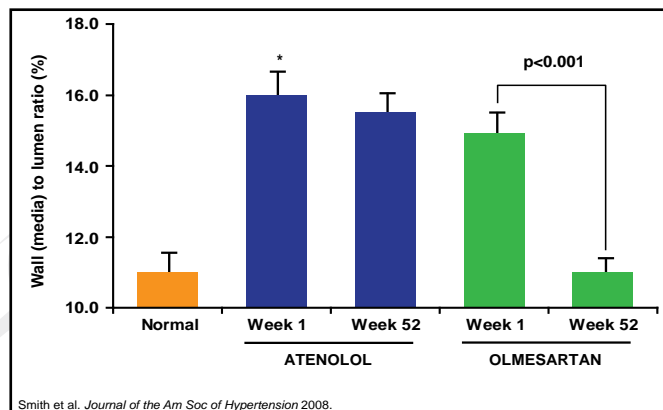


CC-IMT at Weeks 28, 52, and 104. Atenolol was associated with a steady, but nonsignificant, increase in PV compared with baseline at each follow-up evaluation. In contrast, olmesartan significantly reduced PV compared with baseline levels at each time period, including 28 weeks ( $p=0.044$ ), 52 weeks ( $p=0.038$ ), and 104 weeks ( $p=0.014$ ), and significantly reduced PV compared with atenolol at 52 weeks ( $p=0.032$ ) and 104 weeks ( $p=0.023$ ) [Stumpe KO et al. *Ther Adv Cardiovasc Dis* 2007].

**Figure 1. Reversal of Vascular Hypertrophy with Olmesartan Versus Atenolol in Patients with Prehypertension.**



Smith et al. *Journal of the Am Soc of Hypertension* 2008.  
Reproduced with permission from C. Ferrario, MD.

The VIOS and MORE trials reinforce the role of RAAS inhibitors in reducing structural damage in patients with hypertension. New models of the vascular disease continuum, which note the onset of vascular remodeling prior to the development of hypertension, highlight the potential benefits of the RAAS blockade in patients with prehypertension as well.

## ACAOS: An Update on Imaging and Revascularization Techniques

Congenital coronary artery anomalies are rare, with an incidence of about 0.3% to 1.3% of all patients undergoing cardiac angiography. Although many anomalies are asymptomatic and benign, more serious defects can cause significant morbidity and mortality. The structure of the anomalous vessel, particularly its origin and course, often determines patient prognosis.

Anomalous coronary artery originating from the opposite sinus of Valsalva (ACAOS) is an under-recognized anomaly that can cause syncope, MI, and sudden cardiac death (SCD) without appropriate intervention. Howard Bush, MD, Cleveland Clinic Florida, Weston, Florida, USA, described contemporary options for imaging and revascularization in patients with ACAOS.

ACAOS is a defect in which both coronary arteries arise from the same aortic sinus. One subtype of ACAOS occurs when the left coronary artery arises from the right aortic sinus. This form of ACAOS represents approximately 1.3% of all coronary anomalies, and has been reported in 0.017% to 0.03% of the general population undergoing coronary catheterization. Young athletes with this defect have a high risk of SCD either during or immediately after physical exercise. Another type of ACAOS occurs when the right coronary artery (RCA) arises from the left aortic sinus. This is a more common defect that accounts for approximately 8.1% of serious coronary anomalies. Prognosis is very poor, with a 25% incidence of SCD in patients with RCA from the left aortic sinus.

Given the low prevalence of ACAOS, new options for diagnosis and treatment are described primarily in individual case reports. Several recent case reports suggest that advanced imaging techniques may improve the detection of ACAOS. For instance, 64-slice computed tomographic angiography (CTA) complements traditional imaging with coronary arteriography in the assessment of the functional anatomy in patients with ACAOS. Evaluation with CTA allows cardiologists to confirm the anatomical course of the aberrant coronary arteries, as well as their relationship to surrounding cardiac structures. CTA imaging also enhances percutaneous coronary intervention, an emerging treatment for anomalous RCA arising from left sinus. By improving the timely recognition, evaluation, and management of rare coronary anomalies, advanced imaging may contribute to improved outcomes in patients with ACAOS.

**The editors would like to thank the many members of the Caribbean Cardiac Society presenting faculty who generously gave their time to ensure the accuracy and quality of the articles in this publication.**

