Aortic dissection secondary to coronary artery intervention

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Figure 1. (A) Left anterior oblique (LAO) cranial view of the RCA showing significant lesion. (B) Catheter-induced anti-grad spiral dissection (small arrows). (C) Retrograde extension involving the coronary cusps and portion of the ascending aorta (big arrows). (D) LAO view of the RCA and ascending aorta after stenting the coronary dissection.

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A 68-year-old-female presented with acute chest pain, and was found to have an acute coronary syndrome (ACS). Coronary angiography demonstrated a significant lesion in the right coronary artery (RCA). Percutaneous coronary intervention was complicated by guide catheter-induced spiral dissection of the RCA, extending proximally to the coronary cusps and to a portion of the ascending aorta (figure 1). Stenting of RCA dissection was enough to seal the retrograde blood flow to the aortic portion of the dissection. Follow-up echocardiography revealed normal left ventricular function and a normal aortic root.

Coronary dissection is a well-known complication of coronary interventions (in our case due to deep seating of the guiding catheter); however, retrograde extension to the aortic root and ascending aorta is exceedingly rare, with an incidence reported as 0.02% of coronary angioplasties.^{1,2} Conservative management can be sufficient in cases with extension less than four centimetres into the ascending aorta.²⁻⁴

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