Prior Antithrombotic Use Is Associated With Favorable Mortality and Functional Outcomes in Acute Ischemic Stroke

In this observational study, Myint et al used data from the Get With The Guidelines-Stroke database to examine the effect of antithrombotic use at the time of admission on the mortality and functional outcome of patients with acute ischemic stroke. In a population of ≈540,000 patients, the authors found an independent positive association between antithrombotic use and favorable outcome. Although indications for antithrombotic use were inversely associated with favorable outcomes, the authors found no interaction between antithrombotic use and indication and the outcomes of interest, with the exception of length of stay. For patients with atrial fibrillation on warfarin, the intensity of anticoagulation as measured by the international normalized ratio had a significant, independent association with outcome; those with international normalized ratio ≤1.4 had higher in-hospital mortality likelihood, longer hospital stay, and were less likely to be discharged home. Besides the primary end points of interest, 3 additional collateral findings on antithrombotic use stand out, highlighting not only limitations but also missed opportunities and areas for improvement by better adherence to evidence-based practice: First, >50% of the patients in the study had a stroke, despite being on an antithrombotic; this not only might partially reflect inadequate compliance but also highlights the limitations of antithrombotic therapy in stroke prevention and the complexity of stroke risk factor interplay. Second, a considerable proportion of patients (≈14%) with indication for antithrombotic use were not prescribed as indicated. Third, ≈14% of the patients were using an antithrombotic although there was no clear indication for it. See p 2066.

High-Sensitive C-Reactive Protein Predicts Recurrent Stroke and Poor Functional Outcome: Subanalysis of the CHANCE Trial

Using data from the CHANCE (Clopidogrel in High-Risk Patients With Acute Nondisabling Cerebrovascular Events) trial, Li et al explored the predictive value of high-sensitivity C-reactive protein (hsCRP) for recurrent stroke and functional outcome after a transient ischemic attack or minor ischemic stroke. HsCRP was measured in within 24±12 hours from randomization in 64% (prespecified) of the participating centers. Patients with higher hsCRP levels were more likely to be older, hypertensive, overweight, and have a transient ischemic attack (as opposed to minor stroke) as a qualifying event for study entry. However, after adjusting for these imbalances and several other risk factors and medication use, the authors found an independent association between higher hsCRP levels and recurrence of any stroke, ischemic stroke, any cardiovascular event at 90-day and 1-year follow-up, and poor functional outcome in the 90-day follow-up. The results of this analysis reflect, at least partially, findings from previous studies linking elevated hsCRP levels with recurrent stroke risk although it does not offer any insight into any potential causative relationship. More complex is the association between the hsCRP levels and the 3-month functional outcome: A closer look in the functional status of patients at study entry and 90 days reveals that despite a good premorbid functional status and—by definition—either a transient ischemic attack or a minor stroke, a considerable proportion of patients (10.5%) had a poor functional outcome. Taken together, the above findings raise the question whether the relationship between elevated hsCRP and poor functional outcome is mediated through its association with increased incidence of stroke recurrence. See p 2025.

Left Ventricular Ejection Fraction and Risk of Stroke and Cardiac Events in Heart Failure: Data From the WARCEF Trial

In this post hoc analysis of the WARCEF (Warfarin Versus Aspirin in Reduced Ejection Fraction) trial, Di Tullio et al examined the relationship between left ventricular ejection fraction (LVEF) and cardiovascular outcomes and mortality in the 2,305 enrolled patients with LVEF of <35% and randomized to treatment with warfarin or aspirin. The authors found an independent, inverse association between baseline LVEF and the outcomes of interest, with the exception of myocardial infarction. The association was linear for the primary study end point, mortality, cardiovascular and sudden death, and heart failure hospitalization but not for stroke where the association was significant only for very low LVEF values (<15%). Interestingly, the detrimental effect of low LVEF was stronger in warfarin-treated patients, a finding that was true for both stroke and death (as well as primary study outcome), despite no significant differences in the time in therapeutic range in low versus high EF. Specifically for stroke, the effect of warfarin treatment was divergent on opposite sides of the LVEF cutoff limit: higher stroke rate compared with aspirin-treated patients in the group with very low LVEF (<15%) and lower in those with LVEF of ≥15%. These findings defy commonly held beliefs on the role of anticoagulant therapy in stroke prevention for patients with systolic heart failure and low LVEF. However, they should be viewed with caution, given the low absolute number of ischemic strokes observed in the study and merit further investigation. See p 2031.
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