Cardiac Electronic Implantable Devices in Elderly Australians: Results from GCOR

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Background: Elderly patients have traditionally had lower access to cardiac devices based partly on the perception that they experience more complications. They are underrepresented in clinical trials and limited data exist regarding the outcomes of elderly (>75 years) patients undergoing device implantation in Australia.

Methods: The Genesis Cardiovascular Outcomes Registry (GCOR-Device) prospectively collected data on 5000 patients from December 2015-December 2018. This analysis compared patient demographic and procedural data with outcomes by age at implantation (<75 years vs >75 years).

Results: Elderly patients received more single chamber devices 19.6% vs 10.3%, received less implantable cardioverter defibrillators 11.1% vs 23.3% and less cardiac resynchronisation devices 7.9% vs 11.0%. Elderly patients were more likely to be implanted during an inpatient stay rather than electively. The complication rates and type did not differ significantly between older and younger patients.

Conclusion: Device implantation in elderly Australians produces complication rates comparable to those in younger patients.

Outcomes at 1 year %

<table>
<thead>
<tr>
<th></th>
<th>&gt;75 (n = 2634)</th>
<th>≤75 (n = 2199)</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Major complications</td>
<td>85 (3.1%)</td>
<td>92 (3.9%)</td>
<td>ns</td>
</tr>
<tr>
<td>All complications</td>
<td>152 (5.3%)</td>
<td>146 (5.5%)</td>
<td>ns</td>
</tr>
<tr>
<td>Cardiac Readmissions</td>
<td>117 (4.2%)</td>
<td>46 (2.0%)</td>
<td>&lt;0.01</td>
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<tr>
<td>Death</td>
<td>125 (4.6%)</td>
<td>23 (1.0%)</td>
<td>&lt;0.01</td>
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Cardiac Fibrosis as a Risk Factor for Atrial Fibrillation: A Meta-Analysis

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Background: Fibrosis is a hallmark of atrial fibrillation (AF) substrate. Recent data suggest that fibrosis detected by late-gadolinium enhancement (LGE) cardiac MRI (CMR) can predict AF. However, this relationship is not well described.

Objective: To evaluate association of cardiac fibrosis with AF.

Methods: PubMed and Embase were searched through November 2018, using the keywords: LGE AND Fibrosis AND CMR AND AF. Included studies were pooled in a random effects meta-analysis and reported as: mean difference (MD); risk ratios (RR); and 95% confidence intervals (95% CI).

Results: A meta-analysis comparing 2274 patients in 5 studies including 1693 controls with 591 patients with AF was performed. Fibrosis detected by LA LGE in 8 (88.9%, biased towards one centre). After 17.8 ± 14.2 follow-up years, atrial fibrosis was significantly greater in recurrent AF than controls (MD: 4.97%, 95% CI: 1.23–8.7, p < 0.01), and predicted 16% increased risk of AF recurrence (RR: 1.16, 95% CI: 1.07–1.26, p < 0.05).

Conclusion: Fibrosis detected by LGE associates with prevalence and progression of AF and is predictive of AF recurrence post ablation. This further supports the proarrhythmic role of fibrosis and selection of patients for ablation therapy based on LGE.

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Care Processes Affecting Door-to-Needle (DTN) and Door-in-Door-out (DIDO) Times at Non-PCI Hospitals

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Background: Challenges to providing timely STEMI management at non-PCI hospitals exist. Reducing delays in administering thrombolysis, and transferring patients to PCI capable centres is critical in reducing total ischaemic time and mortality.

Aim: Identify factors affecting door-to-needle (DTN) and door-in-door-out (DIDO) times of STEMI patients presenting to non-PCI hospitals, evaluating guideline recommended DTN and DIDO times as our primary endpoint.

Method: This retrospective single centre pilot study evaluated DTN and DIDO times of STEMI patients at our non-PCI regional hospital from January 2017 to September 2018. Electronic and paper-based medical records were used to evaluate...