Although anticoagulant therapy with non-vitamin K antagonist oral anticoagulants (NOACs) has demonstrated safety in multiple clinical trials in the setting of stroke prevention in atrial fibrillation (SPAF), a small percentage of patients experience urgent bleeding, which may require advanced bleeding management strategies, including NOAC reversal.

HYPOTHESIS

A video-based online continuing medical education (CME) activity can improve the knowledge and competence of cardiologists regarding strategies for managing anticoagulant-related urgent bleeding events.

METHODS

An online CME activity was developed as a 25-minute roundtable discussion between 4 leading experts. The activity included a transcript of the discussion and a downloadable slide deck to highlight and reinforce key data.

The effects of education were assessed using a linked pre-assessment/post-assessment post-education study design. For all questions combined, the McNemar’s chi-square test was used to assess differences from pre- to post-assessment. P values are shown as a measure of significance; P values <.05 are statistically significant.

Cramer’s V was used to calculate the effect size (% correct with NOAC reversal vs 86% post-assessment; P = .005; V =.176)

A 22% relative improvement in the knowledge of the specificity of andexanet alfa (69% vs 84%; P = .05; V =.176)

A 9% relative improvement in the ability to select appropriate patients for NOAC reversal agents (74% vs 81%; P =.137; V =0.05)

The activity was launched online on September 2, 2015, and data were collected through October 16, 2015.

RESULTS

For cardiologists who participated in the CME activity, comparison of individually linked pre-assessment question responses to the respective post-assessment question responses demonstrates statistically significant improvements (P = .057; McNemar’s chi-square: Table 1).

A total of 33% of cardiologists answered all 4 pre-assessment questions correctly, with 48% answering all post-assessment questions correctly (Figure 1).

Improvements were demonstrated (Figure 2):

- A 23% relative improvement in the knowledge of the mechanism of action for idarucizumab (70% pre-assessment vs 86% post-assessment; P =.005; V =.194).
- A 22% relative improvement in the knowledge of the specificity of andexanet alfa (69% vs 84%; P =.05; V =.176).
- A 9% relative improvement in the ability to select appropriate patients for NOAC reversal agents (74% vs 81%; P =.137; V =0.05).

The statistically significant improvements observed in this online CME roundtable discussion demonstrate the benefits of educating the appropriate target audience base with aptly designed educational activities.

This assessment of cardiologists’ knowledge identified persisting post-education gaps that support the need to develop additional CME activities on:

- Management of NOAC-related bleeding in the setting of SPAF, including the role of specific NOAC reversal agents.
- Patient selection criteria for reversal agents vs the use of supportive care measures to address urgent bleeding.

Acknowledgements

This CME-certified activity was supported by an independent educational grant from Bayer AG.

For more information contact Jelena Spyropoulos, PhD, Director of Clinical Strategy, Medscape, LLC, at jspyropoulos@medscape.net.

References
