Elderly Mortality in Portuguese ICU – an 11 years survey

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• Average life expectancy has increased, resulting in a shift in world populations demographics.

• Older age is associated with higher prevalence of chronic illness and functional impairment, contributing to an increased rate of hospitalization and admission to intensive care.

• Main predictive outcome factors in elderly ICU population:
  – Pre-morbid functional limitation
  – Chronic co-morbidities
  – Severity of the acute illness
  – Planned Vs unplanned admission
  – Age itself ? Sarcopenia
• Retrospective cohort study of elderly admissions in public, mainland Portuguese ICU's during 11 years (2000 to 2010). The sample was divided into 2 age groups:
  – 65-74 years
  – 75 and above

**Primary endpoints**

analyze elderly ICU admission

in-hospital mortality of elderly admitted in ICU

• **Purpose**: analyze the changes in-hospital mortality of patients older than 65-years-old admitted in Portuguese ICU’s during an 11 years period.
Results

- During the 11 years were admitted 61166 elderly patients.
- 57.3% were men and 42.7% women.

<table>
<thead>
<tr>
<th>Age</th>
<th>65-74 years</th>
<th>≥ 75 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>65-74 years</td>
<td>28893 (47.2%)</td>
<td>32273 (52.8%)</td>
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<table>
<thead>
<tr>
<th>Sex</th>
<th>Male</th>
<th>Female</th>
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</thead>
<tbody>
<tr>
<td>65-74 years</td>
<td>17913</td>
<td>17149</td>
</tr>
<tr>
<td>≥ 75 years</td>
<td>10979</td>
<td>15124</td>
</tr>
</tbody>
</table>
Evolution of ICU elderly admissions along the years

![Bar chart showing the evolution of ICU elderly admissions along the years. The chart compares admissions for 65-74 years and 75+ years, with data from 2000 to 2010.]
In-Hospital Mortality

61166 elderly admitted

31065 deceased (50.8%)

- 65-74 years: 13215 (45.7%)
- ≥75 years: 17850 (55.3%)

30101 survived (49.2%)

- 65-74 years: 15678 (54.3%)
- ≥75 years: 14423 (44.7%)
In-hospital mortality evolution over the years in relation with admissions

65-74 years

>= 75 years
Mortality over the years
• The number of elderly patients admitted in Portuguese ICU has increased over the years.
  – on the group 65-74 years, the admissions increased 25% (2097 patients in 2000 and 2637 in 2010),
  – in the age group 75 and above the increase was 90% between year 2000 (1837 patients) and 2010 (3491).

• In-Hospital mortality on the overall group was 50,8%, being superior in the age group 75 and above (55,3% versus 45,7% in the group 65-74 years).

  **BUT**

• Over de years, in-hospital mortality has a reduction in both groups (more significant in the group 75 and above):
  – 65-74 years group has passed of 48,8% to 46,1%,
  – ≥ 75 years has passed of 59,7% to 55%.
Conclusions

• The number of elderly patients in ICU has increased, but the overall mortality has a slight decrease.

• **Age per se** is not predictive of poor prognosis for ICU patients.

• ICU cares are an expensive and scarce resource, but this study shows that is not ethically correct limit ICU admissions to elderly patients, by the age.
• Elderly patients compose a significant and increasing proportion of patient receiving critical care.

• They have an increase mortality but the relation with the age is not straightforward.

• Elderly patients aren’t a homogenous group, and clear admission criteria should be defined.

**Consider:**

• Patient autonomy (levels of frailty an disability).
• Co-morbidities
• Physiologic age, not chronologic age
• The expected impact of treatment on the outcome
• Patient preferences
• Discussion with family
Bibliography

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Thank You!