Letter to the Editor

Cardiovascular disease in elderly

We read the article by Andersen-Ranberg et al. [1] with interest as we have also sought to investigate the prevalence of cardiovascular disease in the very elderly (those aged 80 years and over) and agree it is difficult to acquire robust data. With the rising percentage of very elderly in the Australian population [2], it is important to develop an understanding of the prevalence of disease and potential health needs. To assess the prevalence of cardiovascular disease in the age ranges 20–39, 40–59, 60–79 and 80–99 years, we performed a retrospective review of autopsy data from victims of motor vehicle collisions in which death had occurred rapidly as a result of clearly lethal injuries. The assessment of the amount of atheroma, myocardial fibrosis and valve disease was based on macroscopic observations. Statistical analysis for difference between the groups was performed by ANOVA. The study was approved by the Forensic Science SA Research and Development committee.

Thirty cases in the age group 80 years and over were identified; it was possible to find 60 cases in the age group 60–79 years. Cases in the 40–59- and 20–39-year-old groups were taken at random over the study period (1994–2010) until 90 cases were obtained in each group. There was no statistically significant difference between the 60–79- and the 80–99-year-age groups for the average aorta atheroma score, average maximal coronary artery stenosis, mean number of coronary arteries with >50% stenosis and percent with myocardial fibrosis, but the levels of disease were greater than observed in the younger subjects (Table 1). However, the prevalence of valvular disease was only significantly higher in the 80–99 year group compared with the other groups. Although the methodology was not ideal (being retrospective and selected), the findings are in keeping with the observation that the very elderly are not spared from cardiovascular disease [3], but it is interesting that the very elderly group (80–99 years) appears not to have significantly worse atherosclerotic cardiovascular disease than those in the 60–79 year group. The higher prevalence of heart valve disease in the 80–99 year age group may reflect degenerative valvular processes [4] or changes in the incidence and severity of rheumatic heart disease [5]. Although objective data of the prevalence of disease in the elderly may be obtained from review of autopsy reports future studies may need to be cohort based to dissect the effects of age from era of birth. If the prevalence of cardiovascular disease in the elderly is similar to that in the very elderly this would have implications for provision of health care in the future.

Conflicts of interest

None declared.

Table 1. Demographics and findings in the study groups

<table>
<thead>
<tr>
<th>Age group</th>
<th>20–39</th>
<th>40–59</th>
<th>60–79</th>
<th>80–99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cases</td>
<td>90</td>
<td>90</td>
<td>60</td>
<td>30</td>
</tr>
<tr>
<td>Male ^a</td>
<td>72</td>
<td>65</td>
<td>37</td>
<td>18</td>
</tr>
<tr>
<td>Female ^a</td>
<td>18</td>
<td>25</td>
<td>23</td>
<td>12</td>
</tr>
<tr>
<td>Average age (years)</td>
<td>31.2</td>
<td>48.0</td>
<td>68.9</td>
<td>84.5</td>
</tr>
</tbody>
</table>

Cardiovascular parameters

- Average heart weight (g) ^a | 347 | 393 | 440 | 412 |
- Average aorta atheroma score | 0.19 | 0.59 | 1.58 | 2.00 |
- Average maximal coronary stenosis (%) | 10.7 | 13.6 | 37.5 | 40.0 |
- Mean number coronaries with >50% stenosis | 0.14 | 0.28 | 1.00 | 1.13 |
- Percent with myocardial fibrosis | 1.11 | 3.33 | 21.7 | 20.0 |
- Percent with valve disease | 2.22 | 4.44 | 10.0 | 26.7 |

^a Not statistically different between groups.

References


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