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## The risk of stroke using CHA2DS2-VASc score in hemodialysis patients at a tertiary hospital in Riyadh, Saudi Arabia

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**Introduction & Aim:** Patients undergoing hemodialysis are at increased risk of stroke. However, less known about the impact of some of the stroke risk factors and the value of stroke risk scores in determining the risk in those patients. Our main goal is to assess the risk factors for stroke in hemodialysis patients and the use of the new CHA2DS2-VASc score for stroke assessment.

**Method:** Single centers, retrospective cohort study of 336 patients undergoing hemodialysis from 24 June 2018 to 6 September 2018 were recruited. Baseline demographics, clinical, and laboratory data were collected. We calculated the CHA2DS2-VASc score for stroke assessment in all patients and categorized them into high, moderate and low risk patients according to CHA2DS2-VASc score and subcategorized them into two groups: Atrial Fibrillation (AFib) and Non-atrial Fibrillation (Non-AFib) patients.

**Result:** 336 patients were included in our study. The majority of patients were at high risk with a CHA2DS2-VASc score mean of 2.9±1.5 although history of stroke was observed only in 15 patients (4.46%). According to CHA2DS2-VASc score; 280 patients were at high risk, 172 (51.19%) were high-risk patients on treatment (anticoagulant or antiplatelet) and 108 (32.14%) patients were high risk patients not on treatment 48 were at moderate risk (14.28%) and 8 were at low risk (2.38 %). Patients were divided into subgroups as non-AFib and AFib. In non-AFib patients 320 (95.23%), high-risk patients 103 (32.18%) were not treated, high-risk patients with treatment are 162 (50.62%), moderate patients were 47 (14.68%), 8 (2.5%) was in low risk. AFib patients were 16 with a mean CHA2DS2-VASc score of 4.4±1.1. Patients with AFib were all at high risk except 1 was at moderate risk (6.25%). There were 11 (68.75%) patients on treatment and 5 (31.25%) patients not on treatment. The risk factors for stroke that were statistically significant in increasing score risk for all patients were: age >65 (95% CI, -2.04 to -1.29; p=0.000), being female (95% CI, -1.36 to -0.68; p=0.000) hypertension (95% CI, -2.59 to -1.37; p=0.000), diabetes (95% CI, -2.10 to -1.50; p=0.000), CVD (95% CI, -2.07 to -1.24; p=0.000), history of stroke or TIA (95% CI, -3.70 to -2.03; p=0.000), CHF or LVEF (95% CI, -2.28 to -0.91; p=0.000).

**Conclusion:** The risk of stroke in hemodialysis patients is significant according to the use of CHA2DS2-VASc score in Non-AFib hemodialysis patients shows supportive evidence of increased risk of stroke in those patients, which suggest the importance of close monitoring of patients with stroke risk factors by the nephrologist and the stroke team which will lead to the initiation of early prophylaxis in those patients.

### Biography

Modhi Albaz done her graduation in Princess Nourah bint Abdulrahman University, Saudi Arabia.