Prof Nielsen concluded that the data from this 5-year follow-up of the MANTRA-PAF trial suggest that first-line treatment of AF with RFA led to improved outcomes with decreased occurrence and burden of symptomatic AF compared with patients who received AAD therapy. However, he acknowledged that there are currently no data that indicate RFA improves survival compared with AAD therapy, and the risk of severe complications associated with RFA must be considered when advising patients.

Education Program Fails to Improve Adherence to Apixaban: The AEGEAN Study

Written by Emma Hitt Nichols, PhD

The addition of an educational program to apixaban therapy did not improve patient adherence to therapy. Gilles Montalescot, MD, PhD, Pitié-Salpêtrière Hospital, Paris, France, presented data from the AEGEAN study [NCT01884350].

Vitamin K antagonists have multiple limitations, including regular laboratory monitoring to ensure that the INR is maintained within the narrow therapeutic window, frequent dose adjustments, multiple food and drug interactions, and the risk of bleeding [Mani H, Lindhoff-Last E. *Drug Des Devel Ther*. 2014]. In contrast, the novel (nonwarfarin) oral anticoagulants (NOACs) have fixed dosing, do not require laboratory monitoring, and have few food or drug interactions [Heidbuchel H et al. *Europace*. 2013]. However, patient adherence to NOAC therapy has been suboptimal because patients do not undergo frequent monitoring at an anticoagulation clinic. The purpose of the AEGEAN trial was to assess the efficacy of an education program in improving adherence to apixaban.

Adherence consists of 3 phases: (1) initiation, which occurs when the first dose is received, typically during hospitalization; (2) implementation, which refers to the patient's actual dosing relative to the prescribed dose; and (3) persistence, which is the time that a dose is omitted and no additional doses are taken.

In the open-label, phase 4 AEGEAN trial, patients with atrial fibrillation with a $CHADS_2$ score ≥1 were randomly assigned to receive apixaban with the standard of care or apixaban plus an educational program that consisted of an education booklet about atrial fibrillation and anticoagulation for stroke prevention, a key ring, a short message service alert via a mobile phone, a smartphone application, and access to a virtual clinic with staff from an existing anticoagulation clinic. The standard of care consisted of the usual information about apixaban treatment. After 24 weeks, patients who received the education program were randomly assigned to receive the standard of care or to continue the education program for an additional 24 weeks.

The primary end point was the effect of education on the implementation phase of adherence at 24 weeks. The secondary end points included the effect of education on the persistence phase of adherence at 24 weeks, the effect of an education program on efficacy and safety of apixaban, and identification of predictive risk factors for nonadherence. Patients were excluded if they were at a high risk of bleeding, could not self-administer apixaban, were hospitalized, or were in long-term residential care.

There was no significant difference in the implementation phase of adherence among the treatment arms at 24 weeks. Similarly, the rate of persistence at 24 weeks was 91.1% in the arm that received the education program compared with 90.5% in the standard-of-care arm. In addition, there was no significant difference in clinical outcomes at week 24 between the treatment arms.

In conclusion, Prof Montalescot stated that overall the data suggest that there is a high rate of adherence and persistence to apixaban during the first 6 months of therapy. However, the addition of an education program did not further improve adherence. The effect of the education program beyond 6 months will be evaluated in the second portion of the AEGEAN trial.

BELIEF Study: Left Atrial Appendage Ablation Improves Long-standing Persistent AF

Written by Emma Hitt Nichols, PhD

Empirical electrical isolation of the left atrial appendage (LAA) for the treatment of long-standing persistent (LSP) atrial fibrillation (AF) improved freedom from AF and atrial tachycardia (AT) without increasing complications compared with standard ablation. Luigi Di Biase, MD, PhD, Albert Einstein College of Medicine, Bronx, New York, USA, presented data from the BELIEF study [NCT01362738].

LSP AF is difficult to treat with catheter ablation [Tilz RR et al. *J Am Coll Cardiol*. 2012]. This is likely due to multiple origins of AF, including from the pulmonary vein and regions such as the superior vena cava, ligament of Marshall, coronary sinus, crista terminalis, left atrial posterior wall, and LAA [Di Biase L et al. *Circulation*. 2010]. The purpose of this study was to determine if the empirical electrical isolation of the LAA, in addition to pulmonary vein isolation and ablation of extrapulmonary triggers, would improve freedom from AF or AT.

The BELIEF trial was a randomized, open-label, parallel-group trial with 173 patients who had LSP AF that was