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Image of the Issue

Cangrelor for the Rescue of Intra-Procedural Stent Thrombosis in Percutaneous Coronary Intervention☆

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A 65-year-old white woman, current smoker with a past medical history of chronic obstructive pulmonary disease on home oxygen, breast cancer status post-left mastectomy in 2011, hypertension, type 2 diabetes mellitus, hyperlipidemia, and coronary artery disease with prior percutaneous coronary intervention (PCI) and stent placement in 2008, was admitted for intermittent chest pain radiating to the left arm at rest and with exertion for several days, with associated abdominal pain, nausea, shortness of breath, and diaphoresis. Electrocardiogram showed non-specific ST-T wave changes, and serial cardiac troponin revealed a peak troponin of 0.33 ng/ml (normal <0.045 ng/ml). Echocardiography revealed normal left ventricular systolic function without wall motion abnormalities. Aspirin (325 mg) was given orally.

The patient underwent coronary angiogram via right femoral access. She was found to have a tubular and complex 70–80% stenotic lesion immediately proximal to the mid right coronary artery (RCA) stented segment (Fig. 1, Panel A). The decision was made to perform PCI for the RCA lesion. A 5000-unit loading dose of heparin was given intravenously, and subsequent intravenous bolus was based on activated clotting time (ACT) measurement. ACT was 203 s at the time of mid RCA PCI, and following the measurement, a 2000-unit dose of heparin was given intravenously. A Cordis 6F JR-4 guiding catheter was used to selectively cannulate the RCA. A Cougar XT coronary guidewire was successfully advanced across the mid RCA stenotic segment and positioned distally. Percutaneous coronary angioplasty (PTCA) was performed with a Euphora semicompliant Rx balloon (3.0 mm × 12 mm) twice at 14 atm of pressure followed by implantation of an Abbott Laboratories Xience Sierra 3.50 mm × 28 mm drug-eluting stent (DES; Fig. 1, Panels B, C). After stent placement, ST-segment elevation was noted on the cardiac monitor (Fig. 1, Panel D). Coronary angiogram revealed thrombus formation in the proximal stent segment extending to proximal RCA (Fig. 1, Panel C). Parenteral dose of cangrelor was immediately administered followed by continuous intravenous infusion. Within 10 min, thrombus was noted to be resolving with no further extension on the following angiogram, and ST-segment elevation on the cardiac monitor was resolved. An Abbott Laboratories Xience Sierra 3.50 mm × 12 mm DES was then deployed to cover the proximal RCA segment with overlap to the mid RCA stent. The final angiogram shows excellent dilatation of the stenotic segment with no significant residual stenosis. There was TIMI-3 flow to the distal vessels with no angiographic evidence of dissection or thrombus (Fig. 1, Panel E). The post-procedure electrocardiogram revealed nonspecific T wave abnormality with no ST-segment changes (Fig. 1, Panel F). The patient was started on ticagrelor after the procedure and observed in the hospital overnight with no events. She was then discharged on aspirin and ticagrelor.

☆ **Disclosures:** Ron Waksman – Advisory Board: Abbott Vascular, Amgen, Boston Scientific, Medtronic, Philips Volcano, Pi-Cardia Ltd., Cardioset; Consultant: Abbott Vascular, Amgen, Biosensors, Biotronik, Boston Scientific, Medtronic, Philips Volcano, Pi-Cardia Ltd., Cardioset; Grant Support: Abbott Vascular, AstraZeneca, Biosensors, Biotronik, Boston Scientific, Chiesi; Speakers Bureau: AstraZeneca, Chiesi; Investor: MedAlliance.

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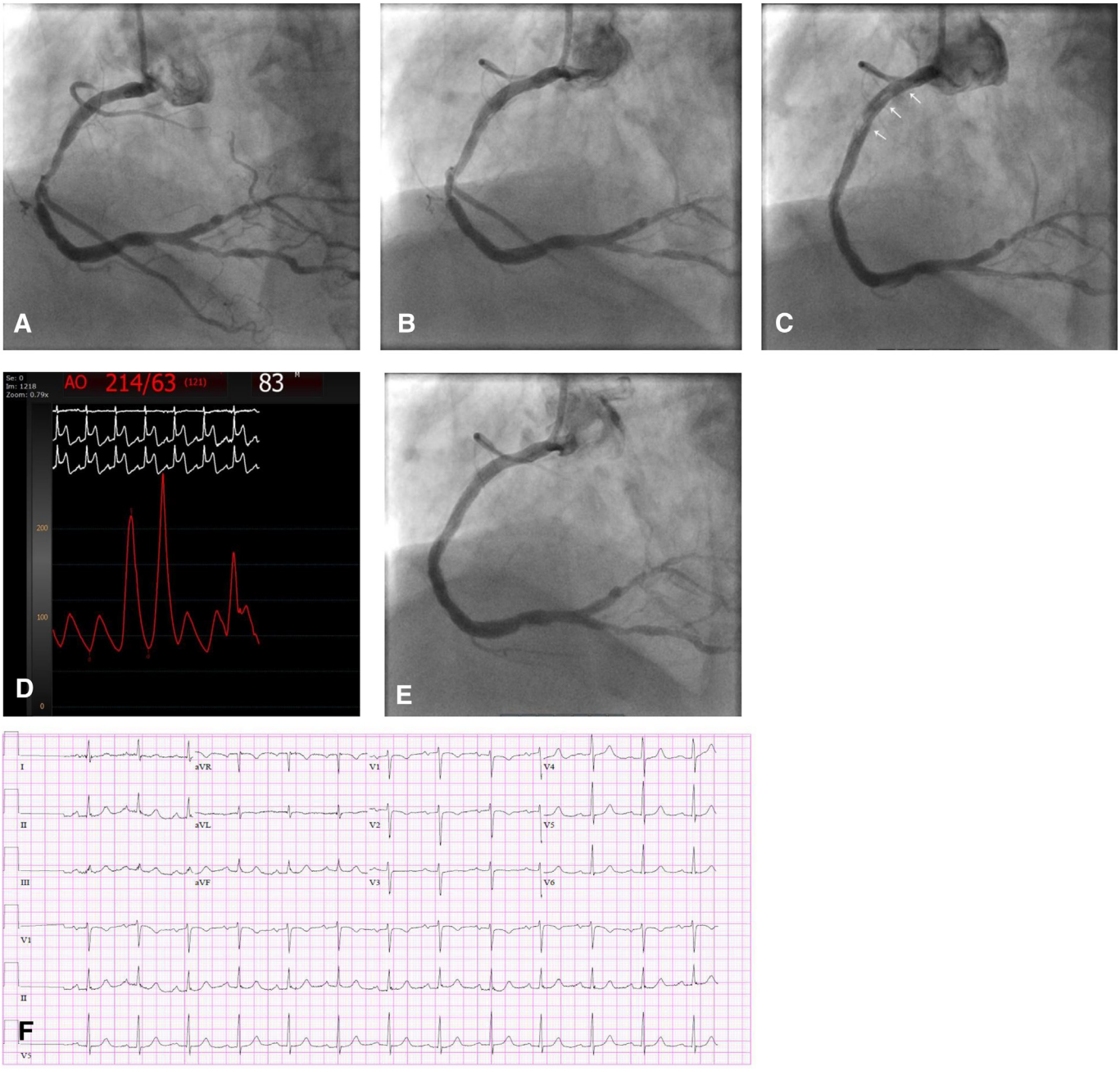
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AO 214/63 (121) 83
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Fig. 1.