



High frequency percussive ventilation in burn patients: hemodynamics and gas exchange.

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High frequency percussive ventilation (HFPV) is a recent ventilatory mode, which combines conventional cycles with high frequency percussions. HFPV was initially instituted as salvage therapy after acute respiratory failure following smoke inhalation injury achieving in each case a dramatic improvement of blood oxygenation, PaCO₂ and ventilatory pressures. This study investigates the influence of HFPV on hemodynamics, blood oxygenation and ventilatory parameters in eight stable ICU burn patients requiring artificial ventilatory support during a postoperative period following traumatic injury. Periods of 2h were analysed receiving conventional ventilation and HFPV with a high frequency of 400 and 800 cycles/min. Hemodynamic data were not significantly modified; peak inspiratory pressure was significantly lower under HFPV but mean airway pressure was unchanged. Blood oxygenation and CO₂ elimination were significantly improved under HFPV. No side effects were noted. These observations suggest that HFPV could improve pulmonary gas exchanges under lower peak pressures and without hemodynamic compromise. HFPV could represent an interesting alternative open lung strategy method to improve alveolar recruitment.

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