UNIVERSITY OF BIRMINGHAM University of Birmingham Research at Birmingham

Cardiac calcified amorphous tumour

Teoh, Jun K: Steeds, Richard P

DOI: 10.1530/ERP-14-0072

License: Creative Commons: Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

Document Version Publisher's PDF, also known as Version of record

Citation for published version (Harvard): Teoh, JK & Steeds, RP 2015, 'Cardiac calcified amorphous tumour', *Echo Research and Practice*, vol. 2, no. 1, pp. I9-I10. https://doi.org/10.1530/ERP-14-0072

Link to publication on Research at Birmingham portal

Publisher Rights Statement: https://doi.org/10.1530/ERP-14-0072

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

•Users may freely distribute the URL that is used to identify this publication.

•Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research. •User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)

•Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

IMAGES AND VIDEOS

Cardiac calcified amorphous tumour

Jun K Teoh MBChB MRCP and Richard P Steeds MD FRCP

Department of Cardiology, Queen Elizabeth Hospital Birmingham, Birmingham, UK

Correspondence should be addressed to J K Teoh **Email** jkteoh@gmail.com

Summary

Calcified amorphous tumour (CAT) is an unusual nonneoplastic cardiac mass that may mimic malignant tumour of the heart (1) or vegetation (2). We report a 43-year-old female with type 1 diabetes and end-stage diabetic kidney disease on haemodialysis, who underwent transoesophageal echocardiography (TOE) in the setting of pyrexia and negative blood cultures. No valve-related vegetation was identified. However, a prominent calcified immobile finger-like mass, measuring 23 mm×10 mm, was detected arising from the posterior mitral annulus adjacent to the base of P3 scallop (Fig. 1). The mass did not cause any obstruction to mitral forward flow (mean transmitral gradient 4 mmHg). Imaging of the mitral



Figure 2

2D transoesophageal echocardiography (mid-oesophageal 0° view; A2/P2 level) image of CAT 'dangling' on the upstream/atrial side of the mitral valve.

valve in the mid-oesophageal 0° view at the A2/P2 level revealed the mass to be 'dangling' on the upstream side of the mitral valve leaflets (Fig. 2). A subsequent 3D TOE image clearly demonstrated that the mass projects in an oblique position from the posterior mitral annulus (adjacent to base of P3) towards the mitral orifice space anterior-superior to the P2 scallop (Fig. 3 and Video 1) giving rise to the appearance as shown in Fig. 2. The patient has been entered into an annual echocardiographic surveillance programme to monitor progression of the mass. The association between CAT and end-stage kidney disease is thought to relate to dysfunctional calcium homeostasis mechanisms (3).

© 2015 The authors



Figure 1

2D transoesophageal echocardiography (mid-oesophageal 90° view) image of CAT arising from the posterior mitral annulus.



This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License.

Downloaded from Bioscientifica.com at 01/09/2019 03:33:21PM via University of Birmingham and PERPETUAL ACCESS BIRMINGHAM

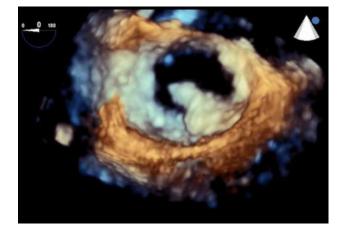


Figure 3

3D transoesophageal echocardiography image of CAT projecting in an oblique position towards the centre of the mitral valve orifice.

Video 1

3D transoesophageal echocardiography video of CAT viewed from the left atrium. Download Video 1 via http://dx.doi.org/10.1530/ERP-14-0072-v1.

Declaration of interest

The authors declare that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

Funding

This research did not receive any specific grant from any funding agency in the public, commercial or not-for-profit sector.

Patient consent

Patient has provided written consent.

Author contribution statement

Both J K Teoh and R P Steeds jointly performed the transoesophageal echocardiographic study, consulted on the patient's cardiology care, and wrote and approved the manuscript.

References

- Reynolds C, Tazelaar HD & Edwards WD 1997 Calcified amorphous tumor of the heart (cardiac CAT). *Human Pathology* 28 601–606. (doi:10.1016/S0046-8177(97)90083-6)
- 2 Fujiwara M, Watanabe H, Iino T, Kobukai Y, Ishibashi K, Yamamoto H, Iino K, Yamamoto F & Ito H 2012 Two cases of calcified amorphous tumor mimicking mitral valve vegetation. *Circulation* **125** e432–e434. (doi:10.1161/CIRCULATIONAHA.111. 072793)
- 3 Kubota H, Fujioka Y, Yoshino H, Koji H, Yoshihara K, Tonari K, Endo H, Tsuchiya H, Mera H, Soga Y *et al* 2010 Cardiac swinging calcified amorphous tumors in end-stage renal failure patients. *Annals of Thoracic Surgery* **90** 1692–1694. (doi:10.1016/j.athoracsur. 2010.04.097)

Received in final form 14 December 2014 Accepted 12 January 2015