
Simultaneous subacute thrombosis in two new-generation drug-eluting stents in different vessels

To the Editor,

We report a rare case of simultaneous subacute thrombosis in 2 new-generation drug-eluting stents (DES) in different vessels after cessation of ticagrelor therapy for 3 days. A 66 year-old man was admitted to our emergency department complaining of acute, severe chest pain. He had hypertension and diabetes mellitus for 20 years, was a smoker, and had a history of stent implantation in the left anterior descending artery (LAD) 6 years ago. His electrocardiography results (ECG) revealed inferior ST elevation. An emergent catheterization was performed, revealing a totally occluded proximal right coronary artery (RCA) and a critical thrombotic lesion on the left circumflex artery (LCX). Angioplasty was performed and 2 everolimus-eluting stents (PROMUS Element, 2.5x16 mm and 2.5x20 mm; Boston Scientific Corp.,

Marlborough, MA, USA) were deployed in the proximal RCA and 1 everolimus-eluting stent (PROMUS Element, 3.0x24 mm) in the mid LCX. A final coronary angiography showed patency of the 2 vessels with Thrombolysis in Myocardial Infarction (TIMI) 3 flow after percutaneous coronary intervention (PCI). He was discharged on hospital day 3 with a recommended course of treatment of dual antiplatelet therapy (aspirin 100 mg daily and ticagrelor 90 mg twice daily).

After 10 days, the patient was readmitted to the emergency department with severe chest pain. ECG revealed inferoposterior ST segment elevation. The patient indicated that he had stopped taking the ticagrelor therapy 3 days earlier because of hematuria. He was hemodynamically stable and taken to the catheterization laboratory for primary PCI, which revealed totally occluded proximal RCA and mid LCX at the same time, the site of the stents. Successful primary PCI with angioplasty was performed for both vessels with transradial access and a final angiography revealed TIMI 3 flow distal to the coronary stents. After 4 days of observation, he was discharged with a strict recommendation to continue dual antiplatelet therapy for at least 1 year.

Stent thrombosis (ST) is a challenging problem that can lead to serious clinical consequences. In addition to patient characteristics or procedure factors, inadequate dual antiplatelet therapy is the main cause (1). Simultaneous subacute thrombosis of 2 new-generation DESs in different vessels is rare and there is little in the literature discussing this condition. Most cases of ST in the literature occurred in a single coronary vessel, and there are still some rare cases reporting simultaneous ST in multiple coronary vessels for bare metal stents and first-generation DESs (2, 3). But there are few reports about the same condition for new-generation DESs (4, 5).

In conclusion, simultaneous ST in different new-generation DESs in multiple coronary vessels was extremely rare, but still a possible complication of PCI. This case strongly suggests that it be ensured that patients are properly educated about the importance of drug use and the potential severe consequences of antiplatelet therapy cessation. Our case also demonstrates that the use of multiple stents, irrespective of stent type, in multiple coronary artery lesions should be undertaken with great attention, especially in high-risk patients, such as acute myocardial infarction.

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