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PP - 003

The effects of Noninvasive positive pressure ventilation on arterial blood gas analysis and cytokines in the patients with chronic obstructive pulmonary disease with acute exacerbation

Shen Yang

Shengjing Hospital of China Medical University

Abstract

Objective: The efficacy of noninvasive positive pressure ventilation (NPPV) to the patients with acute exacerbation of COPD (AECOPD) has been affirmed, but the exact mechanism is not entirely clear, this experiment will study the effects of NPPV on arterial blood gas analysis and cytokines in patients with AECOPD. To further explore the mechanism of the noninvasive positive pressure ventilation (NPPV) in treatment of chronic obstructive pulmonary disease in patients with acute exacerbation.

Methods: 30 AECOPD patients were randomly divided into two groups, with 15 cases in each, group I(NPPV group) were treated with conventional drug combination NPPV therapy, group II(conventional treatment group) patients were treated with conventional drugs such as bronchodilator, theophylline, corticosteroids and antibiotics. Medical Research Council Dyspnea Scale (MRC) score, arterial blood gas analysis results and the levels of IL-6, IL-8, TNF- α in sputum were recorded before treatment and 72 hours after treatment.

Results: Breathing difficulties were significantly alleviated and arterial blood gas results were improved in two groups of patients after treatment, in the sputum IL-6, IL-8, TNF alpha levels were decreased than that before treatment in two groups, especially in the NPPV group.

Conclusions: NPPV can improve arterial blood gas in AECOPD patients, and may reduce the AECOPD patients with systemic inflammatory response and relieve dyspnea through the inhibition of cytokines and the corresponding marker.