Reviewer’s report

Title: "A worm in the heart": The first three-dimensional visualization of a thrombus in transit entrapped between the leads of a permanent dual-chamber pacemaker: a case report

Version: 4 Date: 21 February 2010

Reviewer: Uwe Janssens

Which of the following following best describes what type of case report this is?: An unexpected event in the course of observing or treating a patient

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: No

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: No

Is the anonymity of the patient protected?: No

Comments to authors:

This interesting case report describes a patient with a thrombus in transit which has been entrapped between pacemaker leads. The authors used additionally off-line 3 dimensional reconstruction of their TEE data and demonstrated, that the thrombus did not arise from the pacemaker leads. Moreover the authors discuss in depth the management of this complex patient.

Comments:

General comments:
Overall the authors should check some of the wordings.

Special comments:
“white German” maybe instead the authors should use “Caucasian”.

“The symptomatic benefit for the patient was followed by an acute onset of dyspnoea with pain in lower limbs and elevated D-Dimere (2222 ng/ml). The diagnosis was deep venous thrombosis (DVT) of recent onset in the left lower limb (superficial femoral, popliteal, fibular, solear and gastrocnemial veins).” Maybe wording should be checked. Did the authors perform venous limb sonography or what was the examination applied to diagnose venous thrombosis.

Why did the authors perform additional transösophageal echocardiography? Maybe wording should be checked. Did the authors perform venous limb sonography or what was the examination applied to diagnose venous thrombosis.

The atrial flutter together with the severely reduced left ventricular function could be responsible for the patient’s acute dyspnoe. The authors should comment on the mechanisms which led to the further workup of the patient. Pulmonary embolism was ruled out with computed tomography, therefore other pathomechanisms were responsible for the patients symptoms.

“It would be best, 3D TEE will become available for an expanding range of clinical applications.” The authors should describe more precisely in which clinical situation the authors should describe more precisely in which clinical situation the authors should describe more precisely in which clinical situation the authors feel that 3-D-echocardiography would be advantageous.

“No more than one year ago, a giant free-floating right atrial thrombus, comparable with our “worm in the heart” has been described, but the patient died before initiation of thrombolytic therapy due to fulminant PE.”

Are there any data which describe how often pacemaker leads are associated with thrombus formation?

“In patients with a mobile right heart thrombus, the incidence of pulmonary embolism is 97% and reported mortality is over 44% 23.” The citation should be checked: there are no more than 6 references.

The movies should be blinded for the patient data.

“Even though the number of patients having both, PM leads and right heart thrombus, is very little, it may still be prudent to consider the possibility of a PM to prevent PE.” The wording should be checked.

“electrocardiogram” spelling error, please correct.

Quality of written English: Needs some language corrections before being published

Declaration of competing interests:

I declare that I have no competing interests