

Brief Report

The Effect of 20-Minute Mindful Breathing on the Rapid Reduction of Dyspnea at Rest in Patients With Lung Diseases: A Randomized Controlled Trial



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Abstract

Context. Dyspnea is a common and distressing symptom in respiratory diseases. Despite advances in the treatment of various lung diseases, the treatment modalities for dyspnea remain limited.

Objectives. This study aims to examine the effect of 20-minute mindful breathing on the rapid reduction of dyspnea at rest in patients with lung cancer, chronic obstructive pulmonary disease, and asthma.

Methods. We conducted a parallel-group, nonblinded, randomized controlled trial of standard care plus 20-minute mindful breathing vs. standard care alone for patients with moderate to severe dyspnea due to lung disease, named previously, at the respiratory unit of University Malaya Medical Centre in Malaysia, from August 1, 2017, to March 31, 2018.

Results. Sixty-three participants were randomly assigned to standard care plus a 20-minute mindful breathing session ($n = 32$) or standard care alone ($n = 31$), with no difference in their demographic and clinical characteristics. There was statistically significant reduction in dyspnea in the mindful breathing group compared with the control group at minute 5 ($U = 233.5$, $n_1 = 32$, $n_2 = 31$, mean rank₁ = 23.28, mean rank₂ = 37.72, $z = -3.574$, $P < 0.001$) and minute 20 ($U = 232.0$, $n_1 = 32$, $n_2 = 31$, mean rank₁ = 23.00, mean rank₂ = 36.77, $z = -3.285$, $P = 0.001$).

Conclusion. Our results provide evidence that a single session of 20-minute mindful breathing is effective in reducing dyspnea rapidly for patients with lung cancer, chronic obstructive pulmonary disease, and asthma. *J Pain Symptom Manage* 2019;57:802–808. © 2019 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Mindfulness breathing, dyspnea, palliative, lung cancer, chronic obstructive pulmonary disease, asthma

Introduction

Dyspnea is defined by The American Thoracic Society as a subjective experience of breathing discomfort that consists of qualitatively distinct sensations that vary in intensity.¹ It arises from interactions among multiple physiological, psychological, social, and environmental factors and may induce secondary physiological and behavioral

responses.^{1,2} Although the underlying mechanisms of dyspnea have not been fully elucidated, the prevailing theory suggests dyspnea is a result of a neuromechanical dissociation, in which there is a mismatch between the motor command and the sensory feedback.^{3,4} In other words, dyspnea occurs when the need of breathing is not met by the work of breathing.

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