Mortality-related factors in long term care residents: a 5-year prospective study
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Introduction

Although infirmary patients are known to be associated with a short median survival, there is a wide variation in survival observed in reality. Currently there has been a limited knowledge in the prognostic information in long term care.

Objectives

To identify reversible prognostic factors associated with five-year survival in infirmary patients, with the aim to improve clinical services.

Methodology

This is a prospective cohort study. 314 patients from a long term care hospital in Hong Kong are followed for five years and the main outcome measure is death. Information on subject demographics, social support, medical co-morbidities, nutritional status, disability level, mental status, clinical data, laboratory results and medications was collected at baseline. Univariate and multiple Cox proportional hazard regression were used to identify predictors of mortality.

Result

There were 174 deaths (55.4%) during the follow-up period. The most common cause of death was chest infection (47%). In univariate analysis, the following factors predicted death in five year: higher age ($P<0.001$), previous pneumonia in the past six months ($P<0.001$), serum albumin level lower than 35g/l ($P=0.035$), tube feeding ($P<0.001$), body weight less than 45 kilograms ($P=0.03$), impaired mobility ($P=0.002$), presence of bed sore ($P=0.07$). Multivariate analysis revealed the following independent predictors of death: presence of bedsore (hazard ratio: 2.9; $P < 0.001$), previous pneumonia in the past 6 months (hazard ratio: 2.1; $P < 0.001$), tube feeding (hazard ratio: 1.9; $P = 0.04$), serum albumin level lower than 35g/l (hazard ratio: 1.1; $P = 0.011$) From this study, it appears that potential interventions that may improve the 5-year mortality of infirmary patients include aggressive interventions to treat the reversible causes of malnutrition, and measures to prevent severe infections and pressure sores. This information is also important for us to provide prognostic information to patients' family members, and to plan end-of-life care for our patient.