Aspirin given for up to 2 years after initial anticoagulant treatment reduces the risk of venous thromboembolism recurrence without increasing risk of major bleeding

Henry G Watson

Implications for practice and research

- The use of aspirin to prevent recurrent venous thromboembolism (VTE) after a first idiopathic event should not currently become a standard practice.
- Further studies are required before the use of aspirin following anticoagulation with warfarin for a first episode of venous thromboembolism becomes adopted as routine clinical practice.
- A direct comparison between low-dose aspirin and standard intensity warfarin is required.

Context

Venous thromboembolism, which encompasses deep vein thrombosis and pulmonary embolism, is a relatively common disorder with an incidence in western countries of around 1/1000 per annum. Events are categorised as either provoked, that is occurring in the context of a known temporary risk factor such as surgery, or unprovoked, that is occurring without an associated known risk factor. There is a general consensus that provoked events have a low risk of recurrence and should be treated for a finite period of anticoagulation. However, unprovoked events have a higher rate of recurrence (8–10% per annum) following discontinuation of anticoagulation. This high rate of recurrence has prompted debate around the optimal duration of anticoagulant therapy for this group of patients. The dilemma is that prolonged anticoagulation reduces the risk of recurrent thrombosis while increasing the risk of bleeding events including potentially fatal intracranial bleeding. Efforts to resolve this dilemma have two main approaches. The first is to identify patient features and markers that predict risk of recurrence. The second is to continue thromboprophylaxis using less intense anticoagulation in anticipation that this might confer a benefit in terms of reducing thrombosis recurrence without significantly increasing the risk of bleeding.

Findings

Patients (n=402) were randomised to aspirin or placebo. The study was adequately powered, the clinical end-point was objectively confirmed venous thromboembolism; the primary safety outcome was major bleeding.

Commentary

The use of aspirin to prevent recurrent venous thromboembolism after a first idiopathic event should not currently become a standard practice. Further studies are required before the use of aspirin following anticoagulation with warfarin for a first episode of venous thromboembolism becomes adopted as routine clinical practice. A direct comparison between low-dose aspirin and standard intensity warfarin is required.

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The study was adequately powered, the clinical end-points are appropriate and the definition of major bleeding is one which is generally accepted. Criticism of the study might be that it recruited very slowly suggesting some selection bias of patients, it excluded patients who had experienced bleeding while on warfarin (who may also be at a higher risk of bleeding on aspirin) and it excluded patients with ‘clinically significant thrombophilia’ although this was not further defined.

So should aspirin be used to reduce recurrence in this group of patients? The answer is possibly. Before this is adopted as routine clinical practice it would require a further high-quality clinical study to confirm these findings. It would also be optimal to see a comparison made between continued anticoagulation with...
warfarin at normal intensity and low-dose aspirin. Therefore, there are several possible options that may be considered for patients deemed to be at high risk of recurrent VTE following an initial period of anticoagulation. Reproduction of data such as these would confirm that low-dose aspirin is one of them.

Competing interests None.

References