An unusual complication of a massive thrombus in the left main coronary artery

A 53-year-old male smoker developed anterolateral myocardial infarction, pulmonary edema, and cardiogenic shock while he was on oral antibiotic regimen to treat pneumonia. On coronary angiography, the right coronary artery was normal. A massive thrombus was observed in the left main coronary artery (Fig. A). The left anterior descending artery (LAD) was mainly occluded. Perfusion of the left circumflex artery (LCx) was moderate during the first injection. The next contrast injection showed the persistence of massive thrombus, worsening the perfusion of both LAD and Cx due to its displacement and antegrade embolization into the LCx (Fig. B). The third injection resulted in retrograde movement of the thrombus into the ascending aorta because the guiding catheter was unengaged into the ostium of the left main coronary artery (Fig. B). Finally, a left ventriculogram showed that ejection fraction was at least %50. The localization of the systemic embolization could not be determined even after a detailed physical examination. Thorax computed tomography showed diffuse pneumonia and a coin lesion, which was already being followed. The patient developed respiratory failure due to severe pneumonia and was intubated the following day. His cardiac function remained stable for nine days, after which he was referred to another hospital due to persisting diffuse pneumonia. The authors believe that interventional cardiologists should gently approach to a massive thrombosis in the left main coronary artery. Unfortunately, thrombus aspirating devices, which are vital in such unusual cases, are not widely available in our catheterization laboratories. Primary stenting or emergent bypass surgery may be considered after a single contrast injection. Multiple injections can lead to antegrade or retrograde embolization of a massive fragile thrombus, which may give rise to dramatic consequences.

Figures. (A) The left caudal view showing a massive thrombus in the left main coronary artery (white arrow). Perfusion of left anterior descending artery was obstructed, whereas perfusion of the circumflex artery was moderately good. The thrombus was partially aspirated into the guiding catheter unintentionally (black arrow). (B) Images from continuous frames of the third injection. Continuous retrograde movement of the thrombus from the left main coronary artery (white arrows). The guiding catheter was unengaged at the beginning of contrast injection (black arrow).