Abstracts

226 The Incidence of Fatal Arrhythmia Among Patients with Early Onset Acute Coronary Syndrome and Familial Hypercholesterolaemia

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Background: Familial hypercholesterolaemia (FH) is a common inherited disease which causes premature acute coronary syndrome (ACS). Fatal ventricular arrhythmias are the leading cause of mortality in ACS patients worldwide. However, there are limited data on the association of FH and cardiac arrhythmias.

Objective: This study aimed to examine the association of cardiac arrhythmia profile and FH in the setting of ACS.

Methods: We included 231 patients with early onset ACS out of 997 total admissions to coronary care unit in a large tertiary centre between January-December 2015. FH was diagnosed using the Dutch Lipid Clinic Network Criteria. Fatal ventricular arrhythmias (FVA), defined as primary ventricular tachycardia (VT), or sustained ventricular tachycardia (VT), were confirmed by reviewing rhythm strips and 12-lead electrocardiograms.

Results: Among all subjects with premature ACS incidence of fatal arrhythmia was 4.7%. 26 patients (11.2%) with early-onset ACS had probable/definite FH, with mean age 46.8 ± 7.4 years and mean low density lipoprotein-cholesterol 5.6 ± 1.9 mmol/L. There was no significant difference in the prevalence of diabetes (25.9% vs 24.7% vs 23.0%, p = 0.94), hypertension (46.1% vs 49.5% vs 50.0%, p = 0.87) or smoking (69.2% vs 61.3% vs 76.9%, p = 0.24) among all groups [Unlikely (n = 104), Possible (n = 310), Probable/Definite (n = 26)]. When compared to patients with no FH, patients with FH had significantly lower rates of FVA (4.3%, 0.9%, 0%, p = 0.007). Left ventricular ejection fraction (LVEF) was not significantly different between the groups (p = 0.11). On multivariable analysis, FH was independently associated with lower frequency of FVA, adjusted for age, LVEF <40% and type of ACS (p = 0.04).

Conclusion: This study suggests FH is associated with lower incidence of FVA in the setting of ACS. Further investigation via multicentre prospective studies with larger populations is warranted.

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227 The role of Holter Monitor in the Detection of Atrial Fibrillation in Transient Ischaemic Attack and Acute Ischaemic Stroke

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Background: Ischaemic stroke of cardioembolic origin is associated with profound morbidity and mortality, of which atrial fibrillation (AF) accounts for a significant proportion. Holter monitoring remains the first line investigation in identifying patients with underlying AF in stroke patients.

Methods: We conducted a retrospective review of all patients undergoing Holter monitoring between August 2017 and February 2019 at an urban teaching hospital, to identify incidence of AF (defined as episodes lasting longer than 30 seconds) in patients presenting with transient ischaemic attack (TIA) or confirmed acute ischaemic stroke (AIS).

Results: 193 eligible patients, 15 excluded due to known history of AF. Remaining 178 patients had mean 23.5 hours of Holter monitoring. Baseline demographics data: mean age 64.1 years, male gender 55.6%. TIA accounted for 41.6%, and AIS accounted for the remaining 58.4% of cases. AF was detected in 5 patients (2.8%). An additional 6 patients had AF identified on ward telemetry, which was not detected during Holter monitoring. Nine of these 11 patients were commenced on anticoagulation due to suspected cardioembolic source based on cerebral imaging in the absence of confirmed AF. In a separate analysis of patients excluded for known AF, 8 of the 13 patients had AF detected during Holter monitoring (53.3%).

Discussion: Holter monitor alone is an insensitive method for detecting atrial fibrillation. Longer duration of monitoring should be considered in patients with cryptogenic stroke as suggested by recent trials with detection rate of 30% at 36 months.

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228 Transvenous Lead Extraction in Nonagenarians

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Introduction: The ageing population, coupled with the rising number of pacemaker and defibrillator insertions in Australia, is resulting in an increasing number of elderly patients being referred for transvenous lead extraction (TLE). There is an inherent bias against referral of the very elderly for invasive procedures, particularly those that are perceived to carry a high morbidity/mortality risk. To date, there are no published outcome data for TLE in nonagenarians.