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Effectiveness of airway clearance techniques in children hospitalized with acute bronchiolitis.

Van Ginderdeuren F1,2, Vandenplas Y3, Deneyer M3, Vanlaethem S2, Buyl R4, Kerckhofs E1.

Department of Physiotherapy, Academisch Ziekenhuis, Vrije Universiteit Brussel (VUB), Laarbeeklaan 101, B-1090, Brussels, Belgium.filip.vanginderdeuren@az.vub.ac.be

Author information

Abstract

OBJECTIVE:
To evaluate the effectiveness of two airway clearance techniques (ACT's) in children <24 months hospitalized with mild to moderate bronchiolitis.

DESIGN:
One hundred and three children were randomly allocated to receive one 20-min session daily, either assisted autogenic drainage (AAD), intrapulmonary percussive ventilation (IPV), or bouncing (B) (control group), ninety-three finished the study.

OUTCOME MEASURES:
Mean time to recovery in days was our primary outcome measure. The impact of the treatment and the daily improvement was also assessed by a validated clinical and respiratory severity score (WANG score), heart rate (HR), and oxygen saturation (SaO2).

RESULTS:
Mean time to recovery was 4.5 ± 1.9 days for the control group, 3.6 ± 1.4 days, $P < 0.05$ for the AAD group and 3.5 ± 1.3 days, $P = 0.03$ for the IPV group. Wang scores improved significantly for both physiotherapy techniques compared to the control group.

CONCLUSION:
Both ACT's reduced significantly the length of hospital stay compared to no physiotherapy. Pediatr Pulmonol. 2017;52:225-231. © 2016 Wiley Periodicals, Inc.

KEYWORDS:
airway clearance techniques; autogenic drainage; bronchiolitis; intrapulmonary percussive ventilation; respiratory physiotherapy