

Aortocoronary Dissection With Extension to the Suprarenal Abdominal Aorta

A Rare Complication After Percutaneous Coronary Intervention

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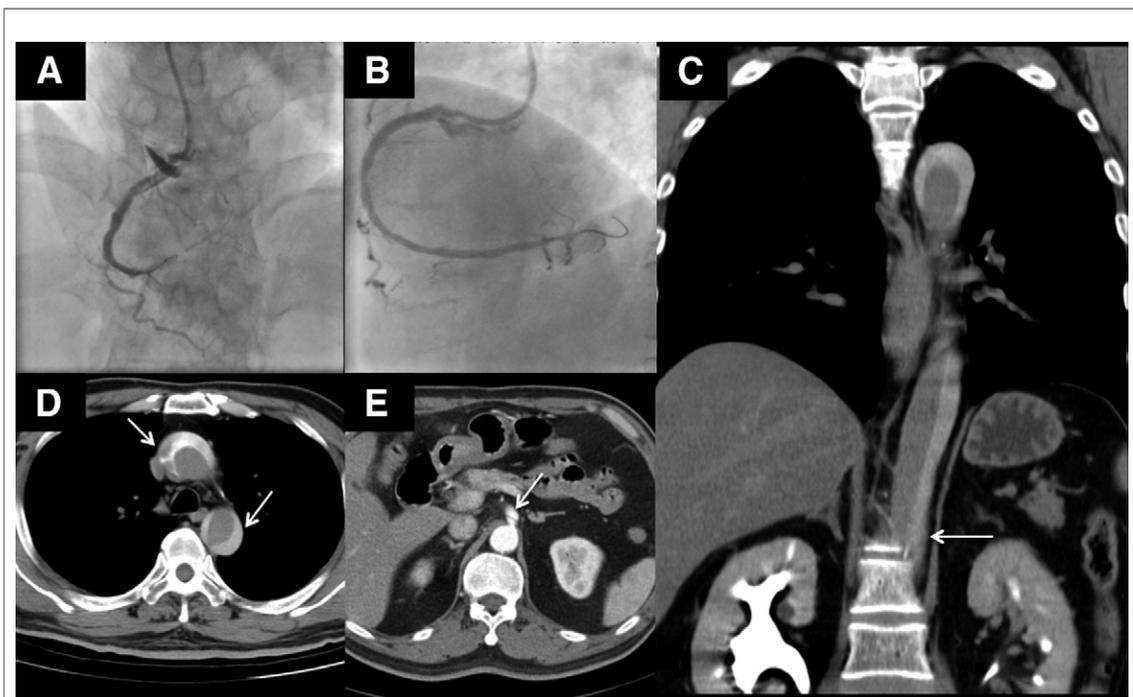


Figure 1. Angiography and Computed Tomography

(A) Angiography demonstrating proximal long segment dissection of the right coronary artery, extending to sinus of Valsalva. (B) After stenting (Driver 3.5 × 24 mm [Medtronic, Minneapolis, Minnesota]), the final angiogram revealed limited dissection to the sinus of Valsalva. (C, D) Computed tomography imaging demonstrated a type A aortic dissection extending from ascending aorta to the suprarenal abdominal level with involvement of the aortic arch and celiac trunk (E).

A 53-year-old man presented with chest tightness and a positive treadmill test. A percutaneous coronary intervention (PCI) was performed on the

distal total occlusion of the right coronary artery (RCA) with a 6-F Amplatz Left 1 guiding catheter and a Runthrough floppy wire (Terumo, Leuven, Belgium). However, a proximal RCA dissection along with an aortic dissection was found during wiring (Fig. 1A). A Driver 3.5 × 24 mm stent (Medtronic, Minneapolis, Minnesota) was deployed on the proximal RCA. Next, a guidewire was placed across the distal total occlusion, and a 2.5 × 30 mm Endeavor Resolute stent (Medtronic) was deployed. The final angiogram showed limited

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aortic dissection (Fig. 1B). The patient state of consciousness changed 30 min after the PCI while in the intensive care unit. An emergent computed tomography scan (within 15 min) revealed a Type A aortic dissection extending from ascending aorta to the suprarenal abdominal level (Figs. 1C and 1D) with involvement of the aortic arch and celiac trunk (Fig. 1E). An emergent ascending aortic graft and venous bypass graft were performed. The patient was discharged 16 days later in stable condition. To the best of our knowledge, this case is the first report of an extensive aortic dissection after PCI to the level of the suprarenal abdominal aorta.

Aortic dissection after PCI is a rare and life-threatening complication with an incidence of approximately 0.02% (1). Most reported iatrogenic aortic dissections have been related to procedures in the RCA (2). The extent of dissection might be underestimated by angiography, especially if the entry point has been sealed by stenting. Management of aortic dissection post-PCI remains controversial. Dunning et al. (3) summarized the results from 9 patients and suggested that patients might be managed by coronary artery stenting if the dissection extends <40 mm from the coronary ostium and that surgical intervention might be required if the dissection extends >40 mm from the ostium.

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