

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://www.elsevier.com/locate/medici>

Original Research Article

Evaluation of daily outpatient multidisciplinary rehabilitative treatment of patients with musculoskeletal, neurological and traumatic disorders in a municipality outpatient setting

Giedrė Sakalauskienė^{a,b,*}, Vidmantas Obelienius^b, Rugilė Pilvinienė^a,
Dovilė Jauniškienė^c

^aInstitute of Physiology and Pharmacology, Medical Academy, Lithuanian University of Health Sciences, Kaunas, Lithuania

^bKaunas Šilainiai Outpatient Clinic, Kaunas, Lithuania

^cChirurgijos Technologijos UAB, Kaunas, Lithuania

ARTICLE INFO

Article history:

Received 28 April 2015

Accepted 22 October 2015

Available online 11 December 2015

Keywords:

Outpatient multidisciplinary rehabilitation

Barthel index

Visual analog pain scale

Modified Keitel functional test

ABSTRACT

Background and objective: Musculoskeletal, neurological, and traumatic injuries are a considerably increasing problem. There is a lack of studies evaluating the results of outpatient rehabilitative treatment of patients with the abovementioned diseases. The aim of this study was to determine the effectiveness of daily outpatient multidisciplinary rehabilitation.

Materials and methods: This observational study enrolled 223 adult people undergoing outpatient rehabilitation performed in a municipality outpatient clinic during 14 days. The functional assessment of disability was performed by using the Barthel index (BI), functional performance was estimated by the modified Keitel functional test (MKFT), and pain perception was evaluated by the visual analogue scale (VAS). The mean scores of the tests were compared before and after outpatient multidisciplinary rehabilitation.

Results: Significantly reduced disability and pain perception as well as increased functional performance were documented after outpatient rehabilitation. The mean scores of BI, MKFT, and VAS before and after rehabilitation did not differ significantly among patients ranked to each cluster of diseases. Increased functional performance of patients had a moderate-to-weak association with decreased disability and pain perception. The positive changes in health status considering disability, functional performance, and pain perception were documented after 14-day rehabilitation.

Conclusions: Multidisciplinary outpatient rehabilitation can be considered as effective treatment. However, it is necessary to implement specific, well-adapted consuming assessment

* Corresponding author at: Institute of Physiology and Pharmacology, Medical Academy, Lithuanian University of Health Sciences, A. Mickevičiaus 9, 44307 Kaunas, Lithuania.

E-mail address: giedre2006@gmail.com (G. Sakalauskienė).

Peer review under the responsibility of the Lithuanian University of Health Sciences.



Production and hosting by Elsevier

<http://dx.doi.org/10.1016/j.medici.2015.11.007>

1010-660X/© 2016 The Lithuanian University of Health Sciences. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

instruments in order to evaluate the outcomes of daily multidisciplinary outpatient rehabilitative treatment.

© 2016 The Lithuanian University of Health Sciences. Production and hosting by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Musculoskeletal conditions encompassing a wide spectrum of diseases such as age-related osteoarthritis, spine disorders usually of unclear etiology, and those related to neurological disorders and traumatic injuries are notably increasing medical, social, and economic problems among the populations of industrialized and developing countries due to high direct and indirect costs. Chronic pain is especially considered to be the most prominent symptom among patients with musculoskeletal diseases representing an important cause of physical limitation, reduced functions of daily life, and disability [1–4].

A multidisciplinary rehabilitation program involving physical therapy, physiotherapy, occupational therapy, and psychosocial support has been developed to restore such functions as physical and occupational abilities, significantly improve skills to cope with pain, and encourage patients to take responsibility for the management of their health conditions. Therefore, the improvement of pain and body function over the multidisciplinary rehabilitation could be estimated using different assessment instruments and methods. However, obtained information may not necessarily reflect the real capacity of a patient's performance, and there is a lack of consensus how an important improvement should be defined and which specific measure is best to evaluate the outcomes [5–8].

The aim of this study was to determine the effectiveness of daily outpatient multidisciplinary rehabilitative treatment in an outpatient setting in accordance with the evaluated scores of disability, functional performance, and pain perception using the approved assessment tools in Lithuania.

2. Materials and methods

A sample of 223 adult people with neurological, musculoskeletal, and traumatic diseases undergoing outpatient rehabilitation in a Šilainiai municipality outpatient care setting, Kaunas, Lithuania, from September 2011 to July 2012 was investigated. The examined sample consisted of 93 men (41.7%) and 130 women (58.3%). Adult patients aged 18 years and more were subjected to outpatient rehabilitation according to the Lithuanian National Guidelines after daily treatment in outpatient and inpatient departments of musculoskeletal and neurological diseases as well as included in the study population. Rehabilitation was performed in a strict frame of the national legal regulation. In concordance with it, the duration of outpatient rehabilitation was 14 days, and multidisciplinary comprehensive rehabilitative treatment for each patient included individualized physical exercises, physiotherapy, occupational therapy, hydrotherapy, massage, and psychological and social counseling. A standardized form was used to

collect the data on history and demographic characteristics (age, sex, occupation, etc.). Health-related data were obtained from the daily medical records completed by three physiatrists leading the teams of rehabilitation specialists; therefore, the study design was observational. Diseases were classified by the International Statistical Classification of Diseases and Related Health Problems 10th Revision (ICD-10).

The patients were examined before and after outpatient rehabilitation by using approved and validated tools for disability, functional assessment, and evaluation of pain perception in Lithuania: the Barthel index (BI), modified Keitel functional test (MKFT), and visual analogue scale (VAS).

The BI was used for the evaluation of patient independence considering the disability. The BI assesses 10 activities of daily life, 8 of which can be described as self-care activities, and 2 as mobility-related activities. The scores for each of the item are summed up to compute a total score from 0 (total dependence) to 100 (total independence). Independence is defined as no need in assistance in daily living and mobility. The BI is among the most widely used tools to measure functional status, providing great validity, reliability, and sensitivity [9,10].

The KFT, a functional performance test, is a tool to assess mobility that evaluates functions of the hands, wrists, shoulders, trunk, and low limbs by 24 simple movement patterns. The score ranges from 0 to 100 points. An adapted and approved version of the KFT with 21 movement patterns and a maximum value of 95 points is used in Lithuania. In both the versions, the maximum value presents no functional limitation. The MKFT that indicates functioning of upper extremities (maximum value, 50 points), and lower extremities and trunk (maximum value, 45 points), respectively was applied [11,12]. The VAS was employed to assess pain intensity (0, no pain; 10, unbearable pain). This scale has been shown to have excellent reliability and validity [13].

Statistical analysis was performed using the statistical software package SPSS 17.0 for Windows. The analysis was performed separately for men and women. Data were expressed as mean and standard deviation. The differences in the distribution of qualitative variables were assessed by the chi-square test. Correlation was used to identify the relationship between two continuous variables; the strength of the association between them was measured by the Pearson correlation coefficient (r). The difference was considered to be significant when $P < 0.05$.

3. Results

3.1. Characteristics of the study population

The mean age of the patients undergoing outpatient rehabilitation was 49.55 ± 12.72 years. The mean age of women and

Download English Version:

<https://daneshyari.com/en/article/2680309>

Download Persian Version:

<https://daneshyari.com/article/2680309>

[Daneshyari.com](https://daneshyari.com)