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Intracoronary Ultrasound Longitudinal Reconstruction of a Postangioplasty Coronary Artery Dissection

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A 62-year-old woman presented with unstable angina. Angiography demonstrated a severe stenosis in the distal right coronary artery (RCA), and angioplasty with stent implantation was undertaken. This was complicated by a coronary artery dissection distal to the stent that was detected by angiography and intracoronary ultrasound (ICUS).

Acknowledgment

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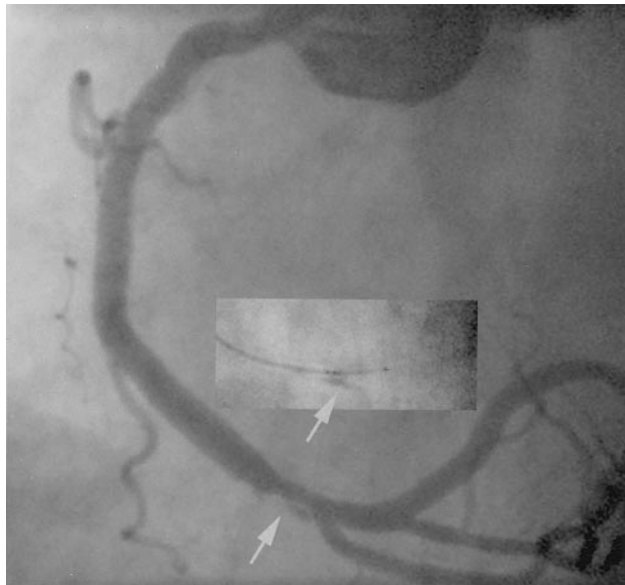


Figure 1. Coronary angiogram (left anterior oblique projection) demonstrates a longitudinal dissection proximal to bifurcation of right coronary artery into posterior descending and posterolateral arteries. Inset, ICUS catheter is in posterolateral branch; contrast staining is present inferior to artery (arrow). ICUS was performed at this site with a 30-MHz transducer mounted on a 2.9F catheter (Microview, Boston Scientific-CVIS).

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Circulation encourages readers to submit cardiovascular images to Dr Hugh A. McAllister, Jr, St Luke's Episcopal Hospital and Texas Heart Institute, 6720 Bertner Ave, MC1-267, Houston, TX 77030.

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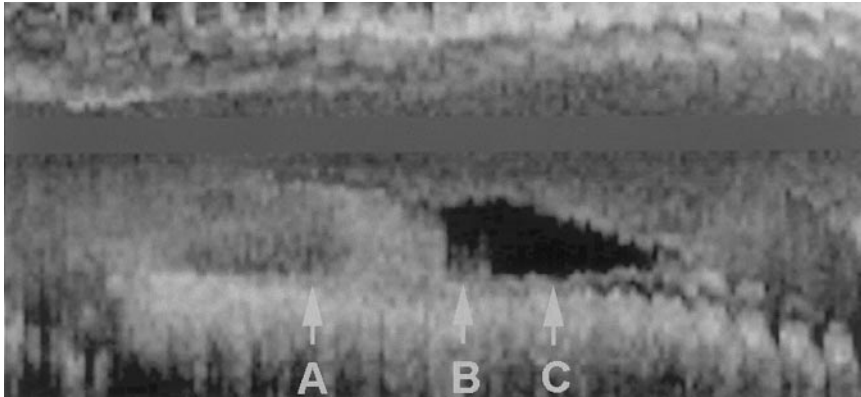


Figure 2. Longitudinal reconstruction of dissection: letters A through C correspond to ICUS transverse sections of accompanying images. In following images, proximal vessel is denoted by a, where both normal and slow blood flow are seen in a double-barreled lumen; b corresponds to transverse section, where blood/contrast interface is seen; and a' denotes area where only contrast within false lumen is seen. Note that artery bifurcates, with ICUS catheter present in posterolateral vessel. Distal dissection stops short of posterior descending artery.

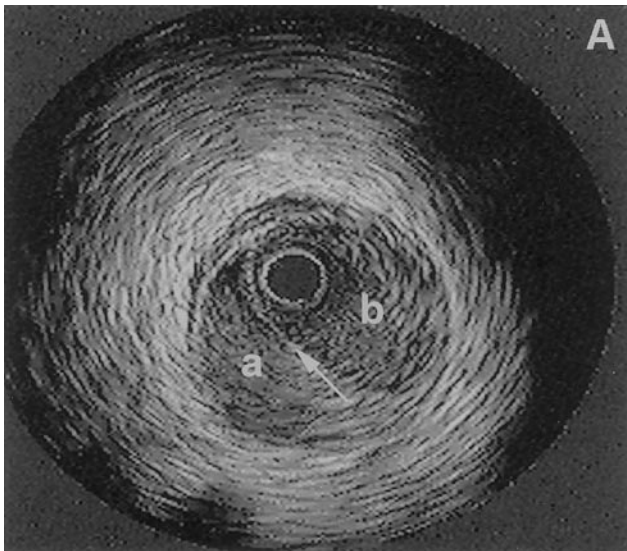


Figure 3. Classic double-barreled lumen is seen, with a flap denoted by arrow. Lumen (b) has normal blood flow, whereas flow in a is decreased.

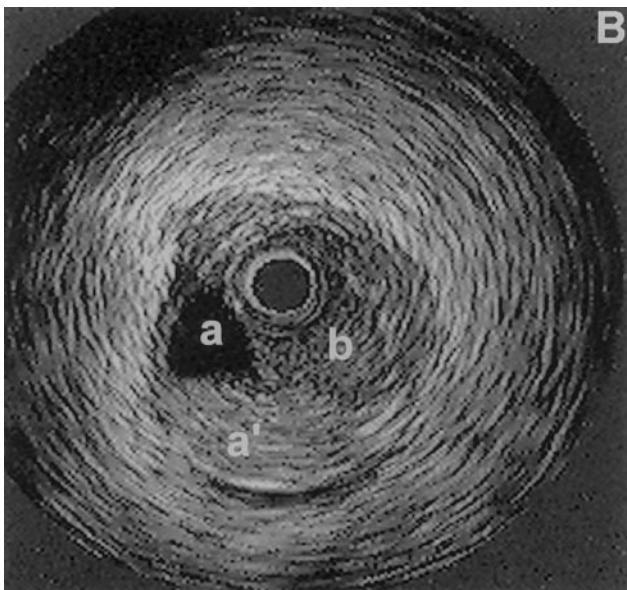


Figure 4. As false lumen fills with blood, a blood/contrast level is demonstrated (a').

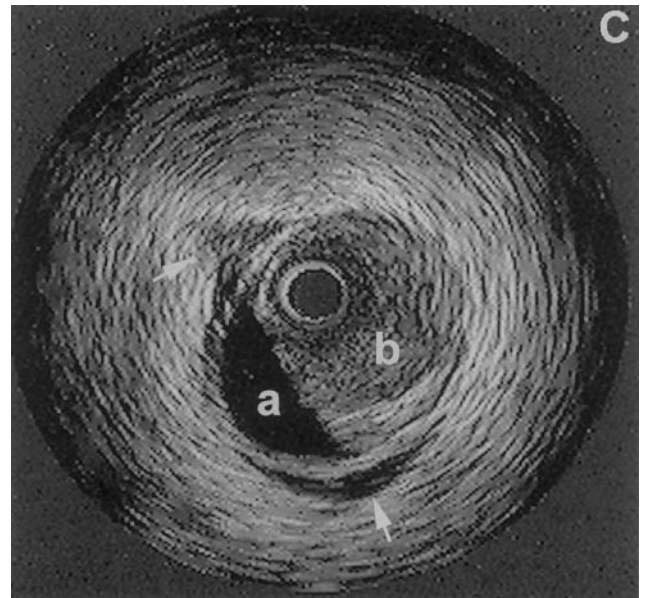


Figure 5. A subintimal dissection with an echolucent contrast-filled false lumen (a) is seen. Arrows denote cardiac veins and are not associated with dissection. Because there was grade 3 Thrombolysis in Myocardial Infarction (TIMI) flow, satisfactory lumen dimensions, and concern over proximity of dissection to RCA bifurcation, no further intervention was undertaken. Patient remains well at 6-month follow-up.