

Aberrant Migration of Thrombi Originating from Ruptured Plaque Along the “Spinning Roller Coaster Track” after Aspiration Thrombectomy

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A 66-year-old male visited out center with chest pain. Coronary angiography (CAG) demonstrated tortuous vasculature in the middle right coronary artery (RCA), and intracoronary thrombus (IT) in the distal RCA (Fig. 1A). Angioplasty was performed, followed by aspiration thrombectomy (AT) (Fig. 1B). The interim CAG, however, still

demonstrated reduced distal flow as well as newly found intraluminal filling defects at ostial, middle, and distal RCA (Fig. 1C, D), suggesting re-distribution of IT by repeated AT. Intervention was deferred and anti-platelets with heparinization were maintained. Follow-up CAG revealed a resolved IT, with the exception of the distal RCA (Fig. 2A).

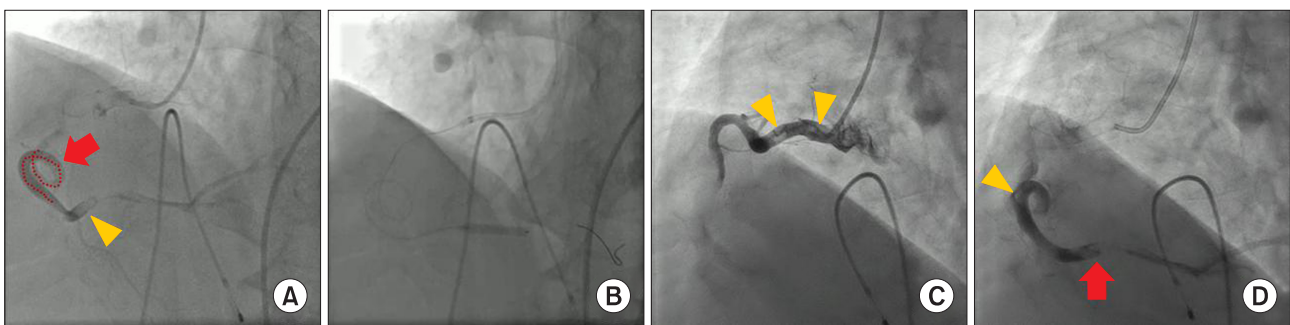


FIG. 1. (A) Initial angiogram showed tortuous vasculature (arrow) in middle RCA, and intracoronary thrombus in distal RCA (arrowhead). (B) After balloon angioplasty and thrombus aspiration, (C, D) angiogram showed newly discovered thrombi in proximal, middle RCA (arrowheads), by thrombus migration. RCA: right coronary artery.

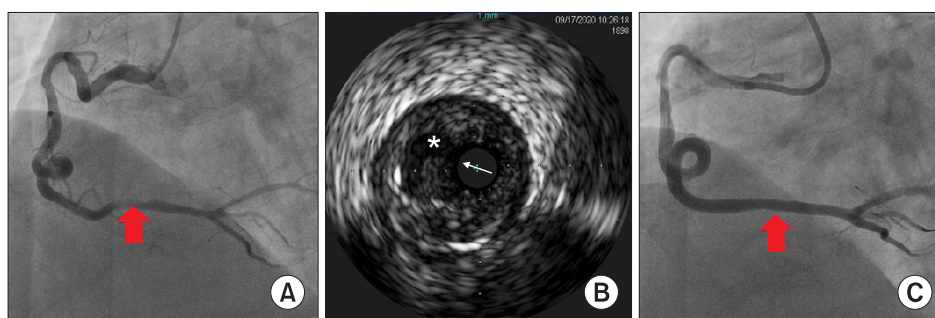


FIG. 2. (A) Follow-up angiogram showed resolved thrombi in ostial and middle RCA, except for distal RCA (arrow). (B) Intravascular ultrasound showed plaque rupture (asterisk) in distal RCA with MLA of 2.6 mm² and plaque burden of 87%. (C) Zotarolimus-eluting stent (Resolute OnyxTM, 3.5×38 mm; Medtronic) (arrow) was implanted, resulting in good antegrade flow without residual stenosis. RCA: right coronary artery, MLA: minimum lumen area.

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Intravascular ultrasound showed a focal plaque rupture with significant stenosis within distal RCA (Fig. 2B). Therefore, stenting was applied (Fig. 2C).

Although AT is a good option to reduce IT burden,^{1,2} it was thought to have no clinical benefits.³ AT manipulation can provide mechanical irritation to the vulnerable plaque, contributing to the dispersion of IT. Although it is hard to explain the mechanism of how this bizarre morphology of vasculature contributes to the migration of thrombus material in our case, we strongly suggest that the 'roller coaster track' functioned as a conduit for migration of the thrombus.

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CONFLICT OF INTEREST STATEMENT

None declared.

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