Service Priorities and Programmes

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Review of end-of- life care practice and analysis of predictors of mortality in patients ventilated outside ICU

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Introduction

In Queen Elizabeth Hospital, patients who were triaged out from intensive care unit (ICU) but required mechanical ventilation would be admitted to the ventilator ward; which consisted of 16 beds. Each patient was under the direct care of the parent team, while ICU specialist provided daily review with focus on ventilator support and end of life care.

Objectives

Our aim is to review the end-of- life (EOL) care in patients being ventilated in the Ventilator Ward and to analysis any clinical variables that might predict mortality.

Methodology

A retrospective cohort was conducted from 1, July 2010 to 30 June 2011 by reviewing the medical records of patients being admitted to the ventilator ward. Data collected include demographics; past medical health; pre-morbid functional status; physiological parameters; EOL discussion and quality of care; ventilator ward and hospital mortality rate. Chi-squares test was performed to study the associations of twenty-five clinical variables with hospital mortality. Multiple logistic regression was then used to identify the independent predictors of mortality.

Result

During the study period, there were a total of 674 admissions and 605 fulfilled the inclusion criteria. EOL issue was brought up in 275 patients (45 %) in the ventilator ward, with the mean time for bringing up EOL discussion was 3.2 days. 251 patients (91%) were initiated by the parent team with additional input from ICU specialist in 25% of the cases. The EOL acceptance rate by family was up to 91%, with 74% success in one attempt. Mean time from first EOL discussion to death is 6.5 days. The ventilator ward and hospital mortality of this subgroup of patients were 63% & 74% respectively. During the EOL discussion, 87% agreed not for cardiopulmonary resuscitation (CPR), and 47% agreed for withholding or withdrawal of therapy. For the quality EOL care, medication for symptom control was given in 59% and artificial

nutrition continued in 79%. However, medical social worker and religious referral was 2.8 and 1.4% respectively. 0.7% involved the palliative team. Upon multiple logistic regression analysis, eight clinical variables emerged as independent predictors of mortality. These were EOL discussion in the ventilator ward (OR 5.0; 95% CI 3.4-7.5), requirement of equal or more than 2 inotropes (OR 5.0; 95% CI 2.3-11.1), acidosis of pH < 7.1 (OR 3.2; 95% CI 1.2-8.7), urine output less than 1000ml over 24 hours (OR 2.7; 95% CI 1.7-4.3), underlying malignancy (OR 2.3; 95% CI 1.3-4.2), evidences of recent cerebrovascular accidents (OR 2.3; 95% CI 1.3-3.9), prior CPR before ventilator ward admission (OR 2.0; 95% CI 1.1-3.8) and ICU triage category 4 (OR 1.7; 95% CI 1.04-2.9).