Letters to the Editor

Nonagenarian’s use of emergency departments

Sir—We have read with great interest the paper of Downing et al. [1] focusing on older people’s use of emergency departments (ED). We would like to make some comments related to our previously reported experience in a subgroup of nonagenarian patients [2, 3].

We have evaluated at the Bellvitge hospital (a 900-bed teaching hospital) those elderly patients (older than 89 years) who are especially frail [4], in order to evaluate their use of ED [2] and to determine the impact of an ED attendance, by any cause not requiring hospital admission, upon their functional capacity [3].

Those patients attending the ED of Bellvitge between January and December 2001 were assessed. Those older than 89 years were compared with the rest [2]. We included 112,971 patients, 48% were female and the mean age was 52 years old. The daily average number of patients attending was 309.5; 4.5 were nonagenarian. In our study we confirm that older patients (nonagenarians), as in the Downing study [1], require admission to hospital. Female predominance, mean stay in the ED and mortality were also higher in the nonagenarian group (Table 1).

We also studied a subgroup of 98 patients in order to evaluate any functional decline after ED attendance not requiring hospital admission [3]. There were 62 women and 36 men. The mean age was 92.4 years. Similar to what has been reported in elderly patients [1], we found that nonagenarians were more likely to be attended to in the medical area of the ED (70%), 17% in the orthopaedic area and 13% in the surgical area. The mean Barthel Index (BI) before the emergency attendance was 65. Control after 3 months follow-up was not analysed in 23 patients; 14 of them died during this period, three could not be found and six had a new episode requiring hospital care. The mean BI of the remaining surviving 75 patients at 3 months control was 66, similar to their BI at the emergency discharge (63; $P=0.19$), remaining slightly lower than before the emergency admission (71; $-5$; $P=0.07$). Forty-nine percent of patients had similar BI at 3 months follow-up after the emergency discharge. Only one patient was unable to live in their pre-admission dwelling 3 months after the ED visit.

The results show that nonagenarians are frequent users of ED, hence the necessity for our EDs to adopt adequate methods and imaginative approaches in order to prevent, as far as possible, the loss of functional capacity observed in these vulnerable older patients [5].

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Table 1. Comparison between the nonagenarian and control groups

<table>
<thead>
<tr>
<th></th>
<th>Patients &gt; 89 years old 1,652 (1.5%)</th>
<th>Patients &lt;89 years old 111,319 (98.5%)</th>
<th>$P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender (male/female)</td>
<td>555 (34%)/1,097 (66%)</td>
<td>58,604 (53%)/53,270 (47%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Mean stay in the ED</td>
<td>7 hours</td>
<td>4 hours and 15 minutes</td>
<td>0.002</td>
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<tr>
<td>Staying more than 24 hours in the ED</td>
<td>43 patients (2.6%)</td>
<td>1,975 patients (1.8%)</td>
<td>0.001</td>
</tr>
<tr>
<td>Hospital admissions</td>
<td>420 patients (25%)</td>
<td>15,375 patients (14%)</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Deaths at the ED</td>
<td>35 patients (2%)</td>
<td>281 patients (0.25%)</td>
<td>0.001</td>
</tr>
<tr>
<td>ED recurrences &lt;4 days</td>
<td>60 out of 1,197 (5%)</td>
<td>4,432 out of 95,663 (4.6%)</td>
<td>0.6</td>
</tr>
</tbody>
</table>

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