From Blue Toe to Bypass: Premature Coronary Artery Disease with an Unusual Presentation

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ABSTRACT

Premature coronary artery disease can be easily overlooked and have devastating consequences with a high rate of major adverse cardiovascular events and a 10-year mortality. Identification of these patients is challenging and a comprehensive approach is be needed for appropriate management.

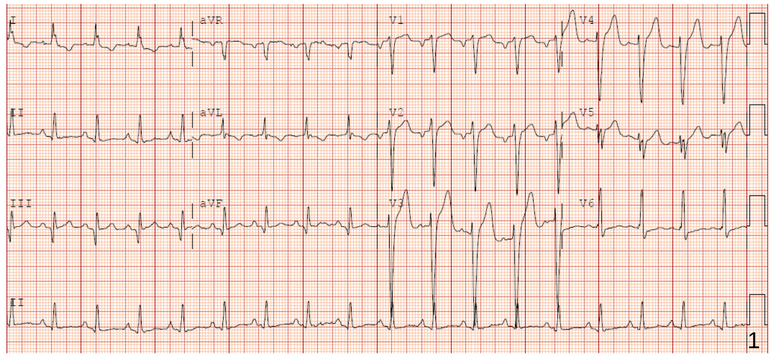
PATIENT PRESENTATION

A 29-year-old male with history of anxiety presented with numbness and blue discoloration of his left 4th toe lasting for one hour.

EKG demonstrated inferior Q waves, poor R wave progression, left ventricular hypertrophy, and left bundle branch block (Figure 1). Labs were notable for Troponin-I 0.13, D-Dimer 1123, and BNP 306. Tchol 250, TG 422, LP(a) 151.

CTA Pulmonary performed without evidence of pulmonary embolism. He was admitted to the inpatient cardiology service and underwent echocardiology demonstrating EF 20-25% with segmental wall abnormalities (Figure 2A, 2B). CTA Coronary showed extensive three – vessel coronary disease with multiple large vessel occlusions (Figure 3). Coronary Catheterization confirmed severe multiple vessel disease (Figure 4A, 4B). A Cardiac MRI was performed to assess for viability, it demonstrated predominantly viable myocardium except for an inferoapical subacute transmural infarction. An apical LV thrombus was identified as well (Figure 5). Embolization of this thrombus is presumed to have caused his toe discoloration.

After evaluation by cardiothoracic surgery, he underwent four vessel CABG (LIMA-LAD, SVG-D, SVG-OM, SVG-PDA). Outpatient genetic workup for familial hyperlipidemia was unremarkable but did reveal early heart disease in multiple family members.



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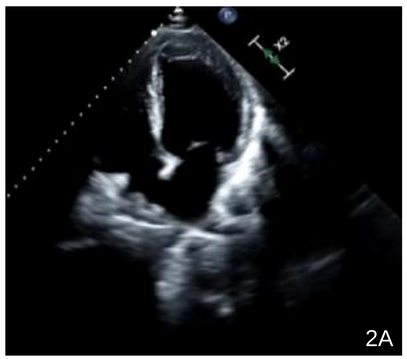
RESULTS



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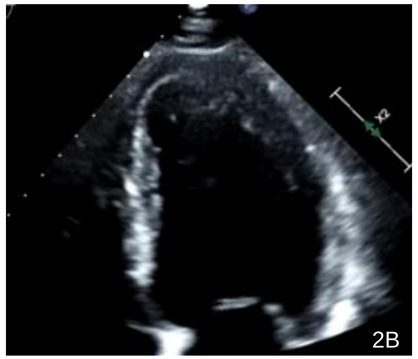

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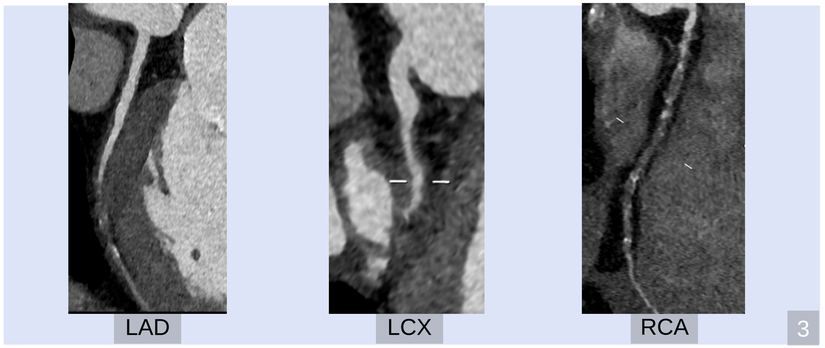

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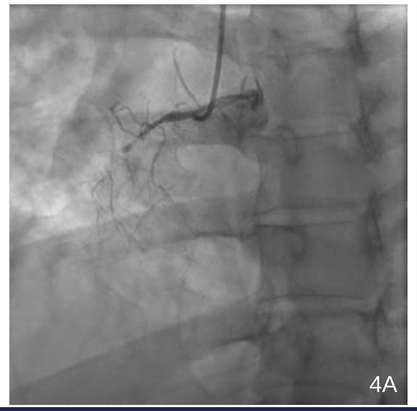

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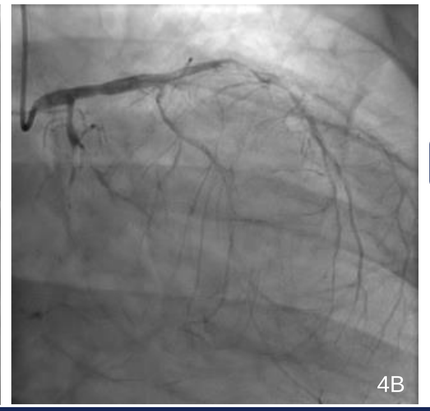
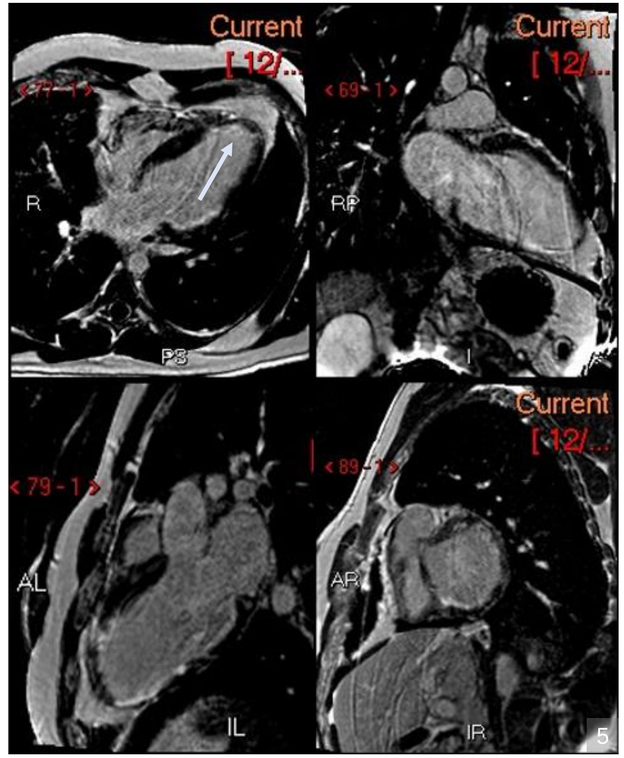


4B



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CONCLUSIONS

This case illustrates an unusual presentation of severe coronary artery disease in a young patient with strong family history of coronary disease. It is presumed that embolization of the identified apical thrombus caused his toe discoloration. Appropriate identification allowed for subsequent treatment and risk factor modification. Identification of young patients with severe coronary disease can be challenging with further focus needed on more systematic identification and initiation of preventative medications for those at highest risk prior to their first event.

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