Clinical vignette

Infective endocarditis with lung and systemic embolization in an injection drug user

Nicola Martinelli, Oliviero Olivieri, Roberto Corrocher, and Domenico Girelli*

Department of Clinical and Experimental Medicine, University of Verona, Policlinico G.B. Rossi, 37134 Verona, Italy

*Corresponding author. Tel: +39 045 8074403; fax +39 045 580111. E-mail address: domenico.girelli@univr.it

Injection drug use (IDU) is a well-known risk factor for infective endocarditis (IE). The clinical manifestations of IE in injection drug users (IDUs) are often atypical, so that the correct diagnosis requires a high index of suspicion.

A 24-year-old male with history of IDU, HIV-negative, presenting with profound malaise, was admitted to the Intensive Care Unit because of acute renal failure requiring immediate haemodialysis. The patient reported that he was treated with antibiotics because of ‘pneumonia’, 1 month before. On admission, no heart murmur could be heard at physical examination. Later, some fever peaks became apparent, and careful recollection of history revealed intermittent fever peaks since more than 1 month.

This prompted the execution of echocardiography, showing biventricular IE, with large vegetations, especially on the tricuspid valve (Panels A and B, white arrows). *Staphylococcus aureus* grew in blood cultures. Despite antibiotic therapy and daily haemodialysis, the clinical course was complicated by multiple embolizations leading to a large splenic infarction (Panel C, white arrow tip) and, eventually, to death because of sudden massive haemoptysis due to lung embolization (Panels D, white circles for the nodular lesions and white arrows for those excavated). At autopsy, the tricuspid valve was nearly completely destroyed and substituted by large vegetations (Panel E, white arrows). Retrospective review of a chest radiograph performed 1 month before revealed, besides an infiltrate in the right lower lobe, multiple bilateral small nodular infiltrates (Panel F, white circles) substantially matching with the septic emboli seen on a CT scan performed during hospitalization.