VALIDITY OF THE CHA2DS2-VASC SCORE IN ASSESSMENT OF PROGNOSIS OF STEMI PATIENTS IRRESPECTIVE OF PRESENCE OF ATRIAL FIBRILLATION: A SINGLE-CENTER PROSPECTIVE OBSERVATIONAL STUDY

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Background: The CHADS2, CHA2DS2VASc and scoring systems were designed to stratify thromboembolic risk in patients with atrial fibrillation (AF). All the components of CHA2DS2VASc are important risk and prognostic factors for cardiovascular disease. This study evaluates the effectiveness and accuracy of CHA2DS2VASc score as a risk-stratification tool for in hospital and short-term clinical outcome in ST-elevation myocardial infarction (STEMI) patients.

Materials & Methods: Our study involved 171 patients admitted with STEMI regardless of presence or absence of AF.GRACE, TIMI and CHA2DS2VASc scores were calculated for all patients at hospital admission. Patients were divided into three groups (score 0-2, 3-4 and ≥5) according to CHA2DS2VASc RS. The primary end point was major adverse cardiovascular events (MACE) including cardiovascular death, non-fatal myocardial infarction (MI) and stroke during hospital admission at three months and six months. The area under the receiver operating characteristic curve (AUC) was used to evaluate the predictive ability of each score at different time points.

Results: Our six months follow up was completed in all patients. Cumulative incidence of MACE was in 29 cases. In chi-square analysis, incidence of MACE was significantly higher in patients with CHA2DS2VASc score ≥5 compared to 3-4 and 0-2 (38.89% vs. 19.57% vs. 12.15%, P=0.01). Death is the most significant complication (p<0.001). Both TIMI score and GRACE RS didn't demonstrate better discrimination than CHA2DS2VASc risk score in predicting in-hospital, three-month and six-month MACE.

Conclusion: Our study demonstrates that CHA2DS2VASc score is an independent predictor for short-term prognosis in STEMI patients and can be used as a risk-stratification system in STEMI patients irrespective of method of treatment.

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