

Despite advances in lead placement and lead technology, lead fracture continues to be a major issue in recent (<5 year) implanted leads, with a disproportionate number of one lead type in our series. The reasons for this require further exploration.

**Conflict of Interest** None

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# DETECTION OF ATRIAL FIBRILLATION WITH AMBULATORY ECG RECORDING – A RETROSPECTIVE SERVICE EVALUATION OF 24 HOURS HOLTER MONITOR AND CARDIAC MEMO RESULTS IN A LARGE DISTRICT GENERAL HOSPITAL

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**Introduction** Atrial fibrillation (AF) is a global public health priority. An unsolved problem is how to detect paroxysmal AF. Patients presenting with palpitations are usually monitored for a short period of time with conventional 24 hour Holter monitor or 72 hours cardiac memo. As a result, it is likely that AF is being routinely underdiagnosed and undertreated. This service evaluation reviewed the proportion of patients amongst those who are investigated for palpitations/pre-syncope/syncope by the Cardiology Department in Queen Alexandra hospital (CQAH) with a 24 hours Holter monitor or cardiac memo who have evidence of AF.

**Methods** Retrospective review of all patients who were investigated with either a 24 hours Holter monitor or 72 hours cardiac memo during August 2019. Clinic letters and discharge summaries were reviewed to assess reason for investigations, findings and outcomes. If a diagnosis of AF, paroxysmal AF or atrial flutter was made, management decision and subsequent anticoagulation was reviewed.

**Results** A total of 232 patients were assessed with 24 hours Holter (n=122) monitor and Cardiac memo (n=108). Average age 65 years (5-94). In 5% of cases (12/232) no documentation of results was found. 5% (10/220) had new diagnosis of AF.

60% (72/122) of patients investigated with a 24 hours Holter monitor for palpitation (18/122), pre-syncope (5/122) and syncope (15/122) were in sinus rhythm (SR) +/- ectopics. No patients with palpitation or pre-syncope had AF. 4/15 patients with syncope had a new diagnosis of AF (2) or supraventricular tachycardia (2). 34% (42/122) of Holter monitor were done as a result of a documented arrhythmia, 18/42 of which had known AF. 21% (26/122) of Holter monitor were used to investigate TIA/Stroke, 3/26 had new diagnosis of AF.

70% (75/108) of patients investigated with a Cardiac Memo for palpitations (28/108), pre-syncope (13/108) and syncope (15/108) were in SR +/- ectopics. 3/28 with palpitations, 1/13 with pre-syncope, 1/15 with syncope group had new AF. 2/15 with syncope who were in SR had a reveal device implanted subsequently. 34% (37/108) were investigated due to TIA/Stroke, all of which were in SR.

**Conclusion** The number of patients diagnosed with significant cardiac arrhythmia, for example AF, as a result of conventional 24 hours tape and cardiac memo is low even if patients present with symptoms of palpitations, pre-syncope and syncope.

As a result of this service evaluation we have applied for a £20,000 grant as part of a 'NHS Joint Working Project'

to introduce novel, prolonged and home-based ECG monitoring to the department. Patients who are referred to CQAH and require investigation of symptoms of palpitation, pre-syncope and syncope will be offered ECG monitoring over up to 3 months with a KardiaMobile 6 lead ECG (by AliveCor) as an alternative to conventional methods described above. A comparison of identification of cardiac arrhythmia, in particularly AF and subsequent management change, will be made.

**Conflict of Interest** Nil

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# PROGNOSTIC POTENTIAL OF ELECTROCARDIOGRAPHIC PARAMETERS IN PATIENTS WITH MULTIPLE MYELOMA

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**Background** Patients with multiple myeloma (MM) can develop cardiac abnormalities, predisposing them to the development of heart failure, arrhythmia or infarction with poor prognosis. The purpose of this study is to evaluate the prognostic potential of electrocardiographic (ECG) parameters in patients with MM.

**Methods** This study retrospectively included patients with MM from January 2010 to December 2018 in the First Affiliated Hospital of Xi'an Jiao Tong University. Univariate and multivariate Cox proportional hazard models were conducted to evaluate the relationship between ECG parameters and all-cause mortality in patients with MM.

**Results** A total of 409 patients were included (mean age: 61.3 ± 9.7 years, 59.1% male). The relationship of ECG parameters, including PR interval, voltage, QRS axis, QRS duration and QTc interval, and all-cause mortality in patients with MM was evaluated. Overall, patients with QTc interval ≥ 400 msec have a significantly higher all-cause mortality compared to those with QTc interval <400 msec (P < 0.001). When stratified by International Staging System (ISS), this relationship was true for stages II and III (P < 0.01), but not stage I (P > 0.05). MM patients with QRS duration ≥ 120 msec had a higher all-cause mortality compared to those with QRS duration <120 msec for females (P < 0.01) but not for males (P > 0.05). PR interval, voltage and QRS axis did not predict mortality.

**Conclusions** QTc interval was independently associated with all-cause mortality in MM patients, especially when QTc interval was more than 400 msec in more advanced stages II and III. ECG parameters may provide prognostic potential of MM patients and promote the management of patients with MM.

**Conflict of Interest** None

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# CLINICAL CODING ERRORS IN ELECTIVE DEVICE IMPLANTATION COSTING

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**Introduction** Payment by Result (PbR) is a system of funding NHS healthcare. Funding to hospitals is therefore directly