Coronary artery embolism from native mitral valve thrombus

Fizzah Aziz Choudry1*, Aaisha Opel2, John Gerry Coghlan2

1Department of Medicine, Barnet and Chase Farm NHS Trust, The Ridgeway, Enfield, Middlesex, EN2 8JL, UK and 2Royal Free NHS Trust, Pond Street, London, NW3 2QG, UK

* Corresponding author. Tel: +44 790 332 4156. Email: ch_fizzahazz@hotmail.com

An 80-year-old lady with hypertension, diabetes, and permanent pacemaker presented with presyncope but no other cardiovascular symptoms. Electrocardiogram showed a paced rhythm and troponin I was 0.16. Pacemaker check was normal, and angiography showed unobstructed coronary arteries. Transthoracic echocardiography (TTE) revealed a heavily calcified mitral valve (MV) and a hypermobile mass on the posterior MV leaflet consistent with thrombus (Panel A). Vegetation could not be excluded; however, she was apyrexic, with normal inflammatory markers and negative blood cultures. She was discharged fully anticoagulated. Within a week the patient re-presented with chest pain and troponin I of 58. Her INR on presentation was 3.2. On TTE, the MV mass had disappeared except for a residual stump (Panel B). Coronary angiography revealed a filling defect consistent with thrombus within circumflex artery at the bifurcation with the first obtuse marginal (Panel C). Attempts to retrieve the mass using a thrombus removal device and inflations using compliant and cutting balloons proved unsuccessful. After a prolonged procedure, treatment with abciximab was commenced. At re-study after 48 h, the mass remained unchanged. Successful removal was finally achieved with a distal protection device (Panels D and E). Histology (Panel F) confirmed calcified thrombus with no inflammatory infiltrate and microbiology was negative. Coronary artery embolism as a rare cause of myocardial infarction has been described from prosthetic valve thrombus in the context of subtherapeutic anticoagulation as well as in infective endocarditis. Here, we describe large coronary embolism from a native MV thrombus in a fully anticoagulated patient.

Panels A and B. TTE on first presentation: calcified MV with hypermobile mass on posterior MV leaflet (Panel A). TTE on second presentation: calcified MV with mass stump visible on posterior MV leaflet (Panel B).


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