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<td>Lau, KK; Chan, YH; Wong, YK; Yiu, KH; Teo, KC; Li, LSW; Shu, XO; Cheung, RTF; Ho, SL; Chan, KH; Siu, CW; Tse, HF</td>
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Garlic intake is an independent predictor of endothelial function in patients with ischaemic stroke

KK Lau1, YH Chan2, YK Yu2, KC Teo1, LSW Li2, XO Shu2, SL Ho1, KH Chan1, CW Siu3, HF Tse2
1 Division of Neurology, The University of Hong Kong, Hong Kong
2 School of Public Health, The University of Hong Kong, Hong Kong
3 Division of Rehabilitation Medicine, The University of Hong Kong, Hong Kong
4 Department of Medicine, Vanderbilt Epidemiology Center & Vanderbilt-Ingram Cancer Center, Vanderbilt University of Medicine, US

Objectives: To investigate the effects of garlic on endothelial function in patients with ischaemic stroke (ISS).

Methods: A total of 125 Chinese patients with prior ISS due to athero-thrombotic disease were recruited from the out-patient clinics during July 2005 to December 2006. Daily allium vegetable intake (including garlic, onions, Chinese chives and shallots) was ascertained by means of a validated food frequency questionnaire for Chinese and brachial artery flow-mediated dilatation (FMD) was measured using high-resolution ultrasound in all subjects.

Results: The mean age of the study population was 65.9±11.1 years and 69% were males. Mean allium vegetable intake and garlic intake of the study population was 7.5±12.7 g/day and 2.9±8.8 g/day, respectively. Their mean FMD was 2.6±2.3%. Daily intake of total allium vegetable ($r=0.36, P<0.01$) and garlic ($r=0.34, P<0.01$) significantly correlated with FMD. Using the median daily allium intake as cut-off (3.37 g/day), patients with a low allium intake <3.37 g/day was noted to have a lower FMD compared to those with a normal allium intake (2.1±2.1% vs 3.0±2.4%, $P<0.05$). After adjusting for confounding factors, multivariate analysis identified that daily allium vegetable (B=0.05, 95% confidence interval [CI]: 0.02-0.09, $P<0.01$) and garlic (B=0.07, 95% CI: 0.02, 0.12, $P<0.01$) intake, but not onions, Chinese chives and shallots were independent predictors for changes in FMD in patients with ISS.

Conclusions: Daily garlic intake is an independent predictor of endothelial function in patients with ISS and may play a role in the secondary prevention of atherosclerotic events.

Roles of the CHADS2 and CHA2DS2-VASc scores in post-myocardial infarction patients: risk of new occurrence of atrial fibrillation and ischaemic stroke

KK Lau1, YH Chan2, S Liu2, KH Chan1, CY Yeung4, SL Ho1, CP Lau2, LSW Li5, HF Tse5, CW Siu3
1 Division of Neurology, Department of Medicine, The University of Hong Kong, Hong Kong
2 School of Public Health, The University of Hong Kong, Hong Kong
3 Division of Cardiology, Department of Medicine, The University of Hong Kong, Hong Kong
4 Division of Endocrinology, Department of Medicine, The University of Hong Kong, Hong Kong
5 Division of Rehabilitation Medicine, Department of Medicine, The University of Hong Kong, Hong Kong

Introduction: Patients with myocardial infarction are at risk of development of atrial fibrillation (AF) and ischaemic stroke. We sought to evaluate the prognostic performance of the CHADS2 and CHA2DS2-VASc scores in predicting new AF and/or ischaemic stroke in post-ST segment elevation myocardial infarction (STEMI) patients.

Methods: A total of 607 consecutive post-STEMI patients without previously documented AF were studied.

Results: After a follow-up of 63 months (3184 patient-years), 83 (13.7%) patients developed new AF (2.8% per year). Patients with a high CHADS2 score and/or CHA2DS2-VASc score were more likely to develop new AF. The annual incidences of new AF were 1.18%, 2.10%, 4.52% and 7.03% in patients with CHADS2 of 0, 1, 2, and ≥3; and 0.39%, 1.72%, 1.83%, and 5.83% in patients with the CHA2DS2-VASc score of 1, 2, 3 and ≥4. The test discrimination of the CHA2DS2-VASc score (C-statistic=0.676) was superior to the CHADS2 (C-statistic=0.632) for new AF. Furthermore, 29 patients developed ischaemic strokes (0.9% per year). Likewise, the incidences of stroke increased with increasing CHADS2 (0.41%, 1.02%, 1.11% and 1.95% with CHADS2 of 0, 1, 2, and ≥3) and CHA2DS2-VASc scores (0.39%, 0.49%, 1.02%, and 1.48% in patients with the CHA2DS2-VASc score of 1, 2, 3 and ≥4). The C-statistic of the CHA2DS2-VASc score as a predictor of ischemic stroke was 0.601, which was superior to that of CHADS2 score (0.573).

Conclusion: The CHADS2 and CHA2DS2-VASc scores can identify post-STEMI patients at high risk of AF and stroke, enabling close surveillance and prompt anticoagulation for stroke prevention.