Abstract: P5667

A clinical risk score for predicting incident atrial fibrillation in asians: derivation in 7,220,654 Taiwan subjects with 438,930 incident atrial fibrillation

Authors:
TF Chao¹, SA Chen¹, ¹Taipei Veterans General Hospital - Taipei - Taiwan,

Topic(s):
Prevalence and Incidence of Atrial Fibrillation

Citation:
Background: The patient number of atrial fibrillation (AF) is continuously increasing all over the world. No risk score for predicting incident AF has been specifically developed using a nationwide dataset for Asians. Our aim was to investigate risk factors for incident AF in Asians and to combine them to develop a clinical risk scheme.

Method: From January 1st 2000 to December 31st 2000, 7,220,654 subjects aged > 40 years without past history of cardiac arrhythmia were identified from the Taiwan National Health Insurance Research Database. Cox regression analysis was performed to identify significant clinical predictors of incident AF which were then incorporated together to develop a scoring scheme.

Results: During a follow up of 16 years, 438,930 patients experienced incident AF. The significant predictors and the calculation rule of the scoring scheme are shown in Figure A. The score ranged from -3 to 25, and the risk of incident AF ranged from 0.06%/year for patients with a score -3 to 7.99%/year for those with a score >19. The AUC in the prediction of 1-year risk of incident AF was 0.86 and was 0.75 for 16-year risk of AF (Figure B), which was higher than that of CHADS2, CHA2DS2-VASc and C2HEST scores.

Conclusion: A clinical risk score has been developed based on a large nationwide database which could be used to identify patients at a high risk of incident AF.
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Conclusion: A clinical risk score has been developed based on a large nationwide database which could be used to identify patients at a high risk of incident AF.

A

Calculation rule of the score (range -3~25)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Previous stroke/TIA</th>
<th>COPD</th>
<th>CAD without MI</th>
<th>MI</th>
<th>Autoimmune dx</th>
<th>Liver cirrhosis</th>
<th>Hyperthyroidism</th>
<th>CKD without ESRD</th>
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<th>Gout</th>
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<td>-3</td>
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<td>≥ 80</td>
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<td>Congestive heart failure</td>
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</tbody>
</table>

B

AUC in the prediction of AF

1 | 0.96 | 0.84 | 0.78 | 0.80 | 0.75
t | 3 | 5 | 7 | 10 | 12 | 16

Years