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A Rare Intraluminal Chord Crossing the Main Stem of the Left Coronary Artery

A 58-year-old man presented with precordial discomfort 2 months ago. His electrocardiogram shows sinus bradycardia. Transthoracic echocardiogram revealed that there was no obvious abnormality in cardiac structure and function. Coronary computed tomography angiography (CCTA) revealed that there is no obstructive lesion in his coronary artery. Multi-planar reconstruction CCTA suggested a linear, 1-2-mm thick flap crossing the main stem of the left coronary artery (Figure 1A). Three-dimensional endoluminal image demonstrated an intraluminal chord at the ostium of the left coronary artery (Figure 1B and C), Three-dimensional volume rendering images with a virtual intraluminal view showed a thin linear structure crossing the main stem of the left coronary artery (Figure 1D).

An intraluminal chord of the coronary artery is an extremely rare entity. Coronary computed tomography angiography showed a small, short, plain cylindric tube crossing an intra-coronary artery lumen. The main differential diagnosis is the

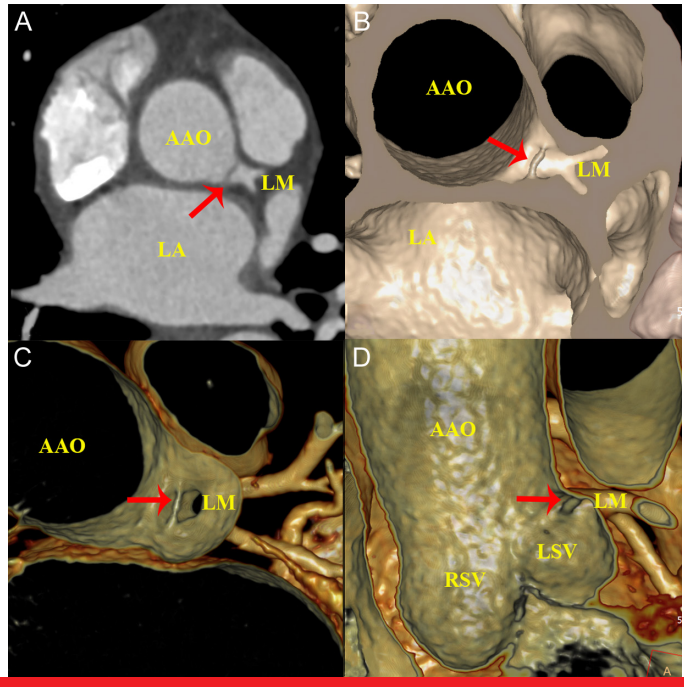

Figure 1. (A) Multi-planar reconstruction coronary computed tomography angiography suggested a linear, 1-2-mm thick flap crossing the main stem of the left coronary artery. (B and C) Three-dimensional endoluminal image demonstrated an intraluminal chord at an intracoronary artery lumen. (D) Three-dimensional volume rendering images with a virtual intraluminal view showed a thin linear structure crossing the main stem of the left coronary artery. LM, left main; AAO, ascending aorta; LSV, left sinus of Valsalva; RSV, right sinus of Valsalva.

E-PAGE ORIGINAL IMAGE

Leizhi Ku [1,#]
Yafeng He [2,#]
Juan Xia [2]
Xiaojing Ma [2]

[1]*Department of Radiology, Wuhan Asia Heart Hospital, Wuhan, P.R. China*
[2]*Department of Echocardiography, Wuhan Asia Heart Hospital, Wuhan, P.R. China*

Corresponding author:
Xiaojing Ma
✉ klz1534292102@163.com

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#Leizhi Ku and Yafeng He have the same contribution to the article.

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intimal flap of Aortic dissection (AD). Intraluminal chord was not associated with the presence of a false lumen, with no fluttering of the flap within the lumen, and the lesion was focal. The treatment strategies are uncertain whether the chord can be left untouched conservatively or needed treatment. We reported a case of finding a thin linear structure crossing the main stem of the left coronary artery, the abnormal structure resembling an intimal flap of coronary artery dissection, but it was neither associated with the presence of a false lumen nor with fluttering of the flap within the lumen, and the lesion was very focal. There were thus many arguments against coronary artery dissection. To the best of our knowledge, the description of an intraluminal chord of the coronary artery has not been reported so far. This exceptional entity can be accurately assessed by CCTA of an intracoronary artery lumen as a thin linear and short cylindrical plain tube attached to 2 distinct points of the coronary artery wall and crossing the coronary artery lumen.

Informed Consent: The informed consent was obtained from the patient for this study.

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