- 6 Godden DJ, Sandhu PS, Kerr F. Stenosed bicuspid aortic valves in twins. *Eur Heart J* 1987;**8**:316-8.
- 7 Bayata S, Yesil M, Postaci N, et al. Severe aortic and mitral calcification in identical twin boys. *J Am Soc Echocardiogr* 2002;**15**:1412-3.
- 8 O'Donnel CJ, Chazaro I, Wilson PWF, et al. Evidence for heritability of abdominal aortic calcific deposits in the Framingham heart study. *Circulation* 2002;**106**:337-41.
- 9 Bella JN, MacCluer JW, Roman MJ, et al. Genetic influences on aortic root size in American Indians. The Strong Heart Study. *Arterioscler Thromb Vasc Biol* 2002;**22**:1008-11.
- 10 Cripe L, Andelfinger G, Martin LJ, et al. Bicuspid aortic valve is heritable. *J Am Coll Cardiol* 2004;**44**:138-43.
- 11 Ortlepp JR, Hoffmann R, Ohme F, et al. The vitamin D receptor genotype predisposes the development of calcified aortic valve stenosis. *Heart* 2001;**85**:639-42.
- 12 Ortlepp JR, Schmitz F, Mevissen V, et al. The amount of calcium-deficient hexagonal hydroxyapatite in aortic valves is influenced by gender and associated with genetic polymorphisms in patients with severe calcific aortic stenosis. *Eur Heart J* 2004;**25**:514-22.
- 13 Aronow WS, Schwartz KS, Koenigsberg M. Correlation of serum lipids, calcium, and phosphorus, diabetes mellitus and history of systemic hypertension with presence or absence of calcified or thickened aortic cusps or root in elderly patients. *Am J Cardiol* 1987;**59**:998-9.
- 14 Stewart BF, Siscovick D, Lind BK, et al. Clinical factors associated with calcific aortic valve disease. Cardiovascular Health Study. *J Am Coll Cardiol* 1997;**29**:630-4.
- 15 Ortlepp JR, Schmitz F, Bozoglu T, et al. Cardiovascular risk factors in patients with aortic stenosis predict prevalence of coronary artery disease, but not the prevalence of aortic stenosis: an angiographic pair matched case-control study. *Heart* 2003;**89**:1019-22.
- 16 Olsson M, Thyberg J, Nilsson J. Presence of oxidized low density lipoprotein in nonrheumatic stenotic aortic valves. *Arterioscler Thromb Vasc Biol* 1999;**19**:1218-22.
- 17 Novaro GM, Tiong IY, Pearce GL, et al. Effect of hydroxymethylglutaryl coenzyme A reductase inhibitors on the progression of calcific aortic stenosis. *Circulation* 2001;**104**:2205-9.
- 18 Shavelle DM, Takasu J, Budoff MJ, et al. HMG CoA reductase inhibitor (statin) and aortic valve calcium. *Lancet* 2002;**359**:1125-6.
- 19 Bellamy MF, Pellikka PA, Klarich KW, et al. Association of cholesterol levels, hydroxymethylglutaryl coenzyme-A reductase inhibitor treatment, and progression of aortic stenosis in the community. *J Am Coll Cardiol* 2002;**40**:1723-30.
- 20 Cowell SJ, Newby DE, Prescott RJ, et al. A randomized trial of intensive lipid-lowering therapy in calcific aortic stenosis. *N Engl J Med* 2005;**352**:2389-97.
- 21 Harikrishnan S, Byju CK, Tharakan J. Severe valvar aortic stenosis in a child with familial hypercholesterolaemia. *Heart* 2004;**90**:238.
- 22 Ho HH, Miu KM, Jim MH. Homozygous familial hyperlipidaemia presenting as severe aortic stenosis and unstable angina. *Heart* 2004;**90**:1285.
- 23 O'Brien KD, Reichenbach DD, Marcovina SM, et al. Apolipoprotein B₁₀₀ and E accumulate in the morphologically early lesion of 'degenerative' valvular aortic stenosis. *Arterioscler Thromb Vasc Biol* 1996;**16**:523-32.
- 24 Avakian AD, Annicchino-Bizzacchi JM, Grinberg M, et al. Apolipoproteins AI, B, and E polymorphisms in severe aortic valve stenosis. *Clin Genet* 2001;**60**:381-4.
- 25 Novaro GM, Sachar R, Pearce GL, et al. Association between apolipoprotein E alleles and calcific valvular heart disease. *Circulation* 2003;**108**:1804-8.
- 26 Koch W, Ehrenhaft A, Griesser K, et al. TaqMan systems for genotyping of disease-related polymorphisms present in the gene encoding apolipoprotein E. *Clin Chem Lab Med* 2002;**40**:1123-31.
- 27 Trenkwalder P, Ruland D, Stender M, et al. Prevalence, awareness, treatment and control of hypertension in a population over the age of 65 years: results from the Starnberg Study on Epidemiology of Parkinsonism and Hypertension in the Elderly (STEPHY). *J Hypertens* 1994;**12**:709-16.
- 28 Low M, Stegmaier C, Ziegler H, et al. ESTHER study. [Epidemiological investigations of the chances of preventing, recognizing early and optimally treating chronic diseases in an elderly population (ESTHER study)]. *Dtsch Med Wochenschr* 2004;**129**(49):2643-7.
- 29 Funalot B, Varenne O, Mas JL. A call for accurate phenotype definition in the study of complex disorders. *Nat Genet* 2004;**36**:3.
- 30 Gerdes LU, Gerdes C, Kervinen K, et al. The apolipoprotein ε4 allele determines prognosis and the effect on prognosis of simvastatin in survivors of myocardial infarction. A substudy of the Scandinavian Simvastatin Survival Study. *Circulation* 2000;**101**:1366-71.
- 31 Humphries SE, Talmud PJ, Hawe E, et al. Apolipoprotein E4 and coronary heart disease in middle-aged men who smoke: a prospective study. *Lancet* 2001;**358**:115-9.
- 32 Lahoz C, Schaefer EJ, Cupples LA, et al. Apolipoprotein E genotype and cardiovascular disease in the Framingham Heart Study. *Atherosclerosis* 2001;**154**:529-37.
- 33 Chen Q, Reis SE, Kammerer CM, WISE study group, et al. APOE polymorphism and angiographic coronary artery disease severity in the Women's Ischemia Syndrome Evaluation (WISE) study. *Atherosclerosis* 2003;**169**:159-67.
- 34 Song Y, Stampfer MJ, Liu S. Meta-analysis: apolipoprotein E genotypes and risk for coronary heart disease. *Ann Intern Med* 2004;**141**:137-47.
- 35 Freeman RV, Otto CM. Spectrum of calcific aortic valve disease: pathogenesis, disease progression, and treatment strategies. *Circulation* 2005;**111**:3316-26.

IMAGES IN CARDIOLOGY

doi: 10.1136/hrt.2005.085027

Aortic valvular endocarditis visualised by 16-row detector multislice computed tomography

A 58-year-old man was admitted to our institution for a left-sided homonymous hemianopsia with fever and a systolic murmur. Blood cultures were positive for *Enterococcus faecalis* and an ischaemic stroke in the left posterior cerebral artery territory was observed on CT examination. Echocardiography disclosed an extensive vegetation on the aortic valve and a mild aortic insufficiency. A 16-row detector MSCT (Sensation 16 Siemens) with ECG gating demonstrated the aortic vegetation (10 × 23 mm) on the ventricular side of the aortic valve (panel A) with systolic protrusion in the aortic root (panel B). Intravenous antibiotics were immediately started. Because of the stroke, resection of the vegetation and subsequent valve repair were delayed four weeks after the initial diagnosis, without recurrent embolic event. In the absence of coronary artery stenoses on the cardiac CT imaging, and because of the length of the vegetation, a preoperative coronary angiography was not performed. To our knowledge

Sixteen-row detector multislice CT of a valvular aortic endocarditis: large vegetation (23 × 10 mm, arrow) on the ventricular side of the left anterior cusp in diastole.

Aortic protrusion of the vegetation during systole.

this is the first case of aortic endocarditis visualised by 16-row MSCT managed

with a totally non-invasive approach before surgery.

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