

Early activity is feasible and safe in respiratory failure patients*

[Clinical Investigations]

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Abstract

Objective: To determine whether early activity is feasible and safe in respiratory failure patients.

Design: Prospective cohort study.

Setting: From June 1, 2003, through December 31, 2003, we assessed safety and feasibility of early activity in all consecutive respiratory failure patients who required mechanical ventilation for >4 days admitted to our respiratory intensive care unit (RICU). A majority of patients were treated in another intensive care unit (ICU) before RICU admission. We excluded patients who required mechanical ventilation for ≤ 4 days.

Patients: Eight-bed RICU at LDS Hospital.

Interventions: We assessed patients for early activity as part of routine respiratory ICU care. We prospectively recorded activity events and adverse events. We defined three activity events as sit on bed, sit in chair, and ambulate. We defined six activity-related adverse events as fall to knees, tube removal, systolic blood pressure >200 mm Hg, systolic blood pressure <90 mm Hg, oxygen desaturation <80%, and extubation.

Measurements and Main Results: During the study period, we conducted a total of 1,449 activity events in 103 patients. The activity events included 233 (16%) sit on bed, 454 (31%) sit in chair, and 762 (53%) ambulate. In patients with an endotracheal tube in place, there were a total of 593 activity events, of which 249 (42%) were ambulation. There were <1% activity-related adverse events, including fall to the knees without injury, feeding tube removal, systolic blood pressure >200 mm Hg, systolic blood pressure <90 mm Hg, and desaturation <80%. No patient was extubated during activity.

Conclusions: We conclude that early activity is feasible and safe in respiratory failure patients. A majority of survivors (69%) were able to ambulate >100 feet at RICU discharge. Early activity is a candidate therapy to prevent or treat the neuromuscular complications of critical illness.

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