Should closure of PFO be the standard of care in patients with ESUS.

W. D. Heiss
Neurology, Max Planck Institute for Metabolism Research, Germany

Stroke is among the leading causes of mortality and serious long-term disability. Around one-third of the patients hospitalized with stroke are under the age of 65 years. Around 25% of all strokes are cryptogenic, and this reaches approximately 50% in the younger age group. Epidemiologic data reveal significant association between patent foramen ovale (PFO) and cryp- togenic stroke both in the younger and older patient pop- ulations. Despite medical therapy, the rate of stroke recurrence in patients with PFO is estimated to be 25% within a 4-year period. Observational data and meta-analyses of observational studies suggest that percutaneous transcatheter closure of PFO is safe and has a low recurrence rate of stroke as compared to medical therapy. However, several randomized controlled studies published up to 2013 have not shown superiority of PFO closure over medical therapy. An exploratory analysis of long-term data from 1 trial found a significantly reduced stroke risk with closure. Recently published trials also reported positive results. Pooled analyses of these additional data will almost certainly find a statistically significant benefit of closure. As pointed out in the recent Viewpoint by Kamel (2017) the studies on which the metaanalysis was based have some methodological shortcomings and therefore decisions to close or not to close a PFO must still be based on the individual data in a single patient. Nonetheless, the combined clinical, epidemiological, and trial evidence indicate that PFO can cause ischemic stroke and that closure can reduce the risk of recurrence.