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EVALUATION OF ICU PATIENTS REQUIRING MECHANICAL VENTILATION

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INTRODUCTION. Acute Respiratory Failure (ARF) is a frequent cause of admission to ICUs and usually necessitates Mechanical Ventilation (MV). Knowledge about the incidence, mortality, and risk factors associated with patients that require MV is essential to improve outcomes. The objectives are determine the characteristics, risk factors prior and/or during MV, and general and specific mortality rates in patients under MV in a General University ICU, in southern Brazil.

METHODS. Prospective cohort of 523 adult patients admitted to the ICU who needed MV for at least 24 hours, between March/2004 and April/2005. Data were collected daily, for up to 28 days. Age, gender, APACHE II score, medical or surgical patients, causes for the requirement of MV, organ dysfunction/failure developed prior to MV and during MV, ventilatory parameters, duration of MV, modes of MV, tracheostomy and duration of weaning were some variables studied. Uni and multivariable analysis were performed.

RESULTS. The incidence of MV was 31%; the overall and specific mortality rates were 16% and 50%, respectively. The mean (\pm SD) age was 57.4 ± 18.3 years; 51% were males; the mean APACHE II was 22 ± 8.1 ; medical patients was 70%, invasive mechanical ventilation was 93%. A multivariable analysis indicated that age ($p < 0.008$), MV duration ($p = 0.03$), vasoactive drug use ($p = 0.001$), Acute Lung Injury (ALI)/Acute Respiratory Distress Syndrome (ARDS) ($p = 0.001$) and renal failure ($p = 0.007$) occurring during the MV period, were independently associated to death.

CONCLUSION. The risk factors associated with mortality in 28 days (age, MV duration, vasoactive drug use, ALI/ARDS, and renal failure during MV) are similar to some literature studies. The overall and specific mortality rates were higher. Final conclusions will require evaluation of the mortality rates of specific pathologies, planned when our sample size will be increased. The identification of these factors may allow early interventions to improve therapeutic strategies. Others members of study: Costa, C D A O; Raymundi M; Bartz M; Guntzel A M; Schulte F; Beavegan G.

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