Persistent fever in a multicomplcicated infective endocarditis

Fièvre persistante au cours d’une endocardite infectieuse multicompliquée

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Received 30 April 2011; received in revised form 12 May 2011; accepted 13 May 2011
Available online 9 January 2012

KEYWORDS
Endocarditis; Fever; Phlebitis; Mycotic aneurysm

A 54-year-old man was admitted for persistent fever (38 °C) after 15 days of appropriate antibiotic therapy for aortic endocarditis due to Streptococcus bovis. Clinical examination showed blood pressure 112/60 mmHg, a 2/6 diastolic murmur and arterial hyperpulsatility. Electrocardiogram and chest X-ray results were normal. White blood count cell was 14,000/mm³ (80% neutrophils, normal eosinophil count) and C-reactive protein was 86 mg/L. Blood cultures were negative. Transoesophageal echocardiography showed two large aortic vegetations (12 and 14 mm), with severe aortic regurgitation but no abscess (Fig. 1A). Secondary locations were searched to explain persistent fever: CT scan showed splenic infarction, cerebral MRI showed two left cortical ischaemic strokes and a cerebral abscess. Cerebral arteriography showed a mycotic aneurysm requiring cerebral embolization (Fig. 1B).

Fever persisted. An asymptomatic rise in troponin I concentration (11.4 μg/L) with normal coronary angiography led to cardiac MRI showing an anterior myocardial infarction (Fig. 1C), suggesting coronary embolism. Doppler echography performed because of left calf pain showed deep vein thrombosis due to venous compression by a mycotic popliteal aneurysm, as shown by CT angiography (Fig. 1D). Aortic valve replacement was performed at day 29, followed by surgery of the popliteal aneurysm. Fever and inflammation disappeared and clinical evolution was favourable.

Abbreviations: CT, Computed tomography; MRI, Magnetic resonance imaging.
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doi:10.1016/j.acvd.2011.05.012
Figure 1. The patient presented initially with two voluminous aortic vegetations, as shown by transthoracic echocardiography (A). Cerebral arteriography showed a distal cerebral mycotic aneurysm (B: black arrow); a silent subendocardial myocardial infarction in the mid-anterior wall (white arrow) was detected by a delayed-enhancement magnetic resonance sequence (C). Persistent fever was due to a deep venous thrombosis secondary to venous compression by a mycotic popliteal aneurysm (D: white broken arrow).

This case illustrates the need for systematic, global and multiorgan screening in patients with infective endocarditis and persistent fever. After elimination of unadapted antibiotic therapy, extensive perivalvular infection, drug hypersensitivity reaction and lymphangitis due to intravenous treatment, imaging is useful to search for secondary locations (mycotic aneurysm, stroke, myocarditis) or thrombophlebitis, which may explain persistent fever, as in our case.

Disclosure of interest
The authors declare that they have no conflicts of interest concerning this article.