Use of CHA$_2$DS$_2$-VASc / CHADS$_2$ Score to Predict Paroxysmal Atrial Fibrillation in Patients With Cryptogenic Stroke

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Aims:
Paroxymal atrial fibrillation (PAF) is a possible cause of cryptogenic stroke but is under-diagnosed in this patient cohort. We sought to determine the incidence and predictors of PAF using CHA$_2$DS$_2$-VASc and CHADS$_2$ scores in AF naive cryptogenic stroke patients.

Methods:
From 2001 to 2010, 327 AF naive cryptogenic stroke patients underwent 24 hour ambulatory holter monitoring. Patient demographics and individual components of the CHADS$_2$ and CHA$_2$DS$_2$-VASc scores were collected from a retrospective review of case records.

Results:
There were 174 males and 153 females. Mean age was 64.8 years ($\pm$ 13.19). 25 out of 327 (7.65%) were positive for AF. The mean CHADS$_2$ and CHA$_2$DS$_2$-VASc scores were 3.36 ($\pm$ 0.91) and 4.66 ($\pm$1.53) respectively.

Age was the only independent predictor of PAF. The odds of PAF increased by 1.04 times for each 1 year increase in age ($p = 0.03$).

Females, hypertensive, diabetic and cardiac failure patients had higher odds of developing PAF but this was statistically insignificant.

The composite CHA$_2$DS$_2$-VASc score was a better predictor of PAF compared to CHADS$_2$ score ($p=0.03, p=0.07$ respectively). For each unit increase of CHA$_2$DS$_2$-VASc score, the odds of developing PAF increased by 1.37 times ($p=0.03$).

Conclusions:
The higher the CHA$_2$DS$_2$-VASc score, the more likely PAF would be detected in cryptogenic stroke patients and anti-coagulation should be considered.

Keywords: atrial fibrillation, CHA$_2$DS$_2$-VASc, CHADS$_2$