

Left ventricular hypertrophy in hypertension: its arrhythmogenic potential

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Web-only References

1. Roden DM. Taking the “idio” out of “idiosyncratic”: predicting torsades de pointes. *Pacing Clin Electrophysiol* 1998;**21**:1029–34.
2. Marbán E. Heart failure: the electrophysiologic connection. *J Cardiovasc Electrophysiol* 1999;**10**:1425–28.
3. McKenna WJ, Behr ER. Hypertrophic cardiomyopathy. Management, risk stratification, and prevention of sudden death. *Heart* 2002;**87**:169–76.
4. Fuster V, Rydén L, Asinger RW, *et al.* ACC/AHA/ESC guidelines for the management of patients with atrial fibrillation: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and the European Society of Cardiology Committee for Practice Guidelines and Policy Conferences (Committee to Develop Guidelines for the Management of Patients With Atrial Fibrillation). *Eur Heart J* 2001;**22**:1852–1923.
5. Folkow B. Physiological aspects of primary hypertension. *Physiol Rev* 1982;**62**:347–504.
6. O’Rourke MF. From theory into practice: arterial haemodynamics in clinical hypertension. *J Hypertens* 2002;**20**:1901–15.
7. Schlaich MP, Lambert E, Kaye DM, *et al.* Sympathetic augmentation in hypertension: role of nerve firing, norepinephrine reuptake, and Angiotensin neuromodulation. *Hypertension* 2004;**43**:169–75.
8. Malmqvist K, Kahan T, Isaksson H, *et al.* Left ventricular mass is not related to insulin sensitivity in never treated human hypertension. *J Hypertens* 2001;**19**:311–7.
9. Pitt B, Reichek N, Willenbrock R, *et al.* Effects of eplerenone, enalapril, and eplerenone/enalapril in patients with essential hypertension and left ventricular hypertrophy: the 4E-left ventricular hypertrophy study. *Circulation* 2003;**108**:1831–8.
10. Hallberg P, Michaëlsson K, Karlsson J, *et al.* The bradykinin B2BKR receptor polymorphism and change in left ventricular mass in response to antihypertensive treatment. *J Hypertens* 2003;**21**:621–4.
11. Schillaci G, Verdecchia P, Borgioni C, *et al.* Improved electrocardiographic diagnosis of left ventricular hypertrophy. *Am J Cardiol* 1994;**7**:714–9.
12. Dahlöf B, Devereux R, de Faire U, *et al.* The Losartan Intervention For Endpoint reduction (LIFE) in Hypertension study: rationale, design, and methods. The LIFE Study Group. *Am J Hypertens* 1997;**10**:705–13.
13. Devereux RB, Reichek N. Echocardiographic determination of left ventricular mass in man. Anatomic validation of the method. *Circulation* 1977;**55**:613–8.
14. Devereux RB, Dahlöf B, Levy D, *et al.* Comparison of enalapril versus nifedipine to decrease left ventricular hypertrophy in systemic hypertension (the PRESERVE trial). *Am J Cardiol* 1996;**78**:61–5.
15. Casale PN, Devereux RB, Milner M, *et al.* Value of echocardiographic measurement of left ventricular mass in predicting cardiovascular morbid events in hypertensive men. *Ann Intern Med* 1986;**105**:173–8.
16. de Simone G, Devereux RB, Daniels SR, *et al.* Effect of growth on variability of left ventricular mass: assessment of allometric signals in adults and children and their capacity to predict cardiovascular risk. *J Am Coll Cardiol* 1995;**25**:1056–62.

17. Ilercil A, O'Grandy MJ, Roman MJ, *et al.* Reference values for echocardiographic measurements in urban and rural populations of differing ethnicity; the Strong Heart Study. *J Am Soc Echocardiogr* 2001;**14**:601–11.
18. Korner PI, Jennings GL. Assessment of prevalence of left ventricular hypertrophy in hypertension. *J Hypertens* 1998;**16**:715–23.
19. Ganau A, Devereux RB, Roman MJ, *et al.* Patterns of left ventricular hypertrophy and geometric remodeling in essential hypertension. *J Am Coll Cardiol* 1992;**19**:1550–8.
20. Kannel WB, Gordon T, Castelli WP, *et al.* Electrocardiographic left ventricular hypertrophy and risk of coronary heart disease. The Framingham study. *Ann Intern Med* 1970;**72**:813–22.
21. Levy D, Larson MG, Vasan RS, *et al.* The progression from hypertension to congestive heart failure. *JAMA* 1996;**275**:1557–62.
22. Mosterd A, Hoes AW, de Bruyne MC, *et al.* Prevalence of heart failure and left ventricular dysfunction in the general population; The Rotterdam Study. *Eur Heart J* 1999;**20**:447–55.
23. Friehs I, del Nido PJ. Increased susceptibility of hypertrophied hearts to ischemic injury. *Ann Thorac Surg* 2003;**75**:S678–84.
24. Rubulis A, Jensen J, Lundahl G, *et al.* T vector and loop characteristics in coronary artery disease and during acute ischemia. *Heart Rhythm* 2004;**1**:317–25. Erratum in 2004;**1**:529.
25. Sadanaga T, Ogawa S, Okada Y, *et al.* Clinical evaluation of the use-dependent QRS prolongation and the reverse use-dependent QT prolongation of class I and class III antiarrhythmic agents and their value in predicting efficacy. *Am Heart J* 1993;**126**:114–21.
26. Okada Y, Ogawa S, Sadanaga T, *et al.* Assessment of reverse use-dependent blocking actions of class III antiarrhythmic drugs by 24-hour Holter electrocardiography. *J Am Coll Cardiol* 1996;**27**:84–9.
27. Savelieva I, Yap YG, Yi G, *et al.* Relation of ventricular repolarization to cardiac cycle length in normal subjects, hypertrophic cardiomyopathy, and patients with myocardial infarction. *Clin Cardiol* 1999;**22**:649–54.
28. Merri M, Moss AJ, Benhorin J, *et al.* Relation between ventricular repolarization duration and cardiac cycle length during 24-hour Holter recordings. Findings in normal patients and patients with long QT syndrome. *Circulation* 1992;**85**:1816–21.
29. Chevalier P, Burri H, Adeleine P, *et al.* QT dynamicity and sudden death after myocardial infarction: results of a long-term follow-up study. *J Cardiovasc Electrophysiol* 2003;**14**:227–33.
30. Schmieder RE, Schlaich MP, Klingbeil AU, *et al.* Update on reversal of left ventricular hypertrophy in essential hypertension (a meta-analysis of all randomized double-blind studies until December 1996). *Nephrol Dial Transplant* 1998;**13**:564–9.
31. Malmqvist K, Kahan T, Edner M, *et al.* Regression of left ventricular hypertrophy in human hypertension with irbesartan. *J Hypertens* 2001;**19**:1167–76.
32. Dahlöf B, Devereux RB, Kjeldsen SE, *et al.* Cardiovascular morbidity and mortality in the Losartan Intervention For Endpoint reduction in hypertension study (LIFE): a randomised trial against atenolol. *Lancet* 2002;**359**:995–1003.
33. Oikarinen L, Nieminen MS, Toivonen L, *et al.* Relation of QT interval and QT dispersion to regression of echocardiographic and electrocardiographic left ventricular hypertrophy in hypertensive patients: the Losartan Intervention For Endpoint Reduction (LIFE) study. *Am Heart J* 2003;**145**:919–25.
34. Levy D, Salomon M, D'Agostino RB, *et al.* Prognostic implications of baseline electrocardiographic features and their serial changes in subjects with left ventricular hypertrophy. *Circulation* 1994;**90**:1786–93.

35. Gavras I, Gavras H. The antiarrhythmic potential of angiotensin II antagonism: experience with losartan. *Am J Hypertens* 2000;**13**:512–7.
36. De Mello WC. Cardiac arrhythmias: the possible role of the renin-angiotensin system. *J Mol Med* 2001;**79**:103–8.
37. Emdad L, Uzzaman M, Takagishi Y, *et al.* Gap junction remodeling in hypertrophied left ventricles of aortic-banded rats: prevention by angiotensin II type 1 receptor blockade. *J Mol Cell Cardiol* 2001;**33**:219–31.
38. Schwieler JH, Kahan T, Nussberger J, *et al.* Converting enzyme inhibition modulates sympathetic neurotransmission in vivo via multiple mechanisms. *Am J Physiol* 1993;**264**:631–7.
39. Mazzolai L, Pedrazzini T, Nicoud F, *et al.* Increased cardiac angiotensin II levels induce right and left ventricular hypertrophy in normotensive mice. *Hypertension* 2000;**35**:985–91.
40. Varo N, Etayo JC, Zalba G, *et al.* Losartan inhibits the post-transcriptional synthesis of collagen type I and reverses left ventricular fibrosis in spontaneously hypertensive rats. *J Hypertens* 1999;**17**:107–14.
41. Gimelli A, Schneider-Eicke J, Neglia D, *et al.* Homogeneously reduced versus regionally impaired myocardial blood flow in hypertensive patients: two different patterns of myocardial perfusion associated with degree of hypertrophy. *J Am Coll Cardiol* 1998;**31**:366–73.
42. Zabel M, Koller BS, Sachs F, *et al.* Stretch-induced voltage changes in the isolated beating heart: importance of the timing of stretch and implications for stretch-activated ion channels. *Cardiovasc Res* 1996;**32**:120–30.
43. Heidbuchel H. A paradigm shift in treatment for atrial fibrillation: from electrical to structural therapy? (editorial) *Eur Heart J* 2003;**24**:2077–8.