



Article  
scientifique

Rapport de  
cas

2010

Published  
version

Open  
Access

This is the published version of the publication, made available in accordance with the publisher's policy.

---

Non-infectious large vessel vasculitis of the aorta: diagnosis by  
echocardiography and cardiac positron emission tomography-computed  
tomography

---

Mueller, Hajo; Willi, Jean-Pierre; Lerch, René

**How to cite**

MUELLER, Hajo, WILLI, Jean-Pierre, LERCH, René. Non-infectious large vessel vasculitis of the aorta: diagnosis by echocardiography and cardiac positron emission tomography-computed tomography. In: European heart journal, 2010, vol. 31, n° 18, p. 2245–2245. doi: 10.1093/eurheartj/ehq176

This publication URL: <https://archive-ouverte.unige.ch/unige:173959>

Publication DOI: [10.1093/eurheartj/ehq176](https://doi.org/10.1093/eurheartj/ehq176)

24. Gu X, Han YM, Titus JL, Amin Z, Berry JM, Kong H, Rickers C, Urness M, Bass JL. Transcatheter closure of membranous ventricular septal defects with a new nitinol prosthesis in a natural swine model. *Catheter Cardiovasc Interv* 2000;**50**: 502–509.
25. Hijazi ZM, Hakim F, Al-Fadley F, Abdelhamid J, Cao QL. Transcatheter closure of single muscular ventricular septal defects using the amplatzer muscular VSD occluder: initial results and technical considerations. *Catheter Cardiovasc Interv* 2000;**49**:167–172.
26. Butera G, Carminati M, Chessa M, Piazza L, Micheletti A, Negura DG, Abella R, Giamberti A, Frigiola A. Transcatheter closure of perimembranous ventricular septal defects: early and long-term results. *J Am Coll Cardiol* 2007;**50**: 1189–1195.
27. Sullivan ID. Transcatheter closure of perimembranous ventricular septal defect: is the risk of heart block too high a price? *Heart* 2007;**93**:284–286.
28. Carminati M, Butera G, Chessa M, De Giovanni J, Fisher G, Gewillig M, Peuster M, Piechaud JF, Santoro G, Sievert H, Spadoni I, Walsh K. Transcatheter closure of congenital ventricular septal defects: results of the European Registry. *Eur Heart J* 2007;**28**:2361–2368.
29. Michel-Behnke I, Le TP, Waldecker B, Akintuerk H, Valeske K, Schranz D. Percutaneous closure of congenital and acquired ventricular septal defects—considerations on selection of the occlusion device. *J Interv Cardiol* 2005;**18**:89–99.
30. Szkutnik M, Qureshi SA, Kusa J, Rosenthal E, Bialkowski J. Use of the Amplatzer muscular ventricular septal defect occluder for closure of perimembranous ventricular septal defects. *Heart* 2007;**93**:355–358.

## CARDIOVASCULAR FLASHLIGHT

doi:10.1093/eurheartj/ehq176

Online publish-ahead-of-print 28 May 2010

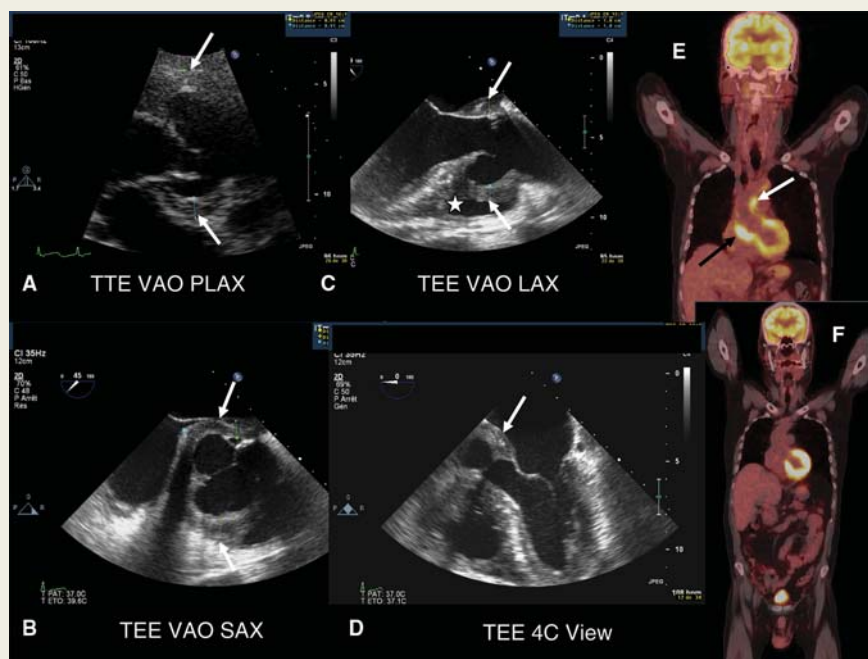
# Non-infectious large vessel vasculitis of the aorta: diagnosis by echocardiography and cardiac positron emission tomography–computed tomography

Hajo Müller<sup>1\*</sup>, Jean-Pierre Willi<sup>2</sup>, and René Lerch<sup>1</sup>

<sup>1</sup>Division of Cardiology, University Hospitals of Geneva, 4, rue Gabrielle-Perret-Gentil, 1211 Geneva 14, Switzerland and <sup>2</sup>Division of Nuclear medicine, University Hospitals of Geneva, Geneva 14, Switzerland

\*Corresponding author. Tel: +41 22 3727201, Fax: +41 22 3727229, Email: hajo.muller@hcuge.ch

A 59-year-old male was referred to the General Internal Medicine Clinic for investigation of slowly deteriorating general condition of unknown origin. He had a 4-month history of general fatigue, weight loss, chills, and night sweats. Large screening for a tumour aetiology was negative and laboratory investigations revealed an inflammatory syndrome with an erythrocyte sedimentation rate of 86 mm/h and C-reactive protein of 143 mg/L. Blood cultures and extensive viral and bacterial serology investigations, including Syphilis, were negative. Transthoracic and transoesophageal echocardiography showed a dilated aortic root with marked thickening of aortic wall appearing as a cuff-like circumferential mass (10 mm, white arrows, Panels A–D).



There was no significant valvular dysfunction and no image suspicious for valvular vegetation. The mass was infiltrating the interventricular and interatrial septum (white asterisk, Panel C). Differential diagnosis included cardiac tumour, abscess or phlegmon, and inflammatory disease. A cardiac positron emission tomography–computed tomography (PET–CT) was performed and disclosed enhanced fluor-18 fluorodeoxyglucose (FDG) uptake in the wall of the aortic root, ascending aorta (Panel E, black and white arrows, respectively), and, less pronounced, in the descending and abdominal aorta. Non-infectious large vessel vasculitis (probable giant-cell arteritis) was suspected and immunosuppressive treatment with high doses of steroids was initiated. At early follow-up, there was marked improvement of symptoms with normalization of inflammatory parameters. A control cardiac PET–CT 4 months later showed nearly complete regression of the FDG uptake in the aortic wall (Panel F). This case emphasizes the complementary role of echocardiography and PET–CT in the diagnosis of large vessel vasculitis.