

CARDIOVASCULAR FLASHLIGHT

doi:10.1093/eurheartj/ehv016

Online publish-ahead-of-print 9 February 2015

Invasive cardiac aspergillosis presenting as complete heart block in a patient with acute lymphoblastic leukaemia

Gustavo Lima da Silva*, Fausto J. Pinto, and Ana G. Almeida

Cardiology Department, Santa Maria University Hospital, Lisbon North Hospital Center, Av. Prof. Egas Moniz, Lisboa 1649-035, Portugal

* Corresponding author. Tel: +351 91 692 0935, Email: gustavossilva@gmail.com

A 56-year-old man admitted to our Haematology Department for acute lymphoblastic B-cell leukaemia underwent intensive induction chemotherapy, which was complicated by ethmoidal and bronchopulmonary aspergillosis.

In the post induction chemotherapy period, he presented with chest pain and bradycardia (40 bpm). An electrocardiogram (EKG) showed complete heart block and 1 mm ST-segment elevation in the inferior leads (*Panel A*). Coronary angiogram revealed a distal chronic occlusion (non-culprit lesion) of the first obtuse marginal branch (*Panel B*). Transthoracic and transoesophageal echocardiogram revealed preserved left ventricular ejection fraction, nodular hypoechoic regions at the basal segments of the inferoseptal, anterolateral, and inferolateral walls, a vegetation at the tricuspid valve and a moderate pericardial effusion (*Panels C–F*). Cardiac magnetic resonance revealed hypointense nodular regions in steady-state free precession images (*Panel G*) and hyperintense in T_1 - and T_2 -weighted imaging within the same walls (*Panels H and I*). A presumptive diagnosis of invasive cardiac aspergillosis was made and the patient was started on amphotericin B and posaconazole, which led to complete recovery from the rhythm disturbance. The patient completed chemotherapy and achieved complete haematological remission.

Six months after completion of the antibiotic therapy, the patient was asymptomatic and on complete haematological remission. Transthoracic echocardiogram revealed only two small residual nodular hypoechoic lesions in the basal segment of the anterolateral wall and preserved left ventricular ejection fraction (*Panel J*).

Invasive cardiac aspergillosis is a rare disorder that affects the immunosuppressed patient with disseminated disease. Cardiovascular imaging is mandatory for its diagnosis and follow-up.

Panel A Twelve-lead EKG with complete heart block and 1 mm ST-segment elevation in inferior leads; (*B*) coronary angiogram demonstrating distal chronic occlusion of the first obtuse marginal branch (arrowhead); (*C–E*) transthoracic echocardiogram demonstrating nodular hypoechoic regions at the basal segments of the inferior-septal, antero-lateral, and infero-lateral walls (arrowheads) and a moderate pericardial effusion; (*F*) transoesophageal echocardiogram revealing a vegetation at the tricuspid valve (arrowhead); (*G*) cardiac magnetic resonance showing hyperintense nodular regions in SSFP cine imaging within the inferior-septal, antero-lateral, and infero-lateral walls (arrowheads); (*H*) cardiac magnetic resonance showing hyperintense nodular regions in T_1 -weighted imaging within the inferior-septal, antero-lateral, and infero-lateral walls (arrowheads); (*I*) cardiac magnetic resonance showing hyperintense nodular regions in T_2 -weighted imaging within the inferior-septal, antero-lateral, and infero-lateral walls (arrowheads); (*J*) transthoracic echocardiogram (zoom) at 6-month follow-up showing small residual nodular hypoechoic lesion in the basal segment of the anterolateral wall. SSFP: steady-state free precession.

Supplementary Material is available at *European Heart Journal* online.

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2015. For permissions please email: journals.permissions@oup.com.

