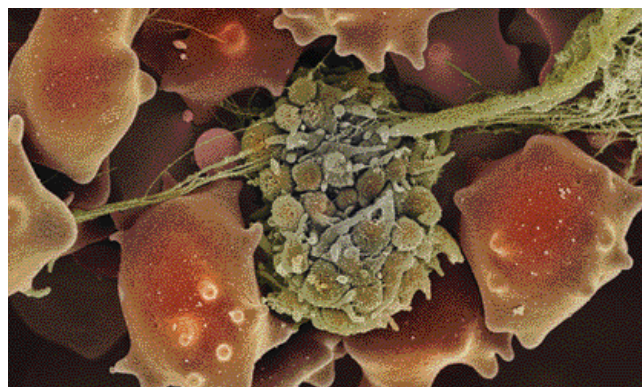


A 73-year-old woman with a falling platelet count

Commentary by **TONY DODDS** MB BS, FRACP, FRCPA

What management is appropriate for this elderly patient, who has a number of significant risk factors for thromboembolic and haemorrhagic events?



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A small thrombus of platelets and crenated erythrocytes.

Case scenario

A 73-year-old woman presents with a falling platelet count (now $123 \times 10^9/L$). She has multiple medical problems, including asthma, hypertension, hypercholesterolaemia and type 2 diabetes. She has a history of DVT and pulmonary embolism; her status for factor V Leiden is positive. She suffers from recurrent atrial fibrillation and has had successful cardioversion, and she has undergone surgery for aortic valve replacement (porcine). The patient also has a history of a bleeding duodenal ulcer requiring transfusion and suffers from essential tremor.

Her medications include primidone and warfarin. Her low platelet count was thought to have been secondary to primidone and it was suggested that this be ceased. But how risky is warfarin therapy? The consensus was that it should be continued, but what other options are available for her?

Commentary

This patient has a number of significant risk factors for thromboembolic and haemorrhagic events. The thrombotic risk factors include past DVT and pulmonary embolus, as well as her positive status for factor V Leiden. We do not know whether she is heterozygous or homozygous for factor V Leiden. It is important to consider

the circumstances of the previous thrombosis – if she had an additional risk factor at the time (such as prolonged airline travel or surgery) then her risk of recurrence would be lower. Recurrent atrial fibrillation and aortic valve replacement can increase risk of systemic embolism.

The patient's haemorrhagic risk factors are also substantial. She is presumably taking a range of other medications, in addition to warfarin and primidone. The polypharmacy increases the risk of poor control of INR, leading to either thrombosis or bleeding. Primidone can lead to a lower INR because of liver enzyme induction; it can also lead to confusion and ataxia in older patients. This woman's history of gastrointestinal bleeding also increases her risk of haemorrhage.

The current problem is a mild neutropenia and thrombocytopenia. Rarely, primidone can cause neutropenia, and it can also cause megaloblastosis secondary to folate deficiency. I agree that it should be ceased as a first step. However, there are many other possible reasons for the cytopenias, including dietary folate deficiency, autoimmune conditions and marrow disorders (especially myelodysplasia). If the cytopenias progress, I would suggest referral to a haematologist.

The question of risk of warfarin has been asked. Firstly, it is important to consider whether this therapy is necessary. Anticoagulation beyond three months postoperatively is not recommended for patients with porcine aortic valves unless

other risk factors are present, such as recurrent atrial fibrillation, atrial thrombosis or severe left ventricular dysfunction. This patient's risk of recurrent venous thromboembolic disease is also relevant. Anticoagulation is usually only indicated for three to six months following an initial thrombosis. The risk of anticoagulation in elderly patients is increased, which has been shown to be related to insufficient education about anticoagulants, use of more than seven regular medications, and $INR > 3.0$. Other factors are important, such as the risk of falls, medication compliance and ability to closely monitor the patient. Mild thrombocytopenia is not usually a problem unless the platelet count falls below $100 \times 10^9/L$.

The risks and benefits of oral anticoagulation need to be carefully considered. Aspirin is an option but it may increase the risk of recurrent gastrointestinal haemorrhage; a proton pump inhibitor could help prevent this. Low molecular weight heparin could be used and may have a lower risk of haemorrhage, provided that the patient's renal function is normal.

In conclusion, I would cease primidone and consider ceasing warfarin treatment, substituting aspirin for the warfarin in conjunction with an H_2 -receptor antagonist or a proton pump inhibitor. I would use low molecular weight heparin if the circumstances change. This patient will require careful monitoring. **MT**

DECLARATION OF INTEREST: None.

Associate Professor Dodds is Director, Haematology and Bone Marrow Transplantation, St Vincent's Hospital, Sydney, NSW.