Prediction of Acute-Coronary-Syndrome using newly-defined R2-CHA2DS2-VASc score among patients with chest pain

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CLALIT 100 YEARS

INTRODUCTION

Chest-pain patients with no evidence of acute coronary syndrome might still be at risk for adverse outcomes.

Adding renal function to the classic scoring of CHADS and CHA2DS2 VASC may improve risk stratification of chest-pain patients discharged from the internal medicine wards after acute coronary syndrome (ACS) rule-out.

METHOD

We accessed medical records of patients admitted to internal medicine wards during 2010-2016 and discharged following ACS rule-out.
A $R_2CHA_2DS_2$-VASc score model that included higher scores as kidney function deteriorated was calculated and compared to CHADS and CHA_2DS_2 VASC scores.
The primary endpoint was the composite of 30-day ACS and mortality. One-year ACS and 1-year mortality were the secondary endpoints. The study included 12,449 patients, stratified into three risk groups according to their $R_2CHA_2DS_2$-VASc score.

OBJECTIVES

To further investigate the value of adding kidney function information to the prognosis and risk stratification of patientss, by correlating pre-admission $R_2CHA_2DS_2$-VASc score and adverse clinical outcomes in patients presenting with chest pain who were discharged from internal medicine wards following ACS rule-out.

RESULTS

Participants were stratified into 3 groups according to $R_2CHA_2DS_2$-VASc score. $R_2CHA_2DS_2$-VASc score predicted better the composite outcome of ACS and mortality 30-days and 1 year after discharge (OR : 4, 95% CI 2.3-7, p<0.01 and OR : 13.3, 95% CI 7.8-22.7, p<0.01, respectively). Receiver operating characteristic curve analysis showed better risk stratification of the $R_2CHA_2DS_2$-VASc compared with both CHADS and CHA_2DS_2 VASC score.

R_2-CHA$_2$DS$_2$-VASc Score		
R_2	eGFR<60 ml/min/1.73 m^2	1 point
	eGFR<30 ml/min/1.73 m^2	2 points
C	Congestive heart failure	1 point
H	Hypertension	1 point
A$_2$	Age > 75 years	2 points
D	Diabetes mellitus	1 point
S$_2$	Previous stroke or TIA	2 points
V	Vascular disease	1 point
A	Age 65-74	1 point
Sc	Sex category (Female)	1 point
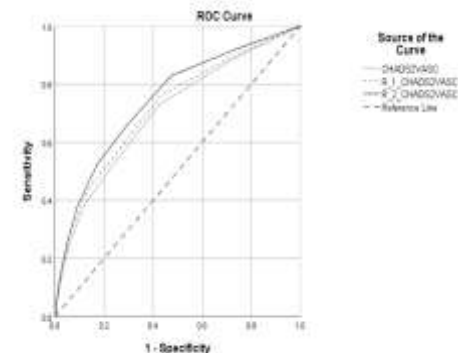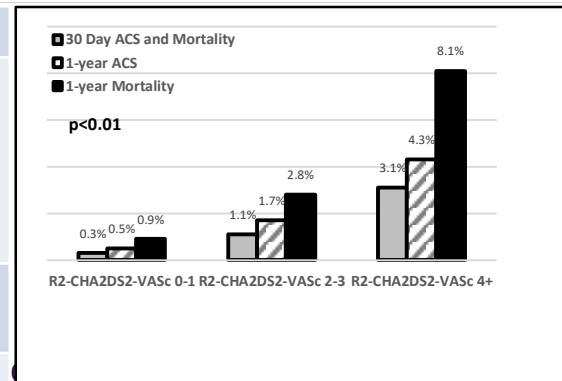
CONCLUSIONS

The R2CHA2DS2-VASc score is a better predictor of short- and long-term cardiovascular morbidity and mortality after hospital discharge.