



INDIVIDUAL KINESITHERAPEUTIC APPROACH IN PATIENTS WITH TOTAL HIP REPLACEMENT

Gergana Nenova, Paraskeva Mancheva,
Department of Kinesitherapy, Faculty of Public Health, Medical University - Varna, Bulgaria.

SUMMARY

The individual kinesitherapeutic approach is increasingly required in rehabilitation practice due to the presence of concomitant diseases, social problems and psycho-emotional characteristics of the patients. Its effectiveness can be assessed by examining the level of satisfaction of patients with total hip arthroplasty with the work of the kinesi-therapist.

Purpose: to study and evaluate the effectiveness of the individual kinesitherapeutic approach on patients with total hip arthroplasty.

Material and methods: *Material:* 60 patients who have undergone operative intervention for total hip replacement at the Orthopaedics and Traumatology Clinic at the University Hospital St. Marina, Varna for the period 2012–2019. The patients are divided into experimental (30 patients with a mean age of 56.17) and control groups (30 patients with a mean age of 55.53). *Methods:* *Sociological method* (questionnaire survey): questionnaire for satisfaction with the kinesi-therapist's work on the Likert scale (α -Cronbach 0.823); *Statistical method:* statistical data grouping, Cronbach's test, descriptive method, testing of statistical hypotheses, correlation analysis. The data is processed with SPSS v.19.0 for Windows.

Results and discussion: 83,3% of patients with total hip replacement answered that they have received answers to their questions from the kinesi-therapist treating them. The patients in the experimental and control groups were equally aware of the need for kinesitherapy in their postoperative recovery period. 100% of the respondents in the control group believed that the kinesi-therapist was very interested and inquired about concomitant diseases and problems that arose during the procedures. Patients with custom hip replacement report greater freedom "to a very large extent" and 26,7% "to a large extent".

Conclusion: the application of the individual kinesitherapeutic approach to patients with total hip arthroplasty leads to a faster and fuller functional recovery and to a higher level of satisfaction.

Keywords: satisfaction, kinesitherapy, total hip replacement,

INTRODUCTION

In the last few years, we have seen an aging population and an increased number of risk factors causing diseases, disability and even death. Some factors are influenced by the economic situation or the social environment, yet others are behavioral - sedentary lifestyle, poor nutrition, tobacco use, excessive alcohol use, insufficient physical activity. According to the World Health Organization (WHO, 2003), musculoskeletal disorders are the most common cause of disability affecting the medical, psychological and social aspects of health [3,5]. The existence of social barriers, in its turn, causes disability, job loss, poor quality of life, and quite often isolation and self-isolation. Knowledge considers that the hip joint is one of the body's largest weight-bearing joints and is prone to suffer from various diseases, including degenerative, fractures, etc., that require endoprosthesis [6,8]. Prosthesis design and access to surgery are definitely important in the subsequent implementation of kinesitherapeutic programs, but so far, there is no unified kinesitherapeutic protocol after a total hip replacement [7]. This is most likely a result of the individual approach used in kinesitherapy, which takes into account the comorbidities, social environment and psycho-emotional characteristics of the patient.

The purpose is to study and evaluate the effectiveness of the individual kinesitherapeutic approach on patients with total hip arthroplasty.

MATERIAL AND METHODS

A total of 60 patients are involved in the study. For the period 2012–2019, they underwent surgical treatment for hip joint replacement at the Orthopaedics and Traumatology Clinic at the University Hospital St. Marina, Varna. The patients are divided into two groups: an experimental group (30 patients, mean age 56.17) and a control group (30 patients, mean age 55.53). The groups are identified as follows: with a custom femoral stem (experimental) and with a conventional femoral stem (control) after hip replacement. The main idea is to compare the recovery period, the chances of earlier workload, return to daily routine and satisfaction with the overall treatment. The total number of respondents is 60, which is a result of the limited number of patients who chose hip replacement with a custom femoral stem at the research center (the Orthopaedics and Traumatology Clinic at the University Hospital St. Marina, Varna) for a seven-year study period (2012–2019). The patients from both groups (experimental and control) are randomly assigned (randomized control trial) to gen-

erate a representative sample and provide validity to the results. We obtained a random sample through tests to detect differences in important exogenous indicators. In our study, these are “gender” and “age” - part of the demographic indicators included in the first part of the questionnaire. The patient’s satisfaction with the work of the kinesi therapist as well as the kinesi therapeutic procedures are surveyed by using the five-point Likert scale. The questionnaire includes 12 questions grouped into categories: awareness (questions No.1 and No.5), attitude/communication (questions No.2 and No.3), time (questions No.4 and No.7), physical activity (questions No.8 and No.10), professionalism (questions No.6 and No.11) and benefit/efficiency (questions No.9 and No.12). The questions are clearly stated, concise and comprehensible, which makes it easier for the patients to complete the questionnaire on their own. The fourth question is a control-question to check for 5 accuracy. The five-point Likert scale is used to allow the individual to express how much they agree or disagree with a particular statement: 1) very little, 2) little, 3) undecided, 4) to a great extent, and 5) definitely. Each patient completes the questionnaire after getting clarifications in advance. The Cronbach’s α calculated in the survey is 0.823, with a questionnaire that has a high level of cognitive and selective abilities. The statistical product SPSS v.19.0 for Windows is used for processing the results.

RESULTS

When asked whether “The kinesi therapist answered all the questions about my recovery and expectations”, 83,3% of the participants in the experimental group answered in the affirmative. The respondents’ answers in the control group are similar, 60% of them point out the score of “5”, and the remaining 40% choose “4”. From these statistics, we can conclude that the kinesi therapists have the necessary knowledge and competence to participate professionally in the process of health restoration (fig.1)

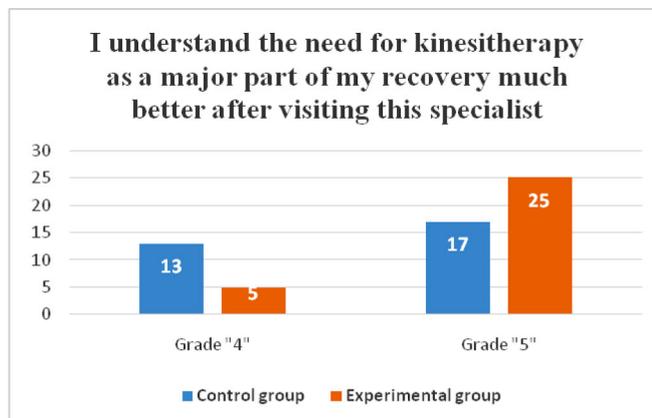
Fig. 1. Patients from the experimental and control groups answering the question “The kinesi therapist answered all the questions about my recovery and expectations”



When asked whether “I understand the necessity of kinesi therapy as a major part of my recovery much better after visiting the specialist”, 83,3% of the participants in the experimental group marked the highest score, and 56,7% in the control group gave the same answer. However, both

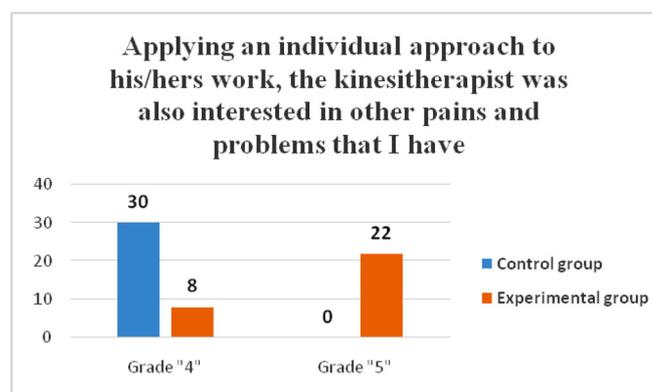
groups are aware of the need for kinesi therapy during their postoperative recovery period (fig. 2):

Fig. 2. Patients from the experimental and control groups answering the question “I understand the necessity of kinesi therapy as a major part of my recovery much better after visiting the specialist”



With the question “Applying an individual approach to their work, the kinesi therapist was also interested if I had any other pains and problems”; we wanted to test the patient’s trust in this specialist. We know that in kinesi therapy, there are also conditions and comorbidities that could impede the maximum use of various methods and means. There are no significant differences in the responses of the two groups. 100% of the respondents from the control group confided that the kinesi therapist has been interested and asked about any comorbidities or problems during the procedures. 73,3% of the experimental group answered “to a great extent”, and the rest of the people mark “definitely” (fig. 3):

Fig. 3. Patients from the experimental and control groups answered the question “Applying an individual approach to their work, the kinesi therapist was also interested if I had any other pains and problems”



When asked whether “It was the kinesi therapist who worked with me”, 70% of the experimental group defined the work of the kinesi therapist as essential in their recovery by giving the answer “to a great extent”, and only 3, 33% were “undecided”. “To a great extent”, answer slightly more than half of the respondents in the control group, 40% are “undecided” and 3, 33% say “little”, i.e. in this group, we once

again distinguish a variety of answers. When asked “After the kinesitherapeutic procedures, I have more freedom and confidence in my daily routines”, we noticed a significant difference in the two distributions – left-right asymmetry. 73.3% of the patients with a custom prosthesis report having more freedom “to a great extent”, and 26.7% choose the answer “infinitely”. As for the patients in the control group, 53.3% cannot appraise whether they are more independent, and only 3.3% evaluate their physical activity after kinesitherapy with a score of 5 “definitely”. In our view, there are some other factors that elicit different responses from the two groups.

Conclusions from the study:

1. The respondents from the experimental groups have a higher level of education, better financial security and live in a large or regional city, which determines the wider range of awareness and demand for a custom femoral stem as a better alternative for solving their health problem and changing their quality of life.

2. The choice of a conventional femoral stem is related to lower awareness and smaller financial opportunities of the respondents in the control groups.

3. The respondents from the experimental groups assess the importance of the individual kinesitherapeutic approach in the recovery period “to a great extent” (96.7%) and would seek the same kinesitherapist in the case of other health problems or for other patients.

4. The direct contact with the kinesitherapist during the rehabilitation procedures gives greater confidence to the patients from the experimental groups while performing the tasks set in the individual kinesitherapeutic program.

5. Hobbies that require high physical activity in patients from experimental groups are associated with higher expectations for the results of the kinesitherapist’s postoperative work.

6. Regardless of the financial and other resources invested in the treatment, the patients from the experimental groups are satisfied with the achieved results and participate in the therapeutic process with motivation.

7. We observed better results in the early period of control measurements (on the 21st day) in patients from experimental groups in comparison to somatoscopic observations.

8. The kinesitherapeutic approach applied in patients with custom femoral stem is effective and achieves satisfactory results in terms of functional recovery and return to work and hobby.

CONCLUSION

The role of kinesitherapy is fundamental for the complete recovery of patients after hip arthroplasty. Kinesitherapy, with its opportunities and active involvement in the recovery process, improves the physical activity impairment, restores patients’ capacity to perform activities of daily living, work capacity and even practicing physical activities such as sport and hobbies [4, 1]. A great challenge for a kinesitherapist is to achieve good functional results in demanding patients, especially those who do sport, whether active or simply as a hobby. That is why it is necessary to create and carry out an individual kinesitherapeutic program on the basis of accurate kinesiological diagnosis relevant to the particular patient [2].

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Address for correspondence:

Gergana Boncheva Nenova,
Department of Kinesitherapy, Faculty of Public Health, Medical University of Varna,
1, Hristo Smirnenski Str., 9002 Varna, Bulgaria,
E-mail: geri_nenova@yahoo.com,