Case Report

Complete Resolution of High-Burden Thrombus in an Ectatic Right Coronary Artery with Triple Antithrombotic Therapy

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Abstract

A 58 year-old man was admitted with acute inferior myocardial infarction. One and a half million units of streptokinase were administered. The patient did not experience any other episode of chest pain. Coronary angiography performed 48 hours after admission showed normal left anterior descending and left circumflex arteries. Right coronary artery (RCA) contrast injection revealed an ectatic vessel with a large filling defect consistent with thrombus at its mid portion. Considering the patient’s stable condition, urgent intervention was avoided and triple therapy with Plavix, aspirin and enoxaparin was started. Control angiography 6 days later revealed complete thrombus resolution. This case study shows that with proper case selection serious consequences of early invasive intervention such as distal embolization and no-reflow in these high risk patients could be avoided.


Keywords: Thrombus “ Myocardial Infarction “ Antiplatelet

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Introduction

A 58 year-old man was admitted to our coronary care unit with acute onset chest pain. His past medical history was remarkable for hypertension. Electrocardiogram on admission was compatible with acute inferior myocardial infarction. One and a half million units of streptokinase were administered. The patient did not experience any other episode of chest pain. Coronary angiography performed 48 hours after admission showed normal left anterior descending and left circumflex artery. Right coronary artery (RCA) contrast injection revealed an ectatic vessel with a large filling defect consistent with thrombus at its mid portion (Figure 1). The patient was placed on aspirin 160 mg daily, clopidogrel 75 mg daily and enoxaparin 80 mg twice a day. Control angiography which was performed six days later, showed complete thrombus dissolution (Figure 2). The patient was discharged uneventfully. At the one-year follow-up he remained symptom free.

Aspirin and thienopyridines inhibit platelet aggregation in separate mechanisms and may exert a complementary effect in prevention of ischemic events. Dual antiplatelet therapy with aspirin and clopidogrel has been shown to be valuable in patients with either non-ST-segment elevation (NSTE) ACS, ST-segment elevation MI (STEMI), and in patients undergoing PCI. The benefit of adding clopidogrel to the regimen of treatment for patients with ACS without STEMI who are already receiving aspirin and other medications has been shown. In such patients, treatment with clopidogrel decreased the risk of myocardial infarction and recurrent ischemia, with a trend toward lower rates of stroke and death from cardiovascular causes. Aspirin is currently known to be an inexpensive, safe, and effective antiplatelet drug. It is ironic that the Bayer Company, which promoted the drug for its efficacy in relieving rheumatological conditions, announced a public reassurance that it did not have harmful effects on the heart. Aspirin irreversibly inhibits cyclooxygenase, an enzyme responsible for the formation of eicosanoids, which include PGI2 and thromboxane A2. Thienopyridine analogues (ticlopidine and clopidogrel) irreversibly inhibit the binding of ADP to its receptor. Coronary artery thrombosis in coronary aneurysm has been reported to be successfully managed with ticlopidine and aspirin in kawasaki syndrome. We report successful management of high burden thrombus in an ectatic coronary artery with triple antiplatelet therapy. Through this approach we avoided the potential serious consequences of early invasive intervention such as distal embolization and no-reflow which were very likely to happen under described circumstances.

References

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