**CAN A WEARABLE CARDIOVERTER-DEFIBRILLATOR (WCD) BE USED FOR ANTIARRHYTHMIC MEDICATION INITIATION AND TITRATION?**

E.T. Karam1, C. Pherson1, **N.R. Bianco2**, S.J. Szymkiewicz2

1Deborah Heart and Lung Center, Browns Mills, NJ, 2Zoll Medical, Pittsburgh,

PA, USA

Dofetilide prolongs depolarization, requiring inpatient hospitalization for monitoring of QTc prolongation and polymorphic VT (PVT). Dosing is based on QTc measurement from serial ECG’s based on a standard algorithm. The initiation of dofetilide therefore incurs an inconvenience to the patient and significant financial expense to the healthcare system. A WCD is commercially available for temporary protection of patients at risk for VT/VF and can record surface electrograms upon demand. This study evaluates the accuracy of QTc measurement from WCD electrograms (WCDE) as compared to standard ECG’s. Patients admitted for dofetilide initiation were fitted with a WCD. Dofetilide was administered as per hospital/manufacturer protocol. Patients recorded a WCDE at the time of each ECG. The QTc was measured from each ECG and WCDE by 3 blinded cardiologists. A total of 16 ECG/WCDE pairs were recorded from 4 patients. The mean difference between the QTc values derived from ECG vs. WCDE was calculated for all readers. The same data was calculated for subsets of ECG/WCDE pairs (AF, Sinus/a-paced, QTc > 500 ms, QTc < 500 ms), combining the data from all readers. This ongoing study suggests that QTc measurement from a WCDE during dofetilide initiation yields similar values as from standard ECG’s (avg difference 37 +/-36 ms), especially for QTc < 500 ms (avg difference 20 +/- 22 ms). Future studies may evaluate the safety of outpatient initiation of dofetilide or other antiarrhythmic medications using WCD’s to monitor ECG parameters and protect against PVT.