primary studies - published RCT

Chest physiotherapy during anesthesia for children with cystic fibrosis: effects on respiratory function.

Code: PM17968997 **Year:** 2007 **Date:** 2007 **Author:** Tannenbaum E

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

RCT

Participants

18 CF children, mean age 12 years (range 2.8-15 years) were recruited, with 9 in each group.

Interventions

Children were randomized either to receive physiotherapy or not following anesthesia and intubation.

Outcome measures

Respiratory mechanics (C(rs) and R(rs)), tidal volume, and peak inspiratory pressure (PIP) were measured immediately before and after physiotherapy. FEV(1) was measured before and after surgery and post-operative physiotherapy requirements were recorded.

Main results

Both groups showed a non-significant decline in FEV(1) the day after surgery compared with pre-operative values (-5.8%: physiotherapy and -7.1%: control). Both PIP and R(rs) increased significantly following physiotherapy (within- and between-groups, P

Authors' conclusions

The unanticipated decline in respiratory function immediately following physiotherapy was short-lived and not discernible in longer term outcomes measured by FEV(1) or physiotherapy requirements post-operatively. If respiratory physiotherapy under anesthesia is considered necessary and the benefits of removing secretions are deemed to outweigh the short-term risks, it may be necessary for the anaesthetist to consider modifying ventilatory support to counteract any short-term negative effects of the treatment.

http://dx.doi.org/10.1002/ppul.20710

See also

Pediatr Pulmonol. 2007 Dec;42(12):1152-8.

Keywords

Adolescent; Anaesthesia; Child; Intraoperative Care; non pharmacological intervention - devices OR physiotherapy; non pharmacological intervention - surg; pharmacological_intervention;