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Women and Heart Disease Make Headlines Around the World *Progress in some areas, setbacks in others dominate research findings*

At the American College of Cardiology's (ACC) 59th Annual Scientific Session in Atlanta in March, two different presentations clearly showed the complexity of women's heart disease and its treatment. The first, a study undertaken in France, highlighted serious gender differences in treatment which contributed to a higher death rate among women, while the second study, conducted in Boston, offered what appears to be a reversal of traditional gender bias.

The French study looked at over 3000 patients, of whom 32% were women, who were treated for heart attacks over a two-year period between 2006 and 2007. By examining the raw data, researchers found that the women were, on average, nine years older than their male counterparts, were in poorer health, had been less effectively treated for heart attack, and were almost twice as likely as men to die as a result, either in the hospital and during the month following their heart attack. The scientists then compared the male and female patients to create matched pairs based on baseline characteristics; when they followed the treatment of the man and woman in each pair, the researchers found clear differences in treatment despite highly similar clinical characteristics. Analysis of the data showed that men were 72% more likely to receive clot-busting drugs than women and 24% more likely to have angioplasty to reopen a blocked artery. The male patients were also 57% more likely to receive an angiogram, a process in which dye is injected into the arteries of the heart so that doctors can identify blockages through X-ray imaging. Overall, the death rate among men was 48% lower during the hospital stay.

The second study offered a potentially more hopeful outlook. Undertaken at Boston's Brigham and Women's Hospital, researchers were surprised to find a definite shift in traditional clinical practices when they looked at over 1700 patients (891 women, 812 men) over a 90-day period and found that female patients were twice as likely as men to be referred for cardiac catheterization. Cardiac catheterization is a process used to diagnose blockages in coronary arteries after cardiac testing. "It seems that the pendulum has swung in the opposite direction and, at this time, men appear to be treated at a lower frequency than women with respect to referral to cardiac catheterization after noninvasive cardiovascular imaging tests," said Marcelo Di Carli, M.D., the study's lead investigator and director of the Noninvasive Cardiovascular Imaging Program at Brigham and Women's Hospital. The researchers believe that increased public awareness campaigns in the medical community regarding women's heart disease and gender bias in medical testing may have contributed to this surprising reversal.

Some cardiologists caution, however, that more does not necessarily mean better, at

least regarding angiograms and other invasive diagnostic techniques. *The New England Journal of Medicine* published a study just a week before the ACC conference which suggests that cardiac catheterizations do not always provide a definitive diagnosis of a cardiac obstruction.

Other recent studies continue to offer both insights and concerns regarding women's heart disease. One study, authored by Lori Mosca, M.D., director of preventive cardiology at New York Presbyterian Hospital, showed certain improvements in women's awareness of their risk of heart disease, but also clearly discovered serious disparities, particularly among race. About 60% of white women knew that heart disease was the leading cause of death among women, compared to 43% of African-Americans, 44% of Hispanics, and 34% of Asians. While there was a doubling of the number of women who knew that heart disease was the number one killer of women, half of all women still do not know the signs and symptoms of a heart attack — and, more troubling, nearly half of women surveyed said they still would not call 911 when they were having those symptoms, but would instead choose to take an aspirin or call their doctor, a potentially life-threatening delay.

Finally, the results of a long-awaited study on the gender differences in statin effectiveness were published in the February issue of *Circulation*. Known as the Jupiter Trial, this industry-funded study looked at over 6800 women and the impact of the popular cholesterol-lowering drug Crestor on their heart health. The results of the study appear to show that participants who took 20 mg of Crestor for 1.9 years saw a 46% reduction in cardiovascular events. Critics of the study point out that men in the study appeared to have a much lower risk of heart attack and stroke as a result of taking Crestor, whereas women had a higher risk of developing diabetes while on the same drug.

You can read more about these studies here:

Invasive heart treatment of women could cut their mortality risk

<http://www.themoneytimes.com/featured/20100317/invasive-heart-treatment-women-could-cut-their-mortality-risk-id-10104112.html>

Women now more apt to be referred to the cath lab

<http://www.qualityhealth.com/news/women-now-more-apt-referred-cath-lab-18417>

Heart Disease Prevention: Mistakes Women Make

<http://www.usnews.com/health/blogs/on-women/2010/02/10/heart-disease-prevention-mistakes-women-make>

Do Statins Work Equally for Men and Women?

<http://www.time.com/time/magazine/article/0,9171,1973295-1,00.html>

Noninvasive testing adds little to risk-factor screening for predicting obstructive CAD

<http://www.theheart.org/article/1054105.do>