EFFICIENCY OF CHADS2 SCORING SYSTEM IN PREDICTION OF THROMBOEMBOLIC RISK: 10-YEAR SURVEY OF OVER 3000 STUDIES

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Sunday, March 14, 2010, 3:30 p.m.-4:30 p.m.

Session Title: Clinical Electrophysiology--Supraventricular Arrhythmias
Abstract Category: Clinical Electrophysiology--Supraventricular Arrhythmias
Presentation Number: 1078-121

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Background: The CHADS2 scoring system was found to be a good predictor of the risk of stroke in patients with atrial fibrillation. The effectiveness of this scoring system in assessing thromboembolic risk, prior to direct current cardioversion (DCC) is unknown.

Method: 3191 consecutive studies from 1999 to 2008 (mean age 66 ± 13 yrs, M: F ratio 2:1) in which transesophageal echo was performed for pre-DCC screening, were analyzed. Left atrial/ left atrial appendage (LA/LAA) thrombogenic milieu [Spontaneous echo contrast (SEC), sludge and thrombus] was investigated. The results were correlated with the CHADS2 (Congestive Heart failure, Hypertension, Age>75, Diabetes, and Stroke [2 points]) score findings.

Results: The CHADS2 score of 0, 1, 2, 3, 4, 5 and 6 were present in 13%, 25%, 30%, 21%, 7%, 3% and 1% of the studies, respectively. The prevalence of LA/LAA thrombus/sludge increased with rising CHADS2 score [Score 0 (6%), 1 (8%), 2(9%), 3(10%), 4-6 (13.5%), P< 0.001]. In the multivariate model, ejection fraction < 25 % was the best predictor of LA/LAA sludge/thrombus (P< 0.001).

Conclusions: CHADS2 scores 0 and 1 is associated with significant amount of sludge and thrombus and therefore mandates the need for revision for assessing thromboembolic risk prior to DCC.