Relationship between 1-minute and 5-repetition sit-to-stand tests in COPD

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Abstract

One-minute sit-to-stand test (1-min STST) is a measure of exercise capacity that is strongly correlated with mortality in Chronic Obstructive Pulmonary Disease (COPD). When compared with the 6-minute walk test (6MWT) or the Incremental shuttle walk test (ISWT), the 1-min STST has the advantage of requiring only limited space, which makes it feasible in most healthcare settings. Although practical, this test is highly demanding for some patients. The five-repetition sit-to-stand test (5STST) is quicker and has also been correlated with the ISWT. If correlated with the 1-min STST, the 5STST might be a simpler measure to apply in some patients. This study aimed to assess correlations between the 1-min STST and the 5STST.

Patients with COPD were recruited from routine pulmonology appointments and primary care centres in Aveiro, Portugal. Assessments included the 5STST and the 1-min STST. Correlations among tests were assessed with the Spearman correlation coefficient.

66 patients with COPD (66±10yrs; 74%male; FEV1 60±28%predicted) participated. A high negative and significant correlation was found between the 5STS and the 1-min STST (rs=-0.778, p<0.001) (Figure 1).
5STST is a simple and quick measure to consider if the aim is to screen patients’ functional exercise capacity. This test might be a good alternative to use in clinical practice, especially in more severe patients. More studies are needed to support these findings.

Footnotes

This abstract was amended on 27 December 2017 to correct an error in the author list.

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