



Tolerisanje napora i dispnoja kod bolesnika sa hroničnom opstruktivnom bolešću pluća

Exercise tolerance and dyspnea in patients with chronic obstructive pulmonary disease

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Apstrakt

Uvod/Cilj. Periferna mišićna slabost i nutritivni poremećaji, pre svega gubitak u telesnoj masi, često su prisutni kod bolesnika sa hroničnom opstruktivnom bolešću pluća (HOBP). Cilj ovog rada bio je da pokaže uticaj parametara plućne funkcije, nutritivnog statusa i perifernih skeletnih mišića na tolerisanje napora i pojavu dispnoje kod bolesnika sa HOBP. **Metode.** Ispitivanjem je bilo obuhvaćeno 30 bolesnika sa HOBP u stabilnoj fazi bolesti. Za procenu plućne funkcije korišćeni su spirometrija, telesna pletizmografija i merenje difuzijskog kapaciteta pluća. Tolerisanje napora procenjeno je pomoću šestominutnog testa hodanja (6MWD). Step en težine dispnoje meren je pomoću Borgove skale. Kod svih bolesnika urađeno je merenje površine poprečnog preseka mišića desne natkolene regije (MTCSA) pomoću kompjuterizovane tomografije. Za procenu nutritivnog statusa korišćen je indeks telesne mase (*body mass index* – BMI). **Rezultati.** Utvrđena je statistički značajna korelacija između parametara plućne funkcije i tolerisanja napora. Step en opstrukcije disajnih puteva i hiperinflacija pluća značajno su uticali na step en dispnoje u miru, a naročito nakon opterećenja. Utvrđena je značajna korelacija između MTCSA i tolerisanja napora. Bolesnici sa izraženijom bronhoopstrukcijom, hiperinflacijom pluća i sniženim difuzijskim kapacitetom pluća imali su značajno nižu MTCSA. **Zaključak.** Tolerisanje napora kod bolesnika sa HOBP zavisi od težine bronhoopstrukcije, hiperinflacije pluća i MTCSA. Težina bronhoopstrukcije i hiperinflacije pluća značajno utiču na nivo dispnoje.

Ključne reči:

pluća, opstruktivne bolesti, hronične; respiratorna funkcija, testovi; mišići, atrofija; ishrana, poremećaji; napor, fizički.

Abstract

Background/Aim. Peripheral muscle weakness and nutritional disorders, firstly loss of body weight, are common findings in patients with chronic obstructive pulmonary disease (COPD). The aim of this study was to analyse the impact of pulmonary function parameters, nutritional status and state of peripheral skeletal muscles on exercise tolerance and development of dyspnea in COPD patients. **Methods.** Thirty COPD patients in stable state of disease were analyzed. Standard pulmonary function tests, including spirometry, body pletysmography, and measurements of diffusion capacity were performed. The 6-minute walking distance test (6MWD) was done in order to assess exercise tolerance. Level of dyspnea was measured with Borg scale. In all patients mid thigh muscle cross-sectional area (MTCSA) was measured by computerized tomography scan. Nutritional status of patients was estimated according to body mass index (BMI). **Results.** Statistically significant correlations were found between parameters of pulmonary function and exercise tolerance. Level of airflow limitation and lung hyperinflation had significant impact on development of dyspnea at rest and especially after exercise. Significant positive correlation was found between MTCSA and exercise tolerance. Patients with more severe airflow limitation, lung hyperinflation and reduced diffusion capacity had significantly lower MTCSA. **Conclusion.** Exercise tolerance in COPD patients depends on severity of bronchoobstruction, lung hyperinflation and MTCSA. Severity of bronchoobstruction and lung hyperinflation have significant impact on dyspnea level.

Key words:

pulmonary disease, chronic obstructive; respiratory function tests; muscular disorders, atrophic; nutrition disorders; exertion.

