Abstract

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Background: International guidelines recommend atrial fibrillation (AF) screening for people aged ≥65 years. The stroke risk profile and eligibility for oral anticoagulation (OAC) of screen-detected AF is uncertain. We aimed to determine incidence, stroke risk (CHA2DS2-VASc), and OAC eligibility of screen-detected AF, in 5-year subgroups.

Methods: Database search identified 23 AF screening studies since 2007. Authors were contacted for collaboration. We combined data for 15 studies (13 countries), in general practitioner/outpatient clinics (n = 7) and community/population screening (n = 8).

Results: Overall 100,874 subjects were screened. New AF incidence was 1.3% (n = 1296/100,874) and 1.7% for those ≥65 years (n = 1123/66,166). AF incidence and CHA2DS2-VASc score increased with age (Table). One hundred per cent of new AF in those aged ≥75 years and 63–67% between those aged 65–74 years had a Class-1 OAC recommendation (Table). Importantly, 63–81% of those over 65 years had ≥1 additional stroke risk factor other than age/sex (Table).

Conclusions: Screening people aged ≥65 years identifies new AF in 1.7%; the majority would benefit from OAC; and 2/3 have at least one additional stroke risk factor other than age/sex. Our data support recommendations for AF screening commencing at age 65.

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<table>
<thead>
<tr>
<th>Age (years)</th>
<th>New AF (%)</th>
<th>CHA2DS2-VASc (mean ± SD)</th>
<th>≥1 non-age/sex stroke risk-factor (%)</th>
<th>Guideline recommendation</th>
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<tbody>
<tr>
<td>&lt;60</td>
<td>0.2</td>
<td>0.7 ± 0.7</td>
<td>18</td>
<td>80</td>
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<tr>
<td>60–64</td>
<td>0.8</td>
<td>1.2 ± 0.9</td>
<td>48</td>
<td>51</td>
</tr>
<tr>
<td>65–69</td>
<td>1.1</td>
<td>2.4 ± 1.7</td>
<td>63</td>
<td>0</td>
</tr>
<tr>
<td>70–74</td>
<td>1.5</td>
<td>2.6 ± 1.3</td>
<td>64</td>
<td>0</td>
</tr>
<tr>
<td>75–79</td>
<td>2.0</td>
<td>3.7 ± 1.2</td>
<td>74</td>
<td>0</td>
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<tr>
<td>80–84</td>
<td>2.5</td>
<td>3.7 ± 1.3</td>
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<td>85+</td>
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<td>4.2 ± 1.4</td>
<td>81</td>
<td>0</td>
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</tbody>
</table>

http://dx.doi.org/10.1016/j.hlc.2018.06.026
Abstract

S55

plateauing by 7 years. Seven-year survival varied from 96% for those aged <55 years to 39% in those >84 years (Figure). The cardiovascular comorbidities strongly associated with increased long-term mortality were heart failure (hazard ratio [HR] 1.81, 95% confidence interval [CI] 1.77–1.84), cerebrovascular disease (HR 1.83, 95% CI 1.47–2.29), and diabetes with complications (HR 1.22, 95% CI 1.53–0.75) in the year preceding the AMI admission showed improved long-term survival.

Conclusions: This study, for the first time, provides population-wide data on the long-term prognosis after an AMI in ANZ. Further efforts to improve survival need to target the elderly who have the greatest risk.

http://dx.doi.org/10.1016/j.hlc.2018.06.027

Heart Failure Prize Finalists (0027–0030)

0027

Impaired Left Atrial Strain Predicts Abnormal Haemodynamics in Heart Failure with Preserved Ejection Fraction

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Introduction: Elevated left atrial (LA) pressure is central to the symptoms of heart failure with preserved ejection fraction (HFpEF). We aimed to characterise the relationship between LA mechanics and the exercise mediated rise in LA pressure.

Methods: Simultaneous echocardiography and right heart catheterisation were performed in 71 subjects with left ventricular ejection fraction ≥50% referred for assessment of dyspnoea. Forty-nine with HFpEF (pulmonary capillary wedge pressure (PCWP) ≥15 mmHg at maximal exertion); and 22 as non-cardiac dyspnoea (NCD). Blind two-dimensional speckle tracking analysis of the LA was performed in apical two- and four-chamber views.

Results: HFpEF was characterised by impaired LA reservoir and pump strain, and increased stiffness (Table). Stiffness was strongly related to brain natriuretic peptide and exercise cardiac output index ($r = 0.73$ and $r = -0.56$, $p < 0.001$). Reservoir and pump strain correlated to exercise PCWP ($r = -0.64$ and $r = 0.52$, $p < 0.001$), and remained independent predictors adjusting for indexed left ventricular mass, indexed LA volume, mean $E/e'$, and systolic blood pressure ($B = -0.66$ and $B = 1.40$, $p < 0.001$). Reservoir strain at cut-off of 32.2% predicted HFpEF diagnosis with 82% sensitivity and 86% specificity (receiver–operator characteristic area under the curve 0.85, $p < 0.001$).

Conclusion: Impaired LA reservoir and pump function and increased stiffness in HFpEF contribute to exercise-mediated rises in PCWP, and to deficits in exercise cardiac output. These markers may be useful non-invasive parameter for diagnosis, as well as assessment of disease progression and novel intervention responses.

Reservoir Global Strain (%)

<table>
<thead>
<tr>
<th></th>
<th>HFpEF 24.3 ± 9.6</th>
<th>vs</th>
<th>NCD 36.7 ± 8.4</th>
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<tbody>
<tr>
<td></td>
<td>p &lt; 0.001</td>
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Pump Global Strain (%)

<table>
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<tr>
<th></th>
<th>HFpEF –11.5 ± 3.2</th>
<th>vs</th>
<th>NCD –17.0 ± 3.4</th>
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<tbody>
<tr>
<td></td>
<td>p &lt; 0.001</td>
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0028

Long-Term Mortality Following Hospitalisation for Heart Failure in Australia and New Zealand: a Population-Wide Study

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Background: Contemporary survival following heart (HF) hospitalisation is uncertain. For the first-time, we performed a population-wide evaluation of long-term mortality after HF hospitalisation in Australia and New Zealand (ANZ).

Methods: We identified first hospitalisations of patients with a primary diagnosis of HF (ICD10-AM codes I11.0, I13.0, I13.2, and I50.0–9) from all Australian states/territories