primary studies - published, non RCT

The intrapulmonary percussive ventilator and flutter device compared to standard chest physiotherapy in patients with cystic fibrosis.

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Interventions

Two devices, the intrapulmonary percussive ventilator (IPV) and the Flutter device (Flutter) have been promoted for this purpose. This study compares these devices to standard, manual CPT.

Outcome measures

sputum quantity, oxygen saturation, pulmonary function, adverse effects

Main results

There was no difference in sputum quantity produced with any method studied. Transiently lower oxygen saturation was noted with standard CPT compared with the IPV and Flutter. Inconsistent but significant improvements in flow rates were noted with the two devices compared to standard CPT. Important trends to lower lung volumes, probably indicating decreased air trapping, were also noted with all three therapies at 1 and 4 hours after administration. There were no adverse effects with any treatment regimen.

Authors' conclusions

Larger and longer studies of these devices compared to standard CPT and with each other are warranted to assess their value for independent administration of CPT in CF patients and to determine long-term effects on maintenance of pulmonary function.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/392/CN-00200392/frame.html

See also

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Keywords

Adolescent; Adult; Airway clearance technique; Child; flutter; Inhalation OR nebulised; Intrapulmonary; nebuliser; non pharmacological intervention - devices OR physiotherapy; Percussion; pharmacological_intervention; Ventilators; Ventilators- Mechanical; oscillating devices; Chest physiotherapy; Respiratory System Agents; Artificial Ventilation; Respiratory Tract Diseases; Intrapulmonary Percussive Ventilation;