DEVICE DETECTED ATRIAL FIBRILLATION AND RISK FOR STROKE: AN ANALYSIS OF MORE THAN 10,000 PATIENTS FROM THE SOS AF PROJECT (STROKE PREVENTION STRATEGIES BASED ON ATRIAL FIBRILLATION INFORMATION FROM IMPLANTED DEVICES)

Oral Contributions
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Context: Cardiac implanted electronic devices (CIEDs) enhance detection of atrial fibrillation (AF), providing a comprehensive measure of AF burden.

Objective: To assess the association between maximum daily AF burden and risk of stroke.

Design, Setting and Patients: A pooled analysis of individual patient data from 3 prospective studies was performed. Patients without permanent AF implanted with CIEDs were included if they had at least 3 months of follow-up. A total of 10,016 patients (median age 70 years) met these criteria. The risk of stroke associated with pre-specified cut-off points of AF burden (5 minutes, 1, 6, 12 and 23 hours, respectively) was assessed.

Main Outcome Measure: Stroke.

Results: During a median follow up of 24 months 43% of patients experienced at least 1 day with at least 5 minutes of AF burden. A Cox regression analysis adjusted for CHADS2 score and anticoagulants at baseline demonstrated that AF burden was an independent predictor of stroke. A threshold of 1 hour was associated with the highest hazard ratio (HR) for stroke, i.e. 2.11 (95% CI 1.22 to 3.64, p=0.008). In the continuous analysis, we found a significant association between daily AF burden and stroke, HR per hour 1.03 (95% CI 1.00 to 1.05, p=0.040).

Conclusions: Device detected AF burden is associated with an increased risk of stroke, with a cut point of 1 hour doubling the risk, even in a relatively unselected population of CIEDs patients. This finding may be the basis for timely and clinically appropriate decision making on anticoagulation treatment.

Keywords: atrial fibrillation, anticoagulation, implantable defibrillator, pacemaker stroke.