

# Optical Coherence Tomography Imaging of Anterior Descending Artery Thrombosis in a Young Bodybuilder

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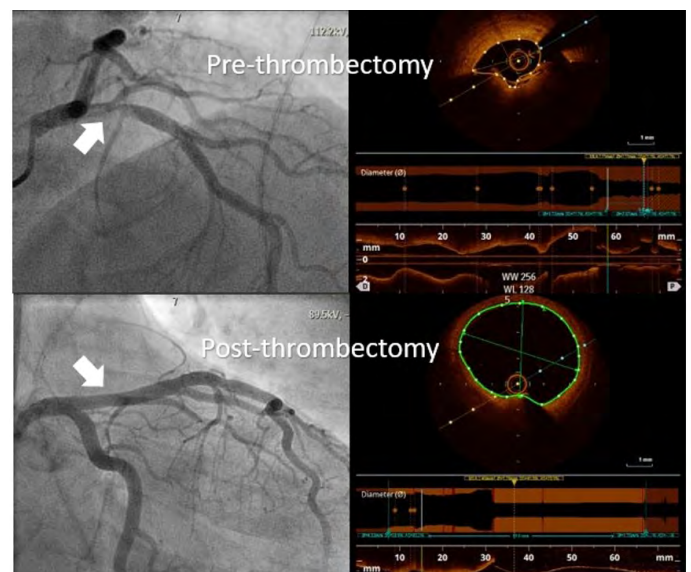
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## Abbreviations

STEMI: ST-Elevation Myocardial Infarction; LAD: Left Anterior Descending Artery; OCT: Optical Coherence Tomography.

## Image Description

A 49-year-old healthy man with a history of exogenous anabolic steroid use presented with acute anterolateral ST-Elevation Myocardial Infarction (STEMI). Coronary angiography revealed an 80% thrombotic occlusion of the proximal Left Anterior Descending Artery (LAD) without angiographic disease in other coronary arteries. Optical Coherence Tomography (OCT) imaging of the LAD, performed after improved flow with aspiration thrombectomy, revealed residual red thrombus. Following repeat aspiration thrombectomy, OCT imaging showed complete resolution of thrombus and no evidence of plaque rupture, ulceration, or dissection. A decision was therefore made to treat with dual antiplatelet therapy without stent placement. A literature review reveals rare but similar cases of young patients on anabolic steroids presenting with STEMI who were treated with aspiration thrombectomy and medical therapy alone. However, there are no randomized controlled trials to support this methodology. It is important to recognize the possible hypercoagulable effects of anabolic steroids in acute coronary syndromes. In conclusion, ours may be the first reported case illustrating the use of OCT after aspiration thrombectomy as a valuable tool to avoid stent placement in young anabolic steroid-related STEMI patients without evidence of plaque disruption.



**Figure:** Proximal left anterior descending artery before and after thrombectomy (arrows). OCT showing red thrombus (top right) and complete resolution of thrombus without rupture, ulceration or dissection (bottom right).