Selecting the Safest Effective Clot Stopper

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How best to reduce the risk of bleeding complications associated with anticoagulation?

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The results of 2 recent studies may reduce the number of patients for whom warfarin is considered optimal antithrombotic therapy and may thereby lower the incidence of bleeding complications.

ANTICOAGULATION AND PERIPHERAL VASCULAR DISEASE

The WAVE (Warfarin Antiplatelet Vascular Evaluation) trial was a randomized, open-label study that compared combination therapy with an antiplatelet agent (aspirin, ticlopidine, or clopidogrel) and an oral anticoagulant (from the warfarin family) to antiplatelet therapy alone.¹ The agents were given to prevent cardiovascular events in patients with PVD. After a mean follow-up of nearly 3 years, cardiovascular events occurred in 12.2% of patients who received combination therapy and in 13.3% of those who received antiplatelet therapy alone. Among patients with severe ischemic events, such as those that would require surgical or invasive interventions, the rate of cardiovascular events was 15.9% for the combination therapy cohort and 17.4% for the single-drug group. All values were nonsignificant. The incidence of bleeding complications was higher in the combination therapy group. These results demonstrate that in patients with PVD, antiplatelet monotherapy is as effective as warfarin in preventing ischemic events and is less likely to cause bleeding complications.

ANTICOAGULATION AND ATRIAL FIBRILLATION

In another study, oral anticoagulants were compared with antiplatelet agents in persons with atrial fibrillation who were without a history of stroke or transient ischemic attack (TIA).² A meta-analysis of 8 randomized trials in more than 9000 patients with a mean follow-up of about 2 years demonstrated that oral anticoagulants were associated with a lower risk of all stroke and embolic events (odds ratio, 0.68 and 0.48, respectively) when compared with antiplatelet agents alone. However, the risk of intracranial hemorrhage was increased 1.98 times among patients who received anticoagulants such as warfarin, compared with those who were given only antiplatelet agents.

In patients who are older, female, hypertensive, or diabetic or have had a previous TIA or stroke, the risk of embolism secondary to atrial fibrillation is higher than in those who do not have these risk factors. Therefore, the presence of specific risk factors mandates aggressive anticoagulation. However, for lower-risk patients with atrial fibrillation, the benefit of therapeutic warfarin is modest because their risk of stroke is less than 1% per year.²

RED VERSUS WHITE CLOTS

In an editorial accompanying the WAVE trial article, Emile R. Mohler 3rd, MD, of the University of Pennsylvania, compared "red" and "white" clots.³ When blood flow is sluggish and the clot more "venous" in nature (such as occurs with a deep venous thrombosis or with blood in the left atrial appendage during atrial fibrillation), red cells are trapped and clotting factors are activated, with very few platelets involved. Thus, the clot appears red. It would make sense intuitively that prevention in this setting would favor warfarin. Alternatively, in arteries, where shear force activates platelets to form a white clot, anti-platelet agents would be more suitable for prevention.

TAKE-HOME POINTS FOR YOUR PRACTICE

- Antiplatelet agents are the mainstay of treatment for PVD. Reduced warfarin use in patients with PVD will most likely translate into fewer bleeding complications without an increase in vascular events.
- Some patients with atrial fibrillation (such as younger persons and those who are not hypertensive) are at low risk for embolic complications and thus may not require warfarin.
References: REFERENCES:


Links:
[1] [http://www.physicianspractice.com/authors/gregory-w-rutecki-md](http://www.physicianspractice.com/authors/gregory-w-rutecki-md)