Streszczenie w języku angielskim

Title: Effect of education on the rehabilitation outcome in patients hospitalised due to chronic obstructive pulmonary disease.

Introduction: Treatment designed for patients with COPD, in addition to pharmacotherapy, includes pulmonary and general rehabilitation which plays a key role in the process. Patient education is also an important component of physiotherapy. Analysis of earlier studies showed a research gap regarding the effect of comprehensive rehabilitation programs including patient education on the clinical outcomes in patients with COPD.

Aim of the study: The study aimed to compare the effects of two models of pulmonary rehabilitation, i.e. conventional and combined with patient education, and assess their effect on cardiorespiratory function, functional performance, self-care, quality of life and emotional status in patients hospitalised due to COPD.

Material and methods: The study involved 100 patients hospitalised due to COPD, including 38 women and 62 men. The participants were randomly assigned to two groups. The study group comprised patients receiving conventional pulmonary rehabilitation combined with educational activities (50 individuals), and the control group consisted of patients receiving conventional pulmonary rehabilitation exclusively (50 individuals). Three assessments were conducted: before the start of the rehabilitation program on the first day of hospitalisation; after the rehabilitation program was completed on the 14th day of hospitalization; and a follow-up two months after the end of hospitalisation. The tests were carried out to assess cardiorespiratory performance with the use of spirometry, acid-base balance (ABB), blood saturation (SpO2), heart rate (HR), as well as the scores on the Borg scale, and mMRC scale. Functional status was assessed with the 6MWT, and Fullerton Test whereas the patients' emotional status, self-care and quality of life were assessed using the HADS scale, IADL Scale and WHOQOL scale.

Results: In Assessment I the patients in both groups acquired similar scores ($p>0.05$). After the two-week rehabilitation process there were visible effects in both subgroups, however the scores were significantly better ($p<0.05$) in the group attending rehabilitation combined with patient education. The results related to dyspnoea severity in Assessment III show more sustained improvement in the group participating in the additional educational program ($p<0.0001$). Assessment of functional status showed beneficial effects of the therapy in both groups, however the results in the study group were better ($p<0.05$). The test assessing self-care

performance in patients who had received conventional rehabilitation with patient education, showed further improvement two months after the therapy reflected by the scores in activities of daily living ($p=0.0001$), whereas this effect was not observed in patients who had received conventional rehabilitation only ($p=0.4222$). Assessment of the quality of life showed better effects in all the domains in the patients from the study group ($p<0.05$). In the control group, Assessment III showed a decrease in quality of life in all the domains, whereas in patients attending rehabilitation with education, a decrease in quality of life was found only in the domain of activities in community settings ($p=0.0171$). Assessment of anxiety and depression, measured with HADS, showed better effects of the therapy in the study group ($p<0.0001$). In the follow-up assessment the results in the study group did not get significantly worse ($p=0.3914$), contrary to the control group ($p=0.0010$).

Conclusions: Pulmonary rehabilitation accompanied with patient education produces better results in terms of improving cardiorespiratory function, functional performance, self-care, quality of life and emotional status in patients hospitalised due to COPD, compared to conventional rehabilitation. By combining physiotherapy programs with patient education, it is possible to achieve long-term effects of treatment in patients, related to the functions investigated in this study.

Key words: chronic obstructive pulmonary disease, pulmonary rehabilitation, education