Innovations in anticoagulation for stroke prevention

June 13 2012

New scientific findings in anticoagulation for stroke prevention are paving the way for updates to the European Society of Cardiology (ESC) Guidelines for the management of atrial fibrillation.

Some of these findings were presented during the European Heart Rhythm Association (EHRA) sessions at Cardiostim 2012, 13-16 June, in Nice, France. Cardiostim is an international scientific congress in the field of electrophysiology and cardiac techniques. It is organised in collaboration with the ESC and EHRA, which is a registered branch of the ESC. Link to Cardiostim

Experts from EHRA showcased the latest science in electrophysiology and cardiac techniques during 30 EHRA sessions at Cardiostim. Professor Gregory YH Lip (Birmingham, UK) and other EHRA members presented the most up to date findings in the field of anticoagulation for stroke prevention in atrial fibrillation.

The CHA2DS22-VASc score to assess stroke risk has now been validated in different independent populations. "The CHA2DS2-VASc score outperforms other stroke risk scores including the older CHADS2 score in identifying very low risk patients who do not need any antithrombotic therapy," says Professor Lip. "And in some of the validations the CHA2DS2-VASc score outperforms the CHADS2 score in predicting those who get a stroke subsequently."

In the past, patients with a CHADS2 score of 0 were considered to be at

low risk of stroke. But when these patients were substratified using the CHA2DS2-VASc score, these patients had stroke rates between 0.8-3.2% per year, if untreated (1). Professor Lip says: "Thus, those patients with a CHADS2 score of 0 are not low risk at all and show that the CHADS2 score does not accurately define low risk patients."

A net clinical benefit analysis balancing ischaemic stroke against intracranial bleeding based on a dataset of more than 180,000 patients with atrial fibrillation in Sweden found that patients with a CHA2DS2-VASc score >1 had a positive net clinical benefit when they were anticoagulated. The findings were irrespective of bleeding risk, which was assessed by the HAS-BLED score (2).

The effectiveness of the HAS-BLED score in assessing major bleeding risk (and the risk of intracranial haemorrhage) has been confirmed in numerous cohorts of patients with atrial fibrillation who are taking oral anticoagulation (3). The score also predicted cardiovascular events and mortality. Professor Lip says: "Recent data also shows that the HAS-BLED score also outperforms other scores (both new and old ones) in predicting bleeding risk."

These new findings support the moves in the 2010 ESC Guidelines for the management of atrial fibrillation to introduce the HAS-BLED bleeding score, and to shift away from the traditional low/moderate/high risk artificial categorisation of stroke risk, and moving towards a risk factor based approach to stroke prevention in atrial fibrillation using the CHA2DS2-VASc score.

Novel data has also been published on the new oral anticoagulants for stroke prevention in atrial fibrillation. In a recent modelling analysis, the researchers used the scores for stroke risk and bleeding to calculate the net clinical benefit of the new anticoagulants. They found that when the risk of bleeding and stroke were both high, the new oral anticoagulants

appeared to have a much greater net clinical benefit compared to warfarin (4).

"Since 2010 there have many new trials related to the new anticoagulants and therefore this is a very exciting time for stroke prevention," says Professor Lip. "These new drugs are powerful anticoagulants. They work well if they are used correctly and in the appropriate patients."

These new findings in this fast changing field are paving the way for the launch of a Focused Update to the ESC Guidelines on atrial fibrillation at the ESC Congress in August in Munich, Germany.

Cardiostim is expected to attract more than 5,000 delegates from across the globe with an interest in electrophysiology. Future events in this field include EHRA EUROPACE 2013, which will be held 23-26 June 2013 in Athens, Greece. This conference is EHRA's official meeting and for the first time in 2013 it will be held jointly with the ESC Working Group on Cardiac Cellular Electrophysiology and the ESC Working Group on e-Cardiology. This unique partnership emphasises the multidisciplinary and translational approach in modern electrophysiology in the diagnosis and therapy of arrhythmias and conduction disturbance.

Provided by European Society of Cardiology