Abstract

Objectives: to evaluate the concurrent validity of the six-minute step test (6MST) in assessing exercise capacity of COPD patients using the six-minute walk test (6MWT) as a gold-standard. The predictive validity of the 6MST was assessed to determine a cut-off point for identification of low exercise capacity. Method: thirty-two COPD patients (50-87 years old) with mild to very severe obstruction performed the 6MST and 6MWT twice. Results: Concurrent validity: a strong positive correlation (Pearson) between the number of ascents on the first (T1), second (T2) and the best of both (T1 or T2) tests during the 6MWT was observed. Although a moderate negative correlation with BODE index and FEV1 was found, it was considered insufficient to test the validity, therefore ROC curves were not applied. The predictive validity (ROC) of the 6MST to identify low physical capacity (compared with the 6MWT) using the performance of T1 or T2, or solely T1 was considered accurate, and the area under the curve was 0.8 (IC95% 0.62-0.98) and 0.85 (IC95% 0.70-0.99), respectively. To classify patients, the cut-off points of 86 and 78 steps were chosen, with both values showing 90% of sensitivity and specificity of 64% and 68% for T1 or T2, or solely T1, respectively. Conclusion: The number of steps on the 6MST was valid to verify exercise capacity in COPD patients and the cut-off point of 78 steps was able to identify patients with poor exercise tolerance. Values under this cut-off point are considered to identify patients with a poorer prognosis.

Keywords

Keywords, COPD, physical therapy, validity, exercise test.