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Title: Effects of self-administered chest physiotherapy (SA-CP) in patients with non-cystic fibrosis bronchiectasis

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Body: Bronchiectasis is a disorder characterized by the abnormal dilation of the bronchi caused by different diseases. SA-CP is considered an essential part of the treatment of these patients. There are still controversial issues on the most appropriate techniques to be applied. Aim: To analyze the effects of SA-CP program in non-cystic fibrosis bronchiectasis (BCH) patients. Method: Although the study initially included 19 BCH patients (73±9ys), only 14 (72±10ys) finished it. They were evaluated at baseline, 3 months later, and again at the end of 3 months SA-CP. This program consisted of a 1 day training period in-hospital followed by in-home sessions (2times/day/3months) of expiration with the glottis open in the lateral posture (ELTGOL) and active cycle of breathing technique (ACTB). Anthropometry, lung and respiratory muscle function, quality of life (QoL), and systemic inflammation were assessed. Result: Baseline: Stable BCH patients showed mild inspiratory muscle dysfunction (MIP 73±11%); poor QoL (SGRQ 51±18), elevated systemic inflammation (ESR 31±17mm/h, nv < 20). 3 months later: patients showed a reduction in MIP. SA-CP resulted in an increase in MIP, a decrease in systemic inflammation and a clinical improvement in QoL.

Effects of Chest Physiotherapy in patients with non-cystic fibrosis bronchiectasis

	Pre.Treatment	Post-Treatment	
SGRQ, total score	51±19	47±17	ns
MIP, %pred	64±14	75±17	*
IFN-γ, pg/ml	157±63	48±43	**
TNF-α, pg/ml	75±20	29±14	**
MIF, pg/ml	1024±461	668±201	*

Conclusion: Stable BCH patients have inspiratory muscle dysfunction, systemic inflammation and poor QoL. SA-CP techniques (ETGOL&ACBT) reduce systemic inflammation, improve inspiratory muscle function and QoL.