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Assessment of the Effectiveness of Sanatorium Treatment Resulting in the Decrease of Pain of the Lumbar Spine

Ocena efektywności leczenia sanatoryjnego wpływająca na zmniejszenie dolegliwości bólowych odcinka lędźwiowego kręgosłupa

Anna Antczak^{1,2}, Beata Haor², Agnieszka Królikowska¹, Renata Jabłońska¹

¹Neurological and Neurosurgical Nursing Department, Faculty of Health Science, Collegium Medicum, Nicolaus Copernicus University, Torun, Poland

²Higher Vocational State School, Włocławek, Poland

Abstract

Introduction. Today, lumbar spine pain is a global problem, as one of the most common health problems in developing countries, including in Poland. One of the main problems of patients with back pain syndromes in the lumbar spine is pain. This disease may be classified as a direct cause of the limitation of physical, social, and professional activities.

Aim. The aim of the study is to assess the impact of sanatorium treatment on the reduction of pain occurring in the pain syndromes of the lumbar spine.

Material and Methods. The survey was conducted among 300 (100%) randomly selected patients, aged from 35 to 65 years. The study was conducted in sanatorium “The Wieniec-Zdrój spa”. The severity of pain in patients with diagnosed pain syndrome of lumbar spine was studied in two stages prior to and following sanatorium treatment using the Oswestry Disability Index Questionnaire. The tests were carried out after obtaining the approval of the Bioethics Committee of Kuyavian-Pomeranian Regional Medical Chamber in Torun (34/KB/2013) and the Medical Director of the institution where the study was conducted.

Results. Analysis of selected components of the Oswestry Questionnaire for comparing the efficiency of patients before and after treatment allows for the assessment of pain intensity. Taking into account the intensity of pain and the use of painkillers it can be determined that after sanatorium treatment because of minor pain patients do not have to take pain medication 89 respondents (30%), 38 patients fewer. The surveyed also responded that painkillers completely/partially remove the pain more than twice as often after treatment.

Conclusions. Sanatorium treatment affected pain in the lumbar spine. After therapy the pain decreased. The respondents stated that after the therapy applied, painkillers partially or completely removed the occurring pain. (JNNS 2016;5(3):99–103)

Key Words: sanatorium treatment, the lumbar spine, pain

Streszczenie

Wstęp. Obecnie zespoły bólowe kręgosłupa odcinka lędźwiowego stanowią problem globalny, jako jeden z najczęstszych problemów zdrowotnych w krajach rozwijających się, w tym także w Polsce. Jednym z głównych problemów chorych z zespołami bólowymi kręgosłupa w odcinku lędźwiowym jest ból. Choroba ta może stanowić bezpośrednią przyczynę ograniczenia aktywności ruchowej, społecznej, a także zawodowej.

Cel. Celem pracy jest ocena wpływu leczenia sanatoryjnego na zmniejszenie dolegliwości bólowych występujących w zespołach bólowych kręgosłupa odcinka lędźwiowego.

Materiał i metody. Badanie przeprowadzono wśród 300 (100%) losowo wybranych pacjentów, w grupach wiekowych od 35 do 65 lat. Badania przeprowadzono w Sanatorium „Uzdrowisko Wieniec Zdrój”. Nasilenie dolegliwości bólowych u pacjentów z rozpoznaniem zespołem bólowym kręgosłupa odcinka lędźwiowego było badane w dwóch etapach przed i po zastosowanym leczeniu sanatoryjnym za pomocą Kwestionariusza Oswestry Disability Index.

Badania zostały przeprowadzone po uzyskaniu zgody Komisji Bioetycznej Kujawsko-Pomorskiej Okręgowej Izby Lekarskiej w Toruniu (34/KB/2013) oraz Dyrektora Medycznego placówki w której było przeprowadzane badanie.

Wyniki. Analiza wybranych składowych kwestionariusza Oswestry w przypadku porównania sprawności chorych przed i po leczeniu pozwala na ocenę nasilenia bólu. Biorąc pod uwagę intensywność bólu a stosowanie środków przeciwbólowych można określić, że po leczeniu sanatoryjnym z powodu niewielkiego bólu nie muszą przyjmować leków przeciwbólowych 89 osób (30%), 38 osób mniej. Ankietowani odpowiedzieli także, że leki przeciwbólowe całkowicie/częściowo usuwają ból ponad dwukrotnie częściej po leczeniu.

Wnioski. Leczenie sanatoryjne wpłynęło na dolegliwości bólowe odcinka lędźwiowego kręgosłupa. Po zastosowanej terapii dolegliwości bólowe uległy zmniejszeniu. Badani określili, że po zastosowanej terapii leki przeciwbólowe częściowo lub całkowicie usuwają występujący ból. (PNN 2016;5(3):99–103)

Słowa kluczowe: leczenie sanatoryjne, odcinek lędźwiowego kręgosłupa, dolegliwości bólowe

Introduction

Nowadays, lumbar spine pain is a global problem, as one of the most common health problems in developing countries, including in Poland. The scope of the problem is still growing and as a consequence leading to disability. Depending on the existing predisposing factors, the risk of aggravation of symptoms of the disease is growing [1,2].

One of the main problems of patients with pain syndromes of the lumbar spine is pain. The etiology of the pain, unfortunately, in the case of this disease is often difficult to be clearly defined or remains unknown. The symptom of pain itself is referred to in the literature as an unpleasant sensory and emotional experience, resulting from an actual or possible tissue damage. Pain is defined as a sensory process, which transmits information to the brain (quantitative and qualitative), whereas the emotional aspect (fear, anxiety) is associated with actual or possible fear in the human psyche [3,4]. Rich innervation of tissue structure of the spine and its surroundings has a direct impact on the appearance of pathology and the phenomenon of pain. One of the risk factors taken into account in the diagnosis is insufficient adaptation to a vertical posture and civilization back strain. The type and nature of pain depends on many factors, defined as weak pain, of short duration and of mild intensity to a permanent, burdensome and chronic or even preventing correct functioning.

Back pain in the lumbar region are classified as diseases that can be a direct cause of limitation of physical, social, and professional activities. In the advanced stage of the disease they significantly reduce the mobility of the patient, frequently leading to the total capacity reduction of self-service. The patient in this case is dependent on the assistance of others, because of the inability to perform independently basic activities of daily living. In the case of motor restrictions, there is also a risk of other disease symptoms occurrence, in the physical, psychological and social sphere. The occurring pain can cause numerous deficits in the patient, which will result from the difficulties of dealing with pain. In contrast, the discomfort associated with pain triggered

by pain syndromes of the lumbar spine can adversely affect the mental state and therefore social relations.

Avoiding largely the back pains is possible through appropriate lifestyle and a proper physical activity arising from that. Exercise and movement should be adjusted to other factors directly affecting the occurrence of the disease including age, type of work, health condition and preferences of the patient [5,2]. Despite implementing preventive measures, it does not guarantee total avoidance of the risk of pain syndromes. Other risk factors for pain syndromes of the lumbar spine should be also taken into consideration.

The aim of the study is to assess the impact of sanatorium treatment on the reduction of pain occurring in the pain syndromes of the lumbar spine. Pain intensity at two stages, before and after sanatorium treatment applied has been subject to an analysis.

Material and Methods

The study was conducted among 300 (100%) randomly selected patients, in the age groups ranging from 35 to 65 years. According to the gender, the study included 110 women (37%) and 189 (63%) men. Among the respondents, 104 respondents (35%) were diagnosed with degenerative changes, 87 (29%) of respondents were treated due to disc disease, 41 patients (14%) were diagnosed with sciatica, and 28 patients (9%) reported spondylolisthesis as the cause of their ailments. As the cause of their ailment, injury is given by 35 patients, who represent 11% of all respondents, other causes are declared by 6 patients, representing 2% of all surveyed. The detailed characteristics of the study population are presented in Table 1.

The study was conducted in sanatorium “The Wieniec-Zdrój spa”. Patients were included in the study based on the diagnosis of lumbar pain.

The severity of pain in patients with diagnosed pain syndrome of the lumbar spine was studied at two stages prior to and following sanatorium treatment using the Oswestry Disability Index Questionnaire. The tool

Table 1. Characteristics of the study population

Variable	N (%)
Gender	
Woman	111 (37)
Man	189 (63)
Age	
35–45	89 (30)
46–55	88 (29)
56–65	123 (41)
Type of work	
Physical	149 (49)
Mental	110 (37)
Does not work	41 (14)
Recognition	
Degenerative changes	104 (35)
Discopathy	87 (29)
Sciatica	41 (14)
Spondylolisthesis	28 (9)
Injuries	35 (11)
Other	6 (2)
Past operations	
Less than 6 months	14 (5)
From 3 years	67 (22)
Overthreeyears	15 (5)
Not applicable	204 (68)

applied allows to assess the impact of the dysfunction of the lumbar spine on the quality of life of the patient. The Oswestry Scale (ODI), is a 10-degree scale — allowing for evaluation of disability, which resulted from pains in the lumbar spine. The Oswestry Questionnaire includes questions on: pain intensity, daily activities of hygiene, carrying, walking, sitting, standing, sleeping, socializing, travelling, and the course of pain.

For the purposes of this study a part of the scale on the severity of pain has been applied. The analysis, included use of painkillers that were to affect directly the pain caused by pain syndromes of the lumbar spine.

The results were processed using Microsoft Excel 2000 and Statistica version 5.1. All statistical hypothesis were verified at the level of $p < 0.05$. Dependencies between variables were compared by means of the chi square test (χ^2).

The tests were carried out after having obtained the approval of the Bioethics Committee of Kuyavian-Pomeranian Regional Medical Chamber in Torun (34/KB/2013) and the Medical Director of the institution where the study was conducted.

Results

Before starting sanatorium treatment, the majority of respondents (37%) said that they took painkillers slightly contributing to the reduction of pain. Nevertheless, 32% of respondents believed that the pain that accompanied them, was a source of discomfort but did not require the use of drugs. In contrast, 17% of respondents felt that they did not have to take painkillers because the pain perceived was slight. The data are presented in Table 2.

Table 2. The severity of the pain in patients before treatment

Pain intensity	N	%
Pain is slight, I do not have to take pain medication	51	17
The pain is troublesome, but I do not take painkillers	95	32
Analgesics completely remove the pain	22	7
Analgesics partially endures pain	22	7
Analgesics slightly reduces pain	110	37
I do not use painkillers, which as such do not reduce pain	0	0

After the sanatorium treatment, most respondents (30%) said that they no longer needed to use analgesia. Another 69 patients (23%), despite slight pain, also did not have to take painkillers. There has been considerable progress in the case of an affirmative answer, that painkillers slightly reduce pain. After sanatorium treatment it was only 31 respondents (10%), whereas before treatment it was 110 patients. Detailed data are presented in Table 3.

Table 3. The severity of pain in patients after treatment

Pain intensity	N	%
Pain is slight, I do not have to take pain medication	89	30
The pain is troublesome, but I do not take painkillers	69	23
Analgesics completely remove the pain	60	20
Analgesics partially endures pain	51	17
Analgesics slightly reduces pain	31	10
I do not use painkillers, which as such do not reduce pain	0	0

Discussion

The main objective of the study was to evaluate the reduction of pain after sanatorium treatment. The analysis was undertaken at two stages — before and after

the sanatorium test, among patients with diagnosed pain syndrome of the lumbar spine.

According to the literature, sanatorium treatment affects the functional status of patients. The therapy implemented translates into a considerable extent into the physical, as well as into mental and social aspects. Demczyszak and others also indicate that the applied sanatorium treatment had a positive impact on the general condition of patients. Both in terms of physical and social improvement, which confirms the effectiveness of comprehensive treatment carried out [6]. The natural consequence of curative actions undertaken to patients with pain syndromes in the spine is a faster return to functioning independently and, therefore, increasing the independence of these patients [7]. Analysing the usability of studies on the reduction of pain after the sanatorium treatment applied, in the group of patients of the unit studied, it should be noted that they are beneficial to the purpose of the actions taken, which is to improve human functioning in various aspects of life. This frequently contributes to the return to the professional as well as social life. Depending on the severity of symptoms, improvement following the treatment applied may partially or completely reduce discomfort of patients [8,9].

The analysis of the Oswestry Questionnaire components when comparing pain perceived by patients before and after the treatment allows for the assessment of pain intensity. Considering the intensity of pain and use of analgesics it can be concluded that the sanatorium treatment increased the number of responses relating to the reduction of the severity of pain. Those surveyed, diagnosed with the lumbar spine pain determined that the pain following the treatment was slight and they did have to take painkillers by 13% less than before the treatment. However, they also responded that the painkillers completely/partially removed the pain more than twice as often after treatment. This is the result of the research applied. At this stage of research, we cannot determine how the study group would assess the effectiveness of the therapy after a certain time.

The use of the Oswestry Questionnaire aimed at the assessment of the degree of impairment of functional activity in patients with pain syndrome of the lumbar spine by the occurrence of pain can be found in the works of many authors. Analysing further the components of the questionnaire one can additionally use the total Oswestry Scale, in order to standardise the assessment.

Conclusions

1. The study clearly indicated the influence of the applied sanatorium treatment on pain.
2. The sanatorium treatment reduced sensation of pain following the treatment.
3. A large group of patients with a diagnosis of pain in the lumbar spine assessed after sanatorium treatment that painkillers completely removed the pain.

Implications for Nursing Practice

This paper presents issues concerning the impact of the sanatorium treatment on pain in the lumbar spine. The results of this work will allow to realise that the improvement in functioning and reduction of the symptoms of disease is not affected only by one of the chosen method of treatment. Multitasking of sanatorium treatment shows that it significantly affects the reduction of medication used or their effectiveness. Based on the findings, we can conclude that the severity of pain depends on the action taken. This knowledge will help nurses understand the need for a holistic patient care. The activities undertaken by nurses, starting from the interview, up to evaluation of the effects of the care implemented should cover all aspects of functioning. This would improve the quality of care and contribute to better effects of the actions introduced.

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Corresponding Author:

Anna Antczak
ul. Obrońców Wisły 1920 r. 21/25,
87-800 Włocławek, Poland
e-mail: antczak231@wp.pl

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Author Contributions: Anna Antczak^{A-E, H, I}, Beata Haor^{C, E, G}, Agnieszka Królikowska^{A, C, G, H}, Renata Jabłońska^{A, C, G, H}
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