

AU InforMed

Volume 5 Number 3 (Issue 138)

Wednesday, January 31, 2007

Guest Editors: Matt Sega, PharmD Candidate, Perry Jones, PharmD Candidate, Wesley T. Lindsey, Pharm.D.

February is National Heart Month!



A Focus on Cardiovascular Disease

FROM THE MEDICAL LITERATURE ...

We're Not Gonna Take It! Though clinical trials can demonstrate how drugs may decrease mortality, less is known about the impact they make in the “real world” due to such things as variations in compliance.^{1,2} A recent study published in the *Journal of the American Medical Association (JAMA)* examined the relationship between drug adherence and mortality in elderly heart attack survivors. Patient compliance was categorized as being high, medium or low. Survival following acute myocardial infarction (AMI) was found to be directly proportional to compliance with beta-blockers and statins³. Not surprisingly the low adherence group displayed the greatest risk of mortality (25% greater than the high adherence group). The intermediate adherence group also showed an increased risk of mortality (12% greater than the high adherence group). There were also differences noted between the drugs; the statins have a slight edge in survival over beta-blockers. This suggests that decreased mortality is not simply a function of adherence, but is also related to the drug-class³.



1. Osterberg L, Blaschke T. Adherence to medication. *N Engl J Med*. 2005;353: 487-497.
2. Simpson SH, Eurick DT, Majumdar SR, et al. A meta-analysis of the association between adherence to drug therapy and mortality. *BMJ*. 2006;333:15.
3. Rasmussen J, Chong A, Alter DA. Relationship between adherence to Evidence-Based pharmacotherapy and Long-term Mortality After Acute Myocardial Infarction. *JAMA*. 2007; 297(2):177-186.

Is it really that many? Researchers report that the prevalence of congenital heart disease (CHD) in Quebec, Canada took a huge jump between 1985 and 2000, with a relative increase of 85% in



adults and 22% in children. One possible explanation for this trend is changing birth prevalence rates with respect to maternal age. More likely would be the advent of cardiac ultrasound, making it easier to detect less severe CHD. The prevalence rate of CHD showed a significantly greater increase in adults than children over the 15 year study period. The study reports that despite the increasing prevalence of CHD, the number of medical resources needed to treat it have largely stayed the same. The authors also assert that “there is no reason to believe that the predominantly Caucasian population of Quebec and

Canada is different from the United States.” If these assertions are correct, it would appear that more specialized healthcare resources may be needed to handle the increased rate of CHD in the future. With an observance for CHD coming up in February, it’s an ideal time to consider the topic! Marelli AJ, Mackie AS, Ionescu-Ittu R, Rahme E, Pilote L. Congenital Heart Disease in the General Population: Changing Prevalence and Age Distribution. *Circulation*. 2007;115(2):163-72.

You want me to take WHAT?! Angiotensin converting enzyme (ACE) inhibitors, aspirin, beta-blockers, statins and calcium channel blockers all have a wealth of evidence supporting their effectiveness in both primary and secondary prevention of cardiovascular disease (CVD). Despite this evidence, they are not used optimally, largely due to compliance problems with multi-drug therapy regimens. As a solution, some practitioners have advocated the use of a “**polypill**” – a single pill containing several key drugs for reducing cardiovascular risk. It has been suggested that a pill containing aspirin, an ACE inhibitor, and a statin can be easily customized for either primary or secondary prophylaxis. Current treatment guidelines recommend the use of multiple drugs for secondary prevention of CVD, but in the case of primary prophylaxis, the value of such a “polypill” would have to be clearly demonstrated. The World Heart Federation has agreed to support the development of a polypill containing an ACE inhibitor, aspirin, and a statin. However, only clinical trials will tell us if a polypill is really the answer we seek, or merely false hope. Reddy KS. The Preventive Polypill – Much Promise, Insufficient Evidence. *N Engl J Med*. 2007;356(3):212.



SPECIAL EVENT ...



That’s a lot of red! Did you know that **February 2nd is Go Red for Women Day**? Heart disease is the number one killer of women, and many are unaware. Heart disease is also largely preventable with simple lifestyle changes. Wearing **red** is a simple way to raise awareness while being fashionable at the same time! Wearing **red** can also help spread the American Heart Association’s message of “Love Your Heart”. Once you realize the power of your life that stems from your heartbeat you’ll be ready to make a promise to yourself to exercise and eat smart.

So get the **red** out in your wardrobe and start spreading the word!

Some statistics:

- Only 13 % of women view heart disease as a health threat, even though it is the #1 killer of women over age 25.
- Cardiovascular disease (CVD) kills over 480,000 women a year. That’s almost one per minute.
- 64% of women who died suddenly of coronary heart disease had no previous symptoms.

American Heart Association [Homepage on the internet]. c2006 [cited 2007 Jan 25]. Available from: <http://www.goredforwomen.org/index.html>

FROM THE LAY LITERATURE...

Save your heart! An interview with Dr. Arthur Agatston, the creator of the “South Beach Diet” reveals his opinions on the current state of heart disease in America. He believes that we as a country, are focused too much on treating heart disease rather than preventing it. Current technology, such as computed



tomography angiography scans, can help prevent the nearly 1 million heart attacks that occur each year. However, not enough people have the test done until they're already experiencing chest pain. Dr. Agatston says that the trick is having these tests done before symptoms occur. You can read more about prevention vs. treatment in The South Beach Heart Program. Time Magazine [Homepage on the internet]. Tampa (FL): Time; c2007 [cited 2007 Jan 28]. Available from: <http://www.time.com/time/magazine/article/0,9171,1576846-1,00.html>.



Be Sweet... Be sure and give your sweetie some chocolate this Valentines' Day! A recent study suggests that the flavonoids present in chocolate (especially dark chocolate) can have an anti-oxidant effect. This can effectively lower LDL cholesterol, which translates into good news for your heart health. Not only this, but flavonoid-rich chocolate bars may also have a beneficial effect on hypertension. Of course, one must be careful of the high fat content in chocolate, but in moderation chocolate does a heart good!

American Heart Association [Homepage on the internet]. c2006 [cited 2007 Jan 25]. Available from: <http://www.americanheart.org/presenter.jhtml?identifier=3032114>



ABERRANCIES

- **An Ounce of Prevention...** The American Heart Association has a quiz to determine your risk of developing heart disease, and what steps you can take to reduce that risk. Visit <http://www.americanheart.org/presenter.jhtml?identifier=3019149> if you're interested in learning more.
- **Time to Go Shopping!** Ever wonder what foods are heart-healthy? The American Heart Association can help you get your grocery shopping started with a list of foods that will keep your heart in tip-top shape. Check out <http://checkmark.heart.org> and get your grocery list started today!
- **Did you know?** The Mediterranean eating style significantly reduces the risk of further heart disease in individuals who have already had a heart attack. Surprisingly, this benefit is not related to any significant difference in cholesterol levels. Other components of the diet seem to work in concert to protect the body:

- Eating a generous amount of fruits and vegetables
- Consuming healthy fats such as olive oil and canola oil
- Eating small portions of nuts
- Drinking red wine, in moderation, for some
- Consuming very little red meat
- Eating fish on a regular basis



The Mayo Clinic [Homepage on the internet]. c1998-2007 [cited 2007 Jan 25]. Available from: <http://www.mayoclinic.com/health/mediterranean-diet/CL00011>.

- **I Don't Wanna Grow Up...** We all know how hard it is to motivate ourselves to exercise, despite the fact that it's a proven way to shed unwanted pounds and reduce the risk of cardiovascular disease. But did you know that it gets even harder to drop those pounds the older you get? Reasons for this include a decrease in the body's basal metabolic rate (BMR), a decrease in physical activity. However, a few simple lifestyle changes can help you keep the pounds off and reduce your risk of cardiovascular disease as well:



- Plan to do 30 minutes of exercise each day. Make it a habit.
- Combine cardiovascular exercise with strength training. The extra muscle mass you build will burn more calories than fat.
- Eat balanced meals to control hunger. In combination with daily exercise, this will keep your weight down and add years to your life.

Cable News Network [Homepage on the internet]. c2007 [cited 2007 Jan 29]. Available from: <http://www.cnn.com/2007/HEALTH/diet.fitness/01/17/BK.losing.after.forty/index.html>.

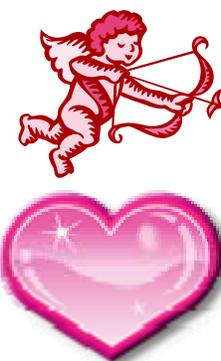
References of Note:

- Brutsaert DL. Does digoxin therapy affect outcome in patients with diastolic heart failure?. *Nat Clin Pract Cardiovasc Med*. 2007 Feb; 4(2):70-1.
- Plebani M. Natriuretic peptides. The hormones of the heart. *Clin Chem Lab Med*. 2007 Jan; 45(1):126.
- Elwood P. The first randomized trial of aspirin for heart attack and the advent of systematic overviews of trials. *J R Soc Med*. 2006 Nov; 99(11):586-8.
- Slordall L, Spigset O. Heart failure induced by non-cardiac drugs. *Drug Safety*. 2006;29(7):567-86.
- DuBard CA, Garrett J, Gizlice Z. Effect of language on heart attack and stroke awareness among US Hispanics. *American Journal of Preventive Medicine*. 2006 March;30(3):189-196.
- Bazzano LA, Reynolds K, Holder KN, He J. Effect of folic acid supplementation on risk of cardiovascular diseases: a meta-analysis of randomized controlled trials. *JAMA*. 2006;296(22):2720-26.



February Monthly celebrations and Observances:

- National Black History Month
- National Caffeine Awareness Month
- Wise Healthcare Consumer Month
- Plant the Seeds of Greatness Month
- Valentine's Day (February 14)
- President's Day (February 19)
- National Condom week (February 14-21)



The last "dose" ...

"All the same,' said the Scarecrow, 'I shall ask for brains instead of a heart; for a fool would not know what to do with a heart if he had one.'"

-L. Frank Baum, *The Wonderful Wizard of Oz*

An electronic bulletin of drug and health-related news highlights, a service of ...

Auburn University, Harrison School of Pharmacy, Drug Information Center

• Phone 334-844-4400 • Fax 334-844-8366 • <http://www.pharmacy.auburn.edu/dilrc/dilrc.htm>

Bernie R. Olin, Pharm.D., Director