lesson of the month

Balancing the risk of chronic gastrointestinal bleeding and thromboembolic events in a patient with a metallic aortic valve

Evidence shows clear benefit of anticoagulation for prosthetic heart valves but consideration must be given to coexisting medical conditions.

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Lesson

An 80-year-old woman presented with malaena. Her past medical history consisted of a metallic aortic valve replacement, for which she was anticoagulated with warfarin, and congestive cardiac failure. On initial examination she was haemodynamically stable. Investigations revealed her to be anaemic with a haemoglobin concentration of 5.3 g/dl, mean cell volume of 70, urea of 29 and creatinine of 129. The international normalised ratio was 4.0. Her warfarin therapy was initially suspended and, following transfusion, she underwent gastroscopy. This was reported as showing moderate erythematous antral gastritis but no obvious source of bleeding. Further investigations with colonoscopy, small bowel meal and mesenteric angiogram were all negative. Following a further episode of malaena she had a repeat gastroscopy which reported typical endoscopic changes of gastric antral vascular ectasia (GAVE) with active bleeding. She was treated with argon plasma coagulation (APC) and haemostasis was achieved. Histology confirmed this diagnosis of GAVE. The patient was treated with high-dose proton pump inhibitors (PPI) and repeated endoscopic treatment with APC. Despite eight therapeutic gastroscopies she continued to pass malaena and required weekly transfusions. After much debate warfarin therapy was discontinued. This reduced though did not eliminate her blood transfusion requirements.

Comment

GAVE syndrome, or 'watermelon stomach', was first described in 1953, and is a rare cause of chronic upper gastrointestinal (GI) bleeding.[1,2] The syndrome is thought to be idiopathic, but has been linked with various disorders, including liver cirrhosis of any cause and autoimmune diseases, such as diabetes and scleroderma. It is more common in elderly women.[3] The condition is often difficult to treat, with patients frequently becoming transfusion dependent.[3] Macroscopically GAVE is characterised by longitudinal antral mucosal folds containing visible columns of ectatic vessels radiating out from the pylorus. The histological hallmark is hypertrophy of the antral mucosa with dilatation and thrombosis of mucosal capillaries. There is pronounced fibromuscular hyperplasia in the lamina propria and the muscularis propria and relatively little inflammatory infiltrate.[1,2] There is no consensus to the most effective therapy. The mainstay of treatment is therapeutic endoscopy, with medical management used either as an adjunct, or for those unable to tolerate endoscopy. The choice at endoscopy usually lies between APC and laser photocoagulation. The outcome is variable in both, and patients often require multiple sessions before adequate haemostasis is achieved.[4]

Conservative management with steroids,[5,6,7] oestrogen–progesterone preparations,[7] thalidomide[8] and tranexamic acid[6,9] have been reported anecdotally and may be useful in those patients who are intolerant to endoscopy or in whom therapeutic endoscopy has failed. Antrectomy provides definitive treatment although it carries operative risks and a reported 30-day mortality as high as 7.4%. It is usually reserved for patients in whom conservative measures have failed.[4,10,11]

In this case, the additional management problem was whether to maintain anticoagulation therapy to reduce the risk of thromboembolism in the face of chronic GI blood loss. Cannegeiter *et al*[12] reported the incidence of a major thromboembolic event in patients with prosthetic valves (aortic and mitral) who are not anticoagulated to be 4 per 100 patient years as compared to 1 per 100 patient years when fully anticoagulated with coumarin therapy. The risk in aortic valves is almost half that of mitral valves. The incidence of major bleeding in patients treated with coumarins is estimated at 1.4 events per 100 patient years.[12] The benefit of anticoagulating

patients without pre-existing bleeding disorders is therefore clear. However, if there is a co-existing condition predisposing to chronic and significant blood loss then the benefits of anticoagulation may be significantly outweighed by the risks of a major bleed.

GAVE syndrome is a rare cause of upper GI bleeding which may not only be difficult to diagnose but is also frequently difficult to treat. Evidence shows clear benefit of anticoagulation for prosthetic heart valves but considerations must be given to coexisting medical conditions predisposing to complications.

References

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