

The Role of Chest Physiotherapy in Prevention of Postextubation Atelectasis in Pediatric Patients with Neuromuscular Diseases

How to Cite This Article: Bilan N, Poorshiri B. The Role of Chest Physiotherapy in Prevention of Postextubation Atelectasis in Pediatric Patients with Neuromuscular Diseases. *Iran J Child Neurol*. 2013 winter; 7 (1):21-24.

*Nemat BILAN MD¹,
Bita POORSHIRI MD²*

1. Professor of Pediatric Pulmonology, Paediatric Health Research Center, Department of Pediatrics, Tabriz University of Medical Sciences, Tabriz, Iran
2. Resident of Pediatrics, Department of Pediatrics, Tabriz University of Medical Sciences, Tabriz, Iran

Corresponding Author:
Bilan N. MD
Paediatric Health Research Center,
Department of Pediatrics,
Tabriz University of Medical
Sciences, Tabriz, Iran
Email: bilannemat@yahoo.co.uk,
bilan@tbzmed.ac.ir

Received: 2-Jan-2012
Last Revised: 23-Jun-2012
Accepted: 15-Jul-2012

Abstract

Objective

There are controversial findings in the literature on the effects of chest physiotherapy on postextubation lung collapse in pediatric age group. Therefore, we aimed to investigate the efficacy of chest physiotherapy in prevention of postextubation atelectasis in pediatric patients.

Materials & Methods

In a case-control study from March 2007 to March 2011, two groups of patients (35 patients in each group) susceptible to lung collapse were enrolled in the study. The studied patients had neuromuscular diseases such as spinal muscular atrophy, Guillain-Barre syndrome, critical illness polyneuropathy/myopathy, and cerebral palsy. The patients were randomly divided into two groups (case and control); The case group underwent daily chest physiotherapy through vibrator and chest percussion and the control group was under supervision. In the latter group, the underlying disease was treated and the lung collapse was managed, if occurred.

Results

The frequency of atelectasis was lower in the case group who received prophylactic chest physiotherapy compared to the control group (16.6% vs. 40%).

Conclusion

Chest physiotherapy as well as appropriate and regular change of position can considerably reduce the rate of pulmonary collapse in pediatric patients.

Keywords: Chest physiotherapy; Atelectasis; Postextubation