Cochrane Database of Systematic Reviews - - Cochrane Review

Standard (head-down tilt) versus modified (without head-down tilt) postural drainage in infants and young children with cystic fibrosis

Code: CD010297 **Year:** 2018 **Date:** 2015 - updated: 19 JUN 2017 **Author:** Freitas Diana A

Study design (if review, criteria of inclusion for studies)

Randomised controlled trials

List of included studies (2)

Button 2003; Doumit 2011

Participants

infants and young children up to six years old with cystic fibrosis

Interventions

standard postural drainage (greater (30° to 45° head down tilt) and lesser (15° to 20° head down tilt)) vs modified postural drainage (without head down tilt)

Outcome measures

Primary outcome: appearance or exacerbation of gastroesophageal reflux episodes (number and duration of episodes) identified by clinical symptoms (e.g. vomiting, regurgitation, rumination) or clinical tests.

Main results

Two studies, involving a total of 40 participants, were eligible for inclusion in the review. We included no new studies in the 2018 update. The included studies were different in terms of the age of participants, the angle of tilt, the reported outcomes, the number of sessions and the study duration. The following outcomes were measured: appearance or exacerbation of gastroesophageal reflux episodes; percentage of peripheral oxygen saturation; number of exacerbations of upper respiratory tract symptoms; number of days on antibiotics for acute exacerbations; chest X-ray scores; and pulmonary function tests. One study reported that postural drainage with a 20Â° head-down position did not appear to exacerbate gastroesophageal reflux. However, the majority of the reflux episodes in this study reached the upper oesophagus (moderate-quality evidence). The second included study reported that modified postural drainage (30Â° head-up tilt) was associated with fewer number of gastroesophageal reflux episodes and fewer respiratory complications than standard postural drainage (30Â° head-down tilt) (moderate-quality evidence). The included studies had an overall low risk of bias. One included study was funded by the Sydney Childrenâ€™s Hospital Foundation and the other by the Royal Childrenâ€™s Hospital Research Foundation and Physiotherapy Research Foundation of Australia. Data were not able to be pooled by meta-analysis due to differences in the statistical presentation of the data.

Authors' conclusions

The limited evidence regarding the comparison between the two regimens of postural drainage is still weak due to the small number of included studies, the small number of participants assessed, the inability to perform any meta-analyses and some methodological issues with the studies. However, it may be inferred that the use of a postural regimen with a 30° head-up tilt is associated with a lower number of gastroesophageal reflux episodes and fewer respiratory complications in the long term. The 20° head-down postural drainage position was not found to be significantly different from the 20° head-up tilt modified position. Nevertheless, the fact that the majority of reflux episodes reached the upper oesophagus should make physiotherapists carefully consider their treatment strategy. We do not envisage that there will be any new trials undertaken that will affect the conclusions of this review; therefore, we do not plan to update this review.

http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD010297.pub3/abstract

See also

Freitas DA, Chaves GSS, Santino TA, Ribeiro CTD, Dias FAL, Guerra RO, Mendonça KMPP. Standard (head-down tilt) versus modified

(without head-down tilt) postural drainage in infants and young children with cystic fibrosis. Cochrane Database of Systematic Reviews 2018, Issue 3. Art. No.: CD010297. DOI: 10.1002/14651858.CD010297.pub3.

Keywords

Airway clearance technique; Child; Drainage; non pharmacological intervention - devices OR physiotherapy; Postural Drainage; Chest physiotherapy;