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Título	Evaluation of respiratory dynamics by volumetric capnography during submaximal exercise protocol of six minutes on treadmill in cystic fibrosis patients
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Resumo	Objectives: Volumetric capnography provides the standard CO2 elimination by the volume expired per respiratory cycle and is a measure to assess pulmonary involvement. Thus, the objective of this study was to evaluate the respiratory dynamics of healthy control subjects and those with cystic fibrosis in a submaximal exercise protocol for six minutes on the treadmill, using volumetric capnography parameters (slope 3 [Slp3], Slp3/tidal volume [Slp3/TV], and slope 2 [Slp2]). Methods: This was a cross-sectional study with 128 subjects (cystic fibrosis, 64 subjects; controls, 64 subjects]. Participants underwent volumetric capnography before, during, and after six minutes on the treadmill. Statistical analysis was performed using the Friedman, Mann–Whitney, and Kruskal–Wallis tests, considering age and sex. An alpha = 0.05 was considered. Results: Six minutes on the treadmill evaluation: in cystic fibrosis, volumetric capnography parameters were different before, during, and after six minutes on the treadmill; the same was observed for the controls, except for Slp2. Regarding age, an Slp3 difference was observed in cystic fibrosis patients regardless of age, at all moments, and in controls for age ≥ 12 years; a difference in Slp3/TV was observed in cystic fibrosis and controls, regardless of age; and an Slp2 difference in the cystic fibrosis, regardless of age. Regarding sex, Slp3 and Slp3/TV differences were observed in cystic fibrosis regardless of sex, and in controls in male participants; an Slp2 difference was observed in the cystic fibrosis and female participants. The analysis between groups (cystic fibrosis and controls) indicated

	that Slp3 and Slp3/TV has identified the CF, regardless of age and sex, while the Slp2 showed the CF considering age. Conclusions: Cystic fibrosis showed greater values of the parameters before, during, and after exercise, even when stratified by age and sex, which may indicate ventilation inhomogeneity in the peripheral pathways in the cystic fibrosis.
Fomento	