

Iatrogenic Coronary Arteriovenous Fistula From Contrast Induced Coronary Dissection of Chronically Occluded Right Coronary Artery.

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Abstract

Iatrogenic Coronary arteriovenous fistula (CAVF) is a rare complication of coronary intervention. Although acquired CAVF during percutaneous coronary intervention (PCI) of chronic total occlusion (CTO) has been reported, CAVF resulting from contrast injection into a right coronary artery (RCA) CTO during diagnostic coronary angiography is very rare.

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Clinical Question:

What can go wrong with contrast injection into a chronically occluded coronary artery during diagnostic coronary angiography?

Answer:

Contrast injection into a chronically occluded vessel can lead to coronary AV fistula. The physicians should be cautious with contrast injection of any vessel with a chronic total occlusion (CTO) to prevent this rare complication.

A 72-year-old female with the history of CABG was admitted with chest pain and underwent diagnostic coronary angiography. Her native RCA was known to be chronically occluded. During contrast injection of native RCA, dissection at the CTO occurred (Video 1) but was unfortunately unnoticed and a second injection resulted in progression of dissection distally causing coronary AV fistula and proximally causing right coronary cusp dissection (Video 2).

VIDEO LEGENDS

Video 1: Contrast injection into right coronary artery (RCA) chronic total occlusion (CTO) led to coronary dissection.

Video 2: Subsequent contrast injection led to progression of dissection leading to AV fistula distally and right coronary cusp dissection proximally. Dissection communicates distally via the middle cardiac vein with free contrast flow into right atrium.