5 points). In the second group, as of 36 classes, 4 women (44.44%) passed the easy degree (1-5 points) according to the results of ICIQ-SF.

Conclusions. The dynamics of indicators indicated that in addition to "Kegel exercise", an individual set of exercises with periodic contraction and relaxation of the abdominal muscles, change the intra-abdominal pressure. Exercise causes reflex contraction and relaxation of the Fundus pelvis muscles, helping to improve their functional state.

All human studies were conducted in compliance with the rules of the Helsinki Declaration of the World Medical Association "Ethical principles of medical research with human participation as an object of study". Informed consent was obtained from all participants.

Keywords: *physical rehabilitation, Fundus pelvis, Kegel exercise.*

Introduction

Urinary incontinence significantly affects the quality of life of any person. This problem significantly reduces social, domestic, professional and family adaptation. According to the WHO, quality of life - "a person's perception of his life position in the context of culture and value systems in which he lives, and in relation to their goals" [1, 2]. Urologists, gynecologists and neurologists deal with this pathology. The clinical manifestation is the inability to keep urine outside the act of urination with an intact urethra at rest, in the transition from horizontal to vertical position and at a time of significant increase in intra-abdominal pressure (cough, sneezing, weight lifting) [2, 3].

The main reason for the development of urinary incontinence in women is the weakening of the muscles of the fundus pelvis after childbirth, menopause with a sharp drop in female sex hormones (estrogen), frequent inflammatory processes in the pelvis and urinary system, abdominal surgery, the use of certain drugs, elderly age and others [2, 4].

In the muscles of the fundus pelvis there are urogenital and pelvic diaphragms, and according to the classification, there are external (superficial muscles of the urogenital and pelvic diaphragms), middle (deep urogenital muscles) and internal (deep pelvic muscles) layers. The main purpose of Fundus pelvis is to support the organs of the abdominal cavity and pelvis [4, 5].

Dysfunction of the fundus pelvis may be due to weakening of the pelvic muscles, damage to the connective tissue structures of the pelvic floor, incoordination of different muscle groups [2, 4].

Much attention is paid to strengthening the muscles of the fundus pelvis and training the muscle that raises the anus (*m. Levator ani*), because the fibers of *m. levator ani* start from the posterior surface of the pubic arch, passing in women laterally from the bladder, vagina and rectum, close to these organs, and end at the sciatic bone. In this case, part of the fibers is intertwined with the muscle fibers of the above organs and, in addition, the muscle is connected to these organs by fibrous tissue and elastic fibers [2, 6-8].

To date, there are three main methods of treatment of urinary incontinence, non-drug, drug

and surgery. Among the conservative methods of treatment, the leading place is occupied by therapeutic physical culture, and its therapeutic effect is associated with increased tone of all muscles of the body, increased tone and muscles of the pelvic floor, which significantly improves their function [8-10].

Experts [6, 10-12] claim that special exercises directly affect the muscles of this area, also have a positive effect on their contractile properties, which gives the overall health and therapeutic effect. A significant role in the performance of exercises is played by alternating increase and decrease of internal abdominal pressure, which also reflexively affect the muscles of the bottom of the pelvic cavity.

Many specialists [2, 13-15] point to the complex of physical exercises with specific tasks: to stimulate compensatory-adaptive reactions in the damaged tissues of the closing apparatus of the bladder and urethra in order to normalize its activity; improve pelvic trophism, eliminate uncontrolled detrusor contractions; strengthen the musculoskeletal system of the pelvic floor, muscles of the urethra, pelvis, abdomen and back; to promote the restoration of anatomical and topographic relationships of the pelvic organs; to promote the removal of pathological dominants in the cerebral cortex; have a tonic effect on the body.

The purpose of the study: To assess the dynamics of quality of life in women with urinary incontinence when using "Kegel exercise" and "Kegel exercise" with an individual set of exercises.

Materials and methods

The study involved 18 women aged 46-60 years. Evaluations were conducted by questionnaires for the "Questionnaire on the impact of urinary incontinence on quality of life (ICIQ-SF)" [16]. All women were informed in advance about the planned scope of the research and agreed to conduct it.

As a result, 2 groups were formed. The first group included women who practiced the standard method of "Kegel exercise". The second group consisted of women who were included in the set of standard methods "Kegel exercise" individual set of exercises.

Results

Physical rehabilitation is an integral part of conservative treatment for urinary incontinence. Pelvic floor muscle training is the main method of physical recovery of women with this pathology. Non-drug treatment is aimed at training the Fundus pelvis, and Kegel exercise is the first line to strengthen the pelvic diaphragm.

As a result of the processed ICIQ-SF questionnaire data, 18 women were selected who received a result in the amount of 6 to 12 points (The degree of urinary incontinence on the scale is average). The women were divided into 2 groups. Classes for the first group were conducted according to the standard method "Kegel exercise", for the second group in the set of standard methods "Kegel exercise" was included an individual set of exercises. Classes were held 3 times a week (every other day). Each training lasted 40 minutes and consisted of three parts: preparatory - 7 minutes; main - 25 minutes and final - 8 minutes. When pain or dizziness stopped training.

The dynamics of indicators after 18 classes on the background of the use of "Kegel exercise" and "Kegel exercise" with an attached individual set of exercises showed that in two groups of women there was an improvement in results, Fig.1.

In the first group of women 22.22% according to the results of ICIQ-SF was found to be mild (1-5 points), 77.78% according to the results of ICIQ-SF medium degree (6-12 points). The dynamics of indicators on the background of the use of "Kegel exercise" with the attached individual set of exercises found that in 2 groups of women there were 33.32% according to the results of ICIQ-SF mild (1-5 points), 66.68% according to the results of ICIQ-SF average degree (6-12 points).

The dynamics of indicators after 36 classes on the background of the use of "Kegel exercise" and "Kegel exercise" with an attached individual set of exercises showed that two groups of women showed improved results. In the first group of women 33.32% according to the results of ICIQ-SF was found to be mild (1-5 points), 66.67% according to the results of ICIQ-SF medium degree (6-12 points). The dynamics of indicators on the background of the use of "Kegel exercise" with the

attached individual set of exercises found that in 2 groups of women there were 44.45% according to the results of ICIQ-SF mild (1-5 points), 55.55% according to the results of ICIQ-SF average degree (6-12 points).

Women who had an average grade (6-12 points) according to the results of ICIQ-SF before the start of classes, as a result received a positive trend. In the first group, as of 36 classes, 3 women according to the results of ICIQ-SF passed to the easy degree (1-5 points). In the second group, as of 36 classes, 4 women according to the results of ICIQ-SF went to the easy stage (1-5 points).

At the end of this period, most women in the groups reported a statistically significant improvement in quality of life.

The results of the study showed that training the pelvic floor muscles is the optimal method for improving the anatomical and functional condition of the muscles.

It should be noted that when using a set of exercises to prevent urinary incontinence in women, it is necessary to take into account the differentiation of exercises and starting points. Systematic muscle activity improves the mechanisms of regulation and coordination of functions of all systems of the human body.

Conclusions

The dynamics of quality of life in women with urinary incontinence was assessed using "Kegel exercise", "Kegel exercise" with an individual set of exercises. As a result, it was found that in addition to "Kegel exercise", an individual set of exercises gave a positive result. As a result, women who had an average grade (6-12 points) according to the results of ICIQ-SF before the start of classes, as a result received a positive trend. In the first group, as of 36 classes, 3 women (33.32%) according to the results of ICIQ-SF passed a mild degree (1-5 points). In the second group, as of 36 classes, 4 women (44.44%) passed the easy degree (1-5 points) according to the results of ICIQ-SF.

The dynamics of indicators indicated that in addition to "Kegel exercise", an individual set of exercises with periodic contraction and relaxation of the abdominal muscles, change the intra-abdominal pressure. Exercise causes reflex contraction and

relaxation of the Fundus pelvis muscles, helping to improve their functional state.

Acknowledgments

The authors declare that there are no conflicts of interest.

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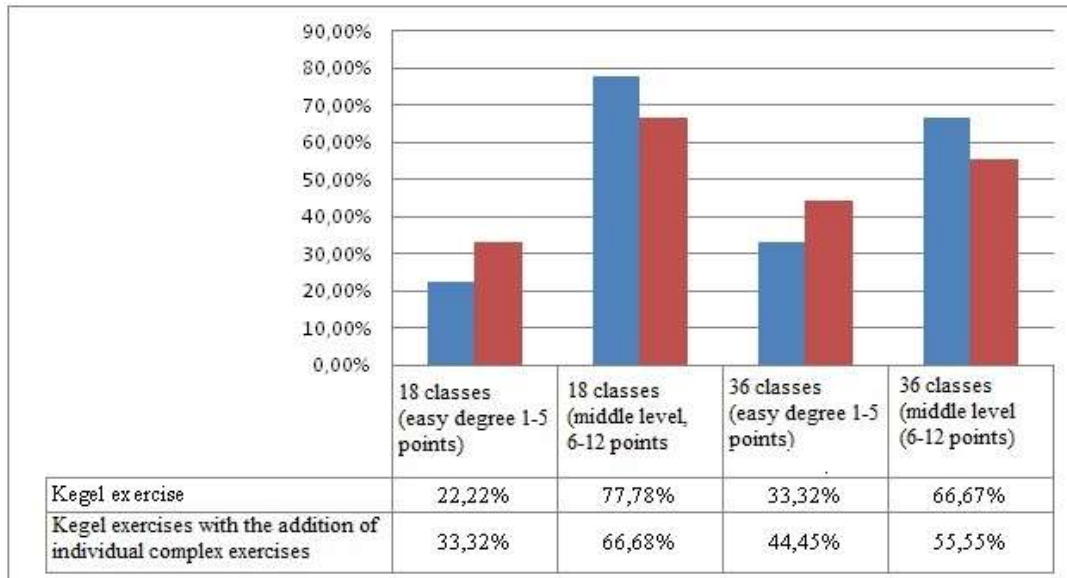


Figure 1. Dynamics of indicators against the background of the application of "Kegel exercise", "Kegel exercise" with an attached individual set of exercises