A 32-year-old 15-day-postpartum G3P2 woman presented with sudden cardiac arrest due to an acute anterolateral wall myocardial infarction. An emergent coronary angiogram revealed a mild 30% distal left main tapering, severe diffuse compromise of the left anterior descending coronary artery (LAD) as well as the diagonal lumen, and normal left circumflex (LCx) and right coronary arteries. Three days later, the patient developed chest pain with 3-mm inferolateral ST-segment elevations by ECG. A second emergent coronary angiogram revealed a new second obtuse marginal occlusion that did not respond to intracoronary nitroglycerin, verapamil, or adenosine. This lesion was successfully treated with percutaneous transluminal coronary angioplasty with a 2.5-mm balloon. The patient was supported with an intra-aortic balloon pump. Intravascular ultrasound evaluation (Figure) revealed a dissection originating at the bifurcation of the LAD and the LCx along the nonmural plane of the vessel. Both retrograde extension into the mid left main coronary artery and anterograde extension into the LAD and involvement of the LCx origin were present. Three months later, the patient has remained asymptomatic and has demonstrated serial improvement in her ejection fraction by transthoracic echocardiogram.

A, Intravascular ultrasound image in proximal aorta demonstrating transthoracic sinus (TTS) as it anatomically defines coronary nonmural surface, opposite mural surface (this plane of dissection contributed to extensive circumferential expansion as well as diffuse distal extension into both LCx origin and entire length of LAD); B, mid left main: retrograde extent of dissection plane and hematoma is demonstrated by arrows; C, distal left main demonstrating hematoma as it arcs around true lumen; D, LAD and LCx bifurcation: arrow demonstrates intimal tear of origin with involvement of LCx origin; E, proximal LAD: hematoma continues distally to involve first septal branch.
**Spontaneous Postpartum Coronary Dissection**
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