

[Intervention Review]

Chest physiotherapy for acute bronchiolitis in paediatric patients between 0 and 24 months old

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Abstract

Background

Acute bronchiolitis is the leading cause of medical emergencies during winter in children younger than two years of age. Chest physiotherapy is thought to assist infants in the clearance of secretions and to decrease ventilatory effort.

Objectives

To determine the efficacy and safety of chest physiotherapy in infants aged less than 24 months old with acute bronchiolitis.

Search strategy

In June 2006 we updated the searches of the Cochrane Central Register of Controlled Trials (CENTRAL) (*The Cochrane Library* 2006, issue 2); MEDLINE (2004 to May Week 4 2006); EMBASE (July 2004 to December 2005) and CINAHL (1982 to May Week 4 2006).

Selection criteria

Randomised controlled trials (RCTs) in which chest physiotherapy was compared against no intervention or against another type of physiotherapy in paediatric patients younger than 24 months old.

Data collection and analysis

Two review authors independently extracted the data. The primary outcome was a severity clinical score. Secondary outcomes were length of hospital stay, duration of oxygen supplementation, and the use of bronchodilators and steroids.

Main results

Three clinical trials met the inclusion criteria. All evaluated vibration and percussion techniques with children in postural drainage positions compared to no intervention. The study populations were hospitalised infants with a clinical diagnosis of acute bronchiolitis, although one study included only infants who required nasogastric tube feeding or intravenous fluids. None of the other included trials observed any differences in the severity of the clinical score at day five, during each of the five days of the trial, or until discharge; length of hospital stay; or oxygen requirements between paediatric patients receiving chest physiotherapy and control.

Authors' conclusions

Based on the results of three RCTs, chest physiotherapy using vibration and percussion techniques does not reduce length of hospital stay, oxygen requirements, or improve the severity clinical score in infants with acute bronchiolitis. These were infants who were not on mechanical ventilation and who did not have any other co-morbidity. Chest physiotherapy using forced expiratory techniques needs to be further evaluated by clinical research.

Plain language summary

Chest physiotherapy for acute bronchiolitis in children younger than two years of age

Acute bronchiolitis is a frequent viral respiratory infection in children younger than two years old. Most children have a mild disease and do not require hospitalisation. Those who do need to be hospitalised sometimes have difficulties clearing phlegm, thick mucous respiratory secretions because of the infection. It has been proposed that chest physiotherapy may assist in the clearance of the respiratory secretions and improve breathing. This review looked at the effectiveness of chest physiotherapy in acute bronchiolitis. Chest physiotherapy does not reduce the length of hospital stay for infants with acute bronchiolitis. There is no good evidence for or against the improvement of clinical scores. Further research is needed to assess the efficacy of chest physiotherapy in this condition.