How should I treat a patient with life-threatening gastrointestinal bleeding early after coronary drug-eluting stent implantation?

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CASE SUMMARY

BACKGROUND: A 68-year-old man was referred for stable angina pectoris and a large apical perfusion defect on stress myocardial scintigraphy. Medical history included chronic oral anticoagulation with warfarin due to longstanding atrial fibrillation, type 2 diabetes mellitus, hypertension, and dyslipidaemia.

INVESTIGATION: Coronary angiography

DIAGNOSIS: Severe stenosis of the mid left anterior descending coronary artery

PRESENTATION OF THE CASE

A 68-year-old man was referred to our hospital in March 2009 for stable angina pectoris and a large apical perfusion defect on stress myocardial scintigraphy. His medical history was significant for chronic oral anticoagulation with warfarin due to longstanding atrial fibrillation, type 2 diabetes mellitus, hypertension, and dyslipidaemia. Coronary angiography revealed severe stenosis of the mid left anterior descending coronary artery (Figure 1A). On the basis of the clinical and angiographic findings, percutaneous coronary intervention (PCI) was planned. Despite the need for continuous warfarin therapy in this patient, the decision to implant a drug-eluting stent was made due to the small size of the coronary vessel and the history of diabetes. Therefore, warfarin was discontinued three days prior to the procedure and replaced with an i.v. of unfractioned heparin. Six hours before PCI, a clopidogrel loading dose (300mg) was administered. Under local anaesthesia, a 6 Fr sheath was introduced in the right common femoral artery. An supplement of unfractioned heparin was administered i.v. to achieve an activated clotting time >250sec. Stenosis predilatation was performed with a 2.0×15-mm Sprinter Legend balloon catheter (Medtronic, Santa Clara, CA, USA) and a 2.75×15-mm Xience V everolimus-eluting stent (Abbott Vascular, Abbott Park, IL, USA) was implanted with good angiographic result (Figure 1B). The arterial sheath was removed at the end of the procedure and haemostasis was obtained with AngioSeal 6Fr (St. Jude Medical, Minnetonka,

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On day one post intervention, warfarin therapy was reintroduced. The patient had an uneventful postprocedural course and was discharged 48 hours after PCI on a triple antithrombotic therapy consisting of aspirin 75 mg/day, clopidogrel 75 mg/day, and warfarin monitored to maintain an international normalized ratio between 2.0 and 2.5. A proton pump inhibitor (omeprazole 20 mg/day) was prescribed for gastric protection. At discharge, haemoglobin was 13.6 g/dl.

The patient remained asymptomatic for 12 days and then suddenly developed several episodes of melena in quick succession followed by marked hypotension. Twenty-four hours later, he was brought to our emergency room in haemorrhagic shock with a blood pressure of 80/60 mmHg and a haemoglobin value of 5.8 g/dl. After immediate administration of plasma expanders to achieve haemodynamic stability, the patient received a transfusion of 4 U of red blood cells. All antithrombotic therapy was withdrawn for 24 hours. Esophagogastroduodenoscopy, performed several hours after admission, excluded the presence of a gastroduodenal ulcer and colonoscopy detected multiple angiodysplastic lesions in the cecum that were the source of gastrointestinal (GI) bleeding (Figure 2). At this point, we were faced with a serious management dilemma in an atrial fibrillation patient with strong indication for antiplatelet therapy post PCI and drug-eluting stent implantation. The first issue was the most appropriate gastroenterology treatment to achieve colonic haemostasis. The second dilemma was choice of safe and effective antiplatelet and anticoagulant medications for use after achieving definitive haemostasis in order to prevent stent thrombosis, cardiogenic embolization and, at the same time, avoid re-bleeding.

Conflict of interest statement
The authors have no conflict of interest to declare.