**USING PACEMAKER/IMPLANTABLE CARDIOVERTER DEFIBRILLATOR MODE SWITCH QUANTIFICATION TO ASSESS CLINICAL PREDICTORS OF ATRIAL FIBRILLATION RECURRENCE**

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Introduction: ‘Mode switching’ refers to a pacemaker/defibrillator’s ability to alter detection/pacing settings to prevent the tracking of supraventricular arrhythmias. There are few studies investigating the clinical implications of mode switch episodes.

Methods: Mode switch was defined as any occurrence documented during device interrogation after the date of implantation. Clinical predictors and demographic data was analyzed to determine association with single and recurrent mode switches. Multivariate analysis was performed to determine association with clinical/demographic criteria.

Results: Fifty-four patients (mean age 70±12 years; mean follow-up 29.1±22 months [3.4-81.4 months]) with dual chamber devices were randomly evaluated in the Electrophysiology Clinic. There were 21 subjects who experienced at least one mode switch event. The median time to first mode switch from device implantation was 39.3 months. Risk factors individually associated with any mode switch episode included diabetes mellitus (DM; p<0.04) and digitalis use (p=0.02). Subjects who had a history of DM were 5 times more likely to have a mode switch (3.7 per follow-up month ±5.3 vs. 0.98 per follow-up month ±2.02; p=0.02). There was a higher rate of mode switching among patients on digitalis (3.1 per follow-up month ±4.3 vs. 0.73 per follow-up month ±1.9; p=0.02).

Conclusion: The main factors associated with any mode switch were the presence of DM and digitalis use. Those patients who are diabetics and those on digitalis may warrant closer observation and management for the development of atrial dysrrhythmias. More large-scale trials should be performed to assess potential clinical predictors of atrial fibrillation recurrence.