Optical coherence tomographic findings of myeloproliferative disorder presenting as acute myocardial infarction

G. Sengottuvelu* and Ravindran Rajendran
Apollo Hospitals, Chennai 06, India
* Corresponding author. Tel: +91 44 28294343, Ext-6753, Fax: +91 44 28294429, Email: drgseng@gmail.com

A 57-year-old female with no conventional coronary artery disease risk factors underwent coronary angiogram in view of persistent pain, 6 h after thrombolysis with weight-based tenecteplase for acute anterior wall myocardial infarction. There was thrombus in distal left anterior descending (LAD) artery and the proximal left circumflex artery (LCX) (Panels A and B; Supplementary material online, Videos S1 and S2). The right coronary artery (RCA) angiogram showed multiple intraluminal filling defects (Panel C; Supplementary material online, Video S3) in its entire course. Optical coronary tomographic imaging showed lotus root-like appearance suggestive of organized recanalized intra-coronary thrombus (Panel D). Percutaneous intervention was done to LCX. Distal LAD thrombus and the organized thrombus in RCA were not intervened. Metabolic profile, vasculitis, and hyper-coagulable work-up were normal except for elevated platelet counts ($573 \times 10^3$ mm$^{-3}$) and positive JAK-2 V617F mutation. A bone marrow study showed hyper-cellular marrow with normoblastic erythropoiesis, increased hyper-lobate megakaryocytes, and platelet clumps favouring the diagnosis of essential thrombocytosis (Panels E and F). She was managed with iso-volumic venesection and continued on dual anti-platelets (aspirin 150 mg and clopidogrel 75 mg) along with hydroxyurea 1 g daily. At 1-month follow-up, she was doing well with haemoglobin of 12.3 g% and a platelet count of $353 \times 10^3$ mm$^{-3}$. Myeloproliferative disorders presenting as acute coronary syndrome with varying stages of fresh and organized thrombus in all three major epicardial coronaries is exceptionally rare and needs to be considered in such situation.

Panels A–C: Angiogram showing thrombus in all three coronaries. Panel D: Optical coherence tomogram of the organized recanalized thrombus of the proximal right coronary artery in axial (top) and longitudinal representation (bottom). Inset showing a cut lotus root. Panel E: Low-power view showing the hyper-cellular marrow and platelet clumps. Panel F: High-power view of hyper-lobate megakaryocytes.

Conflict of interest: none declared.

Supplementary material is available at European Heart Journal online.