Occupational therapy for delirium management in elderly patients without mechanical ventilation in an intensive care unit: A pilot randomized clinical trial

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Abstract

Purpose: Delirium has negative consequences such as increased mortality, hospital expenses and decreased cognitive and functional status. This research aims to determine the impact of occupational therapy intervention in duration, incidence and severity of delirium in elderly patients in the intensive care unit; secondary outcome was to assess functionality at hospital discharge.

Methods: This is a pilot randomized clinical trial of patients without mechanical ventilation for 60 years. Patients were assigned to a control group that received standard strategies of prevention (n = 70) or to an experimental group that received standard strategies plus occupational therapy twice a day for 5 days (n = 70). Delirium was valued with Confusion Assessment Method and Delirium Rating Scale, and functional outcomes at discharge with Functional Independence Measure, Hand Dynamometer, and Mini-Mental State Examination.

Results: A total of 140 participants were recruited. The experimental group had lower duration (risk incidence ratios, 0.15 [P = .000; 95% confidence interval, 0.12-0.19] vs 6.6 [P = .000, 95% confidence interval, 5.23-8.3]) and incidence of delirium (3% vs 20%, P = .001), and had higher scores in Motor Functional Independence Measure (59 vs 40 points, P < .0001), cognitive state (MMSE: 28 vs 26 points, P < .001), and grip strength in the dominant hand (26 vs 18 kg, P < .05), compared with the control group.

Conclusions: Occupational therapy is effective in decreasing duration and incidence of delirium in nonventilated elderly patients in the intensive care unit and improved functionality at discharge.

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1. Introduction

Delirium is a frequent complication in the intensive care unit (ICU), with an incidence of 45% to 87% [1]. In nonventilated elderly ICU patients, the incidence of delirium is 20% to 56% [2,3]. Delirium’s negative impact has been widely documented in the medical literature. It has been associated with increased mortality and morbidity, longer hospital stays, and motor, cognitive, and functional decline [2,4-7]. Some studies suggest that the duration of delirium affects patients’ survival, increasing mortality by 11% for every 48 hours that delirium persists [7]. Therefore, preventing and managing delirium is fundamental to reducing its negative impact, and it has been estimated that up to 40% of cases are preventable in non-ICU patients [8]. Pharmacologic protocols were proposed, including low doses of haloperidol, but they did not show categorical evidence to support delirium prevention [9]. Nonpharmacologic strategies have been recommended in the ICU, including measures for improving sleep (reducing noise and night procedures), developing protocols for bundles of sedation interruption, spontaneous breathing trials, early mobilization, and delirium monitoring [8,10,11].