



July 25, 2008

Cardiovascular News Update

Dear Colleague,

Westside Medical Associates of Los Angeles (WMALA) in conjunction with Westside Medical Imaging (WMI) would like to provide you with this update on important new developments in cardiovascular care. If you have any suggestions on subjects you would like covered, please let us know.

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Nocturnal onset of MI may be linked to sleep apnea in some patients.

Night-time heart attacks may be associated with the breathing disorder sleep apnea according to a study published in the *Journal of the American College of Cardiology*. Investigators studied the breathing patterns of 92 people admitted to the hospital after an MI and for those who had heart attacks at night, the vast majority had undiagnosed sleep apnea. It is postulated that sleep apnea may be acting as a trigger for night-time MI's.

Combining simvastatin and berberine reduces LDL cholesterol more efficiently than simvastatin alone.

The combination of simvastatin and the novel cholesterol-lowering drug berberine reduces low-density lipoprotein (LDL) cholesterol and triglycerides more efficiently than simvastatin alone according to a study published in the journal *Metabolism: Clinical and Experimental*. Berberine is obtained from the traditional Chinese herb *Coptidis rhizome*. The investigators recruited a group of 63 patients with previously untreated hypercholesterolemia who received 1 g/d of berberine, 20 mg/d simvastatin, or a combination of the two for approximately 60 days. Berberine and simvastatin monotherapy reduced LDL cholesterol by 23.8 percent and 14.3 percent, respectively, with combination therapy showing an improved overall reduction of 31.8 percent. Respective figures for triglyceride reduction were 22.1 percent, 11.4 percent, and 38.9 percent.

Catheter ablation using cryoballoon device may result in sinus rhythm in about three-quarters of patients with paroxysmal atrial fibrillation (AF).

Catheter ablation using a novel cryoballoon device results in sinus rhythm in about three-quarters of patients with paroxysmal AF without the need for rhythm- or rate-control drugs according to a study published in the *Journal of the American College of Cardiology*. Catheter ablation was attempted using a cryoballoon device in 1,360 pulmonary veins in 346 patients with symptomatic, drug-resistant AF. Pulmonary vein diameters were assessed on computed tomography such as the special AF protocols at **Westside Medical Imaging** or magnetic resonance imaging and the 23 or 28 mm balloon was selected accordingly. The investigators found that sinus rhythm was maintained over a median 12 months of follow-up in 74 percent of 293 patients with paroxysmal AF, but just 42 percent of 31 patients with persistent AF. **Please feel free to contact Drs. Lepor, Madyoon and Geft at Westside Medical Associates of Los Angeles regarding our unique CT imaging protocols for AF or Dr. Noori regarding the cryoablation procedure.**

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Vytorin does not reduce aortic stenosis better than placebo.

The SEAS (Simvastatin and Ezetimibe in Aortic Stenosis) trial showed that compared to placebo, Vytorin (ezetimibe and simvastatin) did not reduce valve progression of aortic stenosis. An increase risk of cancer with Vytorin was noted. During this study, Vytorin was tested against a placebo in patients with known aortic stenosis. The chairman of the SEAS study said that the results showed the Zetia-statin combination failed to work against the valve condition, and he recommended that researchers look to strategies other than lowering cholesterol to attack that problem. The finding of an increase incidence of cancers is interesting however there did not seem to be a clustering of these malignancies into a specific type of cancer which one would expect if a true cause and effect were present. We await the final publication of this clinical trial and further evaluation of the clinical data.

Patients with CKD, ESRD may be less likely to receive certain drugs following MI.

Patients with end-stage renal disease (ESRD) and those with chronic kidney disease (CKD) are less likely to receive certain recommended medications after a myocardial infarction (MI) than other patients according to a study published in the *Clinical Journal of the American Society of Nephrology*. Investigators retrospectively analyzed medication use for 21,484 patients discharged after MI between 1995 and 2004. Participants with CKD had similar rates of beta-blocker and statin use to those without CKD but 22 percent lower use of ACE inhibitors or ARBs, after multivariable adjustment. Meanwhile, ESRD patients had even lower use of ACE inhibitors or ARBs, at 43 percent lower than patients without a CKD diagnosis. They also had 17 percent lower use of statins than those without CKD. This may explain at least in part the reason these patients have poorer CV outcomes.

Ratio of two serum apolipoproteins may be better predictor of MI than cholesterol-based markers.

The ratio of two serum apolipoproteins is a better and more convenient predictor of myocardial infarction than any cholesterol-based marker, and should become the global standard for assessing heart attack risk according to a study published in *The Lancet*. Investigators analyzed data from the INTERHEART study which compared 12,461 people in 52 countries who suffered first heart attacks with 14,637 age-matched healthy controls. The investigators found that the ratio of apoB to apoA1 had a population-attributable risk for myocardial infarction of 54 percent (95 percent CI 50.6 percent to 57.4 percent). The researchers said that the total cholesterol-to-HDL cholesterol ratio had a risk of 31.9 percent. The investigators also found that the apoB/A1 ratio also showed a higher odds ratio, 1.59, for each standard deviation of change for myocardial infarction for the entire sample than any cholesterol-based indicator.

MRI contrast agent allows in vivo imaging of carotid artery thrombi, atherosclerotic plaques.

New magnetic resonance imaging (MRI) contrast agent which uses antibodies against the platelet fibrinogen receptor activated glycoprotein (GP)IIb/IIIa allows *in vivo* imaging of carotid artery thrombi and atherosclerotic plaques. During the study, published in *Circulation*, investigators examined mice with induced non-occlusive mural thrombi using MRI before administration of the agent, and in repeat sequences at 12-minute intervals after treatment. According to researchers, the noninvasive imaging technique allows for the detection and quantification of thrombi and can be used to monitor the success or failure of thrombolytic therapy. It consists of 1- μ m microparticles of iron oxide (MPIO), and a single-chain antibody targeting ligand-induced binding sites (LIBS) on the activated GP IIb/IIIa. **Westside Medical Imaging will be a site for advanced carotid artery MR imaging.**

Some cardiac procedures becoming more common in very old patients.

Procedures such as valve replacement, bypass surgery and pacemaker implantation are now increasingly commonplace in patients in their 90's. Some physicians say successful surgery for centenarians may be a new frontier in medicine. Others say that such aggressive treatment for what are euphemistically known as the late elderly can be wasteful and barbaric, warning that the rush to test the limits of technology can give patients false hope and compound their health challenges with surgical complications.

Low-carbohydrate diet may offer more cardiovascular benefits than low-fat diet.

Overweight people on low-carbohydrate and Mediterranean diets lost more weight and got greater cardiovascular benefits than people on a conventional low-fat diet according to a study published in the *New England Journal of Medicine*. Researchers followed 322 people for two years and found that a low-carb diet was better than a low-fat diet in boosting blood levels of HDL cholesterol. Meanwhile, the researchers found that the Mediterranean diet, which includes wine, olive oil, whole grains and fruits, was better than the low-fat diet in controlling glucose levels.

Westside Medical Associates of Los Angeles (WMALA) and Westside Medical Imaging (WMI) are premier centers in cardiac diagnosis and treatment.

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