

IMPACT OF PULMONARY FUNCTION, DYSPNOEA, FATIGUE AND EXERCISE TOLERANCE ON DAILY PHYSICAL ACTIVITY IN PATIENTS WITH IDIOPATHIC PULMONARY FIBROSIS: A PILOT STUDY

Marcin Sikora¹, Dariusz Jastrzębski², Katarzyna Pilzak¹, Grażyna Osiadło³, Aleksandra Żebrowska¹, Dariusz Ziara²

¹ Department of Physiological and Medical Sciences, Academy of Physical Education, 72A Mikolowska Street, 40-065 Katowice, Poland

² Department of Lung Diseases and Tuberculosis, Faculty of Medical Sciences in Zabrze, Medical University of Silesia, 41-803 Zabrze, Poland

³ Department of Physiotherapy in Internal Diseases, The Jerzy Kukuczka Academy of Physical Education, 72A Mikolowska Street, 40-065 Katowice, Poland

Correspondence: m.sikora@awf.katowice.pl

This study aimed to determine the impact of pulmonary function, dyspnoea and fatigue of patients with idiopathic pulmonary fibrosis (IPF) on their physical activity.

Nineteen patients with IPF (mean age, 63.6 ± 8.2 years) and 16 healthy aged matched control group participated in the study. Spirometry, peak oxygen consumption (VO_2 peak), daily physical activity (PA) and the association between variables of physical functioning and dyspnoea, modified Borg score and fatigue questionnaire scores were compared between IPF and control group.

Daily physical activity and VO_2 peak were significantly lower in the IPF group than the control group ($p < 0.01$; $p < 0.001$). Significant correlations were observed between PA (steps/day) and VO_2 peak ($r = 0.59$, $p = 0.002$) and PA and anaerobic threshold ($r = 0.46$, $p = 0.02$). PA was negatively correlated with fatigue score ($r = -0.63$, $p = 0.01$) and with Borg score ($r = -0.44$; $p = 0.02$).

This study revealed a substantial reduction in daily physical activity in IPF patients compared with predicted values. Low aerobic performance, dyspnoea and fatigue were the main determinants associated with patients daily physical activity decline. These preliminary findings highlight the requirement for further studies on the effects of rehabilitation programmes on patients physical health.