

Cardiovascular Involvement in IgG4-Related Disease: A Case Mimicking Acute Coronary Syndrome

A 69-year-old man presented with persistent chest pain lasting 2 days after exertion. He had grade 3 hypertension, chronic obstructive pulmonary disease, a 20-year smoking history, and a family history of myocardial infarction. Physical examination was unremarkable except for elevated blood pressure (167/86 mm Hg). Electrocardiogram (ECG) revealed sinus rhythm with pathological Q waves and T-wave inversions in the inferior leads (Figure 1), but echocardiography showed no segmental wall motion abnormalities. Instead, it revealed a dilated ascending aorta (4.2 cm) and hyperechoic plaques in the abdominal aorta. Given suspected ischemia or dissection, coronary and aortic computed tomography angiography (CTA) were performed (Figure 2). Coronary CTA revealed a mixed-density soft tissue mass encasing the left anterior descending, left circumflex, and right coronary arteries. Aortic CTA showed concentric thickening of the ascending and abdominal aorta (Video 1).

Laboratory tests showed elevated D-dimer (1.75 µg/mL) but normal troponin and NT-proBNP. Immunologic testing revealed elevated immunoglobulin G (IgG) (29.20 g/L), IgG4 (22.00 g/L; ref: 0.03-2.01), FLC-kappa (69.4 mg/L), FLC-lambda (99.7 mg/L), with positive PM-Scl and β2GPI-IgG antibodies. A diagnosis of IgG4-related disease (IgG4-RD) was made. After glucocorticoid therapy, the patient's chest pain and vascular inflammation resolved. Over 22 months of follow-up, he remained stable with no vascular progression and normalized immunologic markers.

This case underscores the diagnostic challenge of cardiovascular IgG4-RD, which can mimic acute coronary syndrome. Coronary and aortic involvement represents severe manifestations of the disease. Prompt diagnosis and immunosuppressive treatment are critical to avoid irreversible damage. Long-term monitoring is essential for sustained disease control.

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Informed Consent: Written informed consent was obtained from the patient, and the study was approved by the Ethics Committee of Wuhan Asia Heart Hospital.

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Video 1: Axial view of aortic computed tomography angiography (CTA) showed concentric wall thickening of the ascending aorta and abdominal aorta.

E-PAGE ORIGINAL IMAGE



Shuyi Hu^{1,2}

Hua Yan¹

Leizhi Ku³

Han-Dong Zhu^{1,2}

¹Department of Cardiology, Wuhan Asia Heart Hospital affiliated to Wuhan University of Science and Technology, Wuhan, Hubei Province, China

²School of Medicine, Wuhan University of Science and Technology, Wuhan, Hubei Province, China

³Department of Radiology, Wuhan Asia Heart Hospital affiliated to Wuhan University of Science and Technology, Wuhan, Hubei Province, China

Corresponding author:

Han-Dong Zhu
✉ Harryzhuhandong@outlook.com

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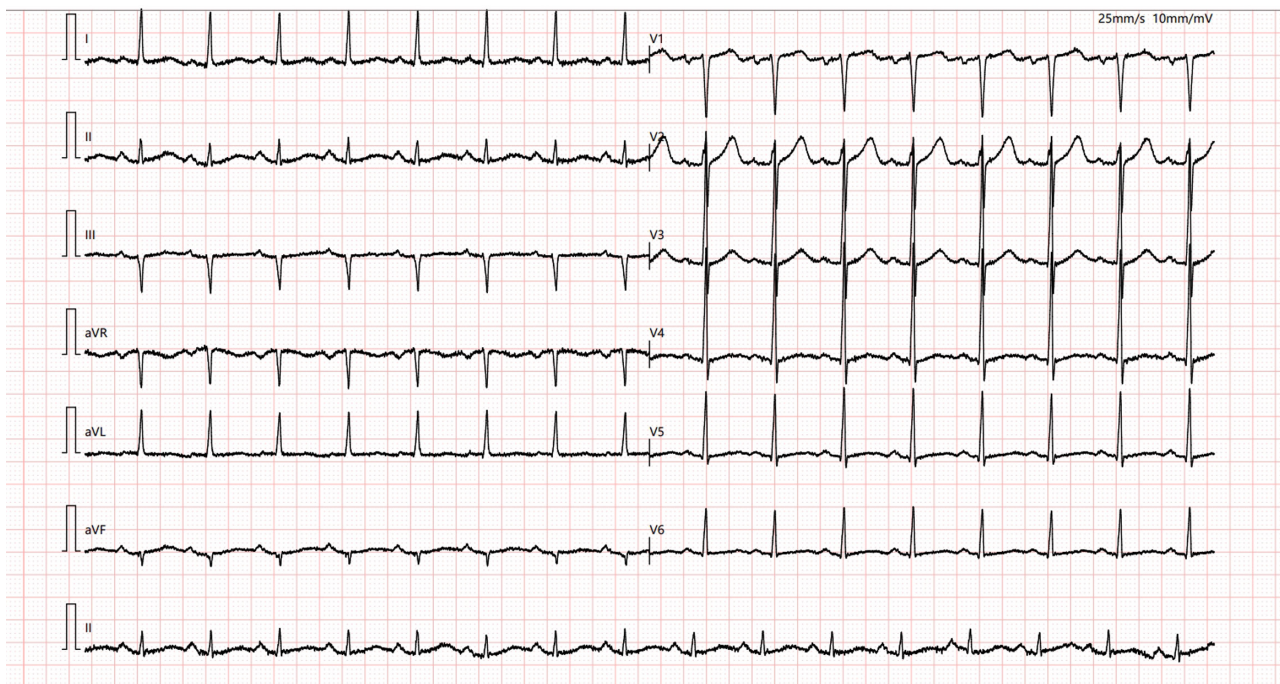


Figure 1. Electrocardiogram (ECG) showing sinus rhythm with pathological Q waves and T-wave inversions in the inferior leads.

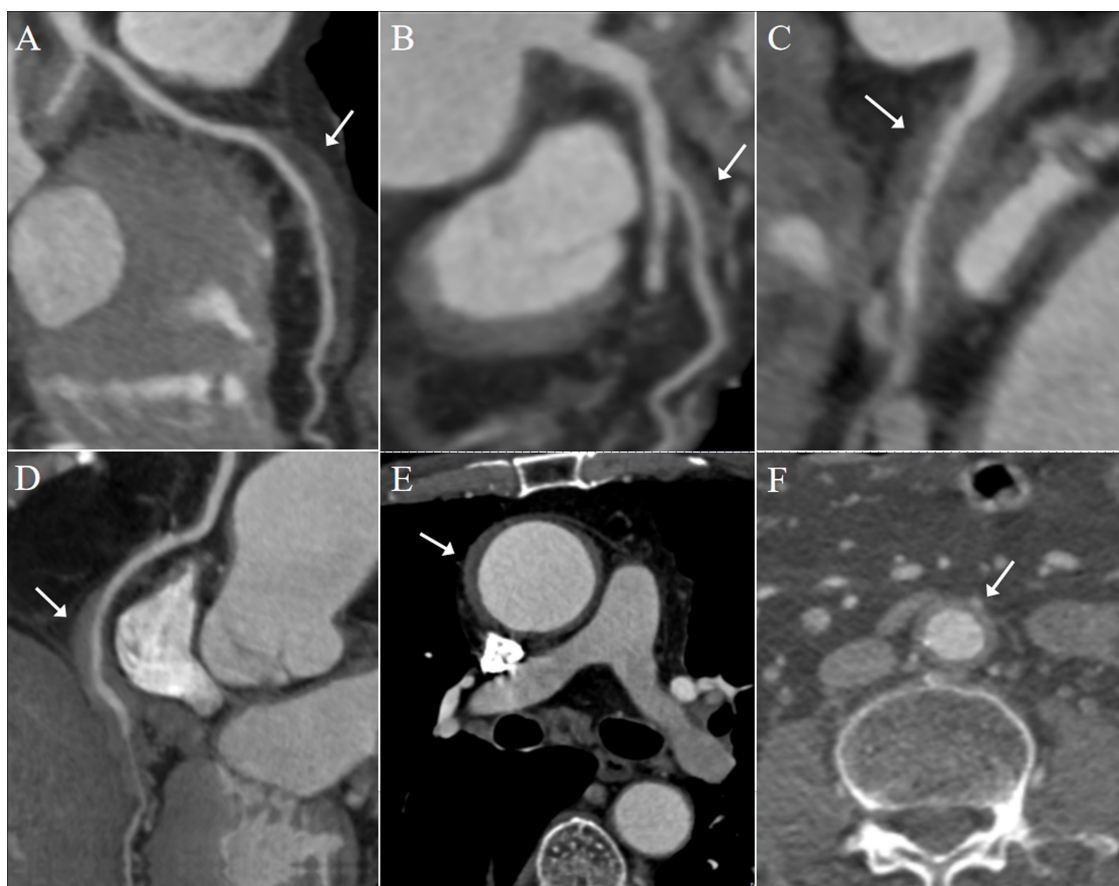


Figure 2. Coronary computed tomography angiography (CTA) revealed a mixed-density, irregular soft tissue mass encasing the mid-segment of the left anterior descending artery (A), left circumflex artery (B, C), and right coronary artery (D). Aortic CTA demonstrated concentric wall thickening of the ascending aorta (E) and abdominal aorta (F), consistent with vascular inflammation.