Feasibility, safety, and patient acceptability of electronic inspiratory muscle training in patients who require prolonged mechanical ventilation in the intensive care unit: a dual-centre observational study



The questions

Is electronic inspiratory muscle training (eIMT):

- safe and feasible for patients who have experienced prolonged mechanical ventilation?
- acceptable from the perspective of a patient who requires prolonged mechanical ventilation?





The study

40 patients who were receiving mechanical ventilation across two hospital ICUs were given daily training consisting of five sets of six breaths at the maximum tolerable load using an eIMT device.

The results

The intervention was shown to be:

- feasible—with 81% of planned sessions completed
- safe—in about 10% of the sessions minor adverse events occurred, which were transient with no clinical consequence
- acceptable to patients—over 85% reported that eIMT was helpful, beneficial and assisted their recovery



Clinical implications





eIMT is feasible, safe and acceptable with critically ill participants who require prolonged mechanical ventilation.

Further studies are underway to evaluate the effectiveness of eIMT in patients during and after mechanical ventilation in the ICU.

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