Effect of the Nurse-directed Weaning Readiness Assessment on the Duration of Mechanical Ventilation: A Randomized Clinical Trial

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Abstract

Background and Objectives: Assessment of patient readiness for weaning from mechanical ventilation is an important phase in the weaning process. The aim of this study was to determine the effect of the nurse-directed patient readiness assessment for weaning on duration of mechanical ventilation in the intensive care unit.

Methods: In this clinical trial study, 50 intensive care units patients who needed mechanical ventilation for more than 48 hours were selected using convenient sampling method, and randomly divided into two 25-person groups. Burn’s weaning readiness assessment questionnaire were used for intervention group, and the control group were weaned from the system according to routine method of the unit. The findings were analyzed with the aid of descriptive statistical methods, independent t-tests, chi-square and Pearson’s correlation. Significance level was considered to be 0.05.

Results: The mean duration of mechanical ventilation in the intervention group was significantly lower than that of the control group (p<0.03). Also, there was a significant inverse relationship between Burn’s checklist scores and the duration of mechanical ventilation (p<0.04, r=-0.263).

Conclusion: The results of this study showed that assessment of the patient’s readiness for weaning from mechanical ventilation by nurse is a safe method in day time and shortens the duration of mechanical ventilation in intensive care units compared to the routine methods.

Keywords: Ventilator Weaning; Patients; Mechanical Ventilation; A Randomized Clinical Trial.