

Functional Status and Quality of Life in Ventilator-Dependent Patients

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Purposes: In the present study, we evaluated the functional status and quality of life (QOL) in ventilator-dependent patients using standardized measurement tools. The reliability of these tools and relationships between them were also examined. **Methods:** Twenty-nine ventilator-dependent patients with clear consciousness at three respiratory care settings (respiratory care center, general wards of a medical center and a regional hospital, and respiratory care ward of a local hospital) were interviewed. Measurement tools employed in the interview process included the Barthel Index (BI) and Functional Independence Measure (FIM) for functional status measurement, and Short-Form 36 Items Health Survey (SF-36) for generic QOL assessments. Eighteen patients were interviewed twice in one-week period to measure the test-retest reliability. **Results:** The average age of the subjects was 73.5 ± 11.5 years. Seventy percent of the patients were over 70 years old, 45% of them had been using ventilator for more than half a year, and 52% of them had a chronic obstructive pulmonary disease (COPD). The results were as follows: The mean BI score was 2.1 ± 3.9 . The mean scores on the motor and cognitive domains of the FIM were 20.4 ± 14.6 and 18.6 ± 6.3 , respectively. The mean scores on the physical and mental domains of the SF-36 were 21.5 ± 7.6 and 42.0 ± 10.3 , respectively. Scores on FIM and SF-36 were not significantly different across groups categorized by age, diagnosis, or duration on mechanical ventilator. The intra-class correlation coefficient (ICC) was 0.995 for BI, 0.926 to 1.000 for FIM, and 0.874 to 1.000 for SF-36. The BI scores correlated significantly ($p < 0.001$) with FIM scores in motor domain ($r = 0.877$) and total scores ($r = 0.729$). No correlation was found between functional status measurements and QOL scores. **Conclusion:** This study was the first attempt to measure the functional status and QOL of ventilator-dependent patients in Taiwan. Their average scores of the functional status and QOL were relatively low, and were not associated with age, diagnosis, or duration on ventilator. Good test-retest reliability for BI, FIM, and SF-36 instruments was found. There appears no significant relationship between measurements of functional status and QOL in these patients. (FJPT 2004;29(1):40-47)

Key words: Barthel index, Functional independence Measure, Short-Form 36 Health Survey Questionnaire, Ventilator-dependent patients

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