

HAC 2016 ABSTRACT for Oral Presentations

Presentation no.: F4.3

Presenting Author: cqisysaccount

Project title

Ventilator Weaning Team - The Winning Team

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Keyword(s)

mechanical ventilation
general ward
weaning
ICU

Approval by Ethics Committee: /

Introduction

General medical wards in Hong Kong often have to care for patients receiving invasive mechanical ventilation (IMV) rejected by the ICU. This drains resources significantly. Weaning is often not possible without dedicated and trained personnel, causing a vicious circle. Our department received new government funding to operate 2 invasive ventilator beds in the respiratory ward. Patients receiving IMV rejected by ICU would be assessed for a trial of weaning in this area.

Objectives

We report an audit of the outcomes of a cohort of patients managed by our IMV weaning team in the funded area.

Methodology

This is a prospective observational study. Cases receiving IMV rejected by ICU between 1st July, 2014 to 30th June, 2015 and admitted to the IMV beds were prospectively followed. Demographics and baseline physiological parameters were described. Outcomes analysed were weaning success, discharge and death.

Result

During the 1-year period, 43 IMV patients (male: female = 65%: 35%) were managed by the IMV team in the funded area. The mean age was 73.4 ± 12.1 years and APACHE II score 30.8 ± 11.2 . The primary conditions leading to IMV were imminent or post-cardiorespiratory arrest (33%), pneumonia (28%), COPD (9%), cerebrovascular accidents (7%), severe asthma (5%), neuromuscular disease (5%), obesity hypoventilation syndrome (2%), acute myocardial infarction (2%) and miscellaneous causes (9%). After initial assessment, 14 patients (33%) were designated comfort care while IMV weaning was attempted in 29 patients (67%). For those designated comfort care, all died within (IQR) 0 – 4 days. For those designated attempted weaning, 25 (86%) were successfully weaned from IMV; the median time to weaning was 8 days and the 30-day weaning success was 83%. Discharge from hospital was possible in 18 patients (62%) during the study period and the median time to discharge was 94 days. On discharge, 61% returned home, 28% returned to elderly home and 11% was transferred to infirmary beds. A minority of patients required long term oxygen (22%); tracheostomy (11%) and home non-invasive ventilation (17%). Katz's ADL score on discharge was (IQR) 0 – 4. The median survival was 106 days. When ICU resource is limited, IMV beds managed by respiratory specialists facilitate weaning from IMV. The IMV beds has positive impacts on patients' and families' experience, improves terminal care of end stage patients and deliver favourable weaning results in selected patients. It helps to reduce the accumulation of IMV cases in general medical wards.