

**CHA2DS2-VASC SCORE PREDICTS INCIDENT ATRIAL FIBRILLATION/FLUTTER IN A REFERRAL POPULATION**

Moderated Poster Contributions

Arrhythmias and Clinical EP Moderated Poster Theater, Poster Hall, Hall C
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Background: CHA2DS2-VASc score has been shown to predict occurrences of perioperative atrial fibrillation (A-Fib) in patients undergoing cardiac surgery. However, data on whether if CHA2DS2-VASc score would predict incidence of A-Fib/Flutter in non-operative setting is lacking.

Methods: From 1993 through 2010, all patients undergoing a clinically indicated treadmill exercise test (TMET) at the Mayo Clinic, Rochester, MN were identified (N= 76,857). From this, Olmsted and neighboring counties residents were selected (N=14,095). From this, patients with age <18 years; prior history of valvular heart disease or A-Fib/Flutter were excluded. Patient undergoing only Bruce or accelerated Naughton protocols on TMET were considered. Patients were stratified into 4 groups at baseline based on CHA2DS2-VASc score as determined at the time of TMET; group-0 score=0; group-1=1; group-2=2; group-3≥3. Patients were prospectively followed from the date of TMET until end of January 2016 for occurrence of A-Fib/Flutter. A-Fib/Flutter diagnosis was ascertained through retrospective chart review. Post-operative A-Fib/Flutter (within 30 days of surgery) was not considered. Proportional hazard regression modeling was done to assess relationship of CHA2DS2-VASc score with the outcome while adjusting for METs achieved, sex, obesity, smoking status, and other relevant risk factors.

Results: Final study population comprised of 12,624 patients with female comprising 37% of the cohort. Mean age in our study group was 52.2 ± 12.8 years. During an overall median follow-up of 14 (8 to 17) years, 1,501 (11.9%) patients developed incident A-Fib/Flutter. While using CHA2DS2-VASc group-0 as referent, patients in CHA2DS2-VASc group-1[1.46(1.22-1.74, p<.0001)], group-2[2.20(1.83-2.65, p<.0001)], and group-3[4.1(3.5-5.0, p<.0001)] were at significantly increased risk for developing A-Fib/Flutter. Each increase of one point on the CHA2DS2-VASc scale was associated with a 45% [1.45(1.40-1.51, p<.001)] increase in incidence of A-Fib/Flutter.

Conclusions: CHA2DS2-VASc score predicts incident A-Fib/Flutter, and points to the fact that A-Fib/Flutter is probably a vascular disease in vast majority of patients.