Medical Xpress

Women with chest pain less likely then men to get proper treatment from paramedics

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Women with chest pain are less likely than male patients to receive recommended, proven therapies while en route to the hospital, according to new research from the University of Pennsylvania School of Medicine. Despite evidence showing that the drugs aspirin and nitroglycerin are important early interventions for people who may be having a heart attack, women don't get them as often as male patients with the same types of symptoms, says a new study that will be presented Friday, May 15, 2009 at the Society for Academic Emergency Medicine's annual conference.

While the researchers found no differences in the types of care given by emergency medical service (EMS) providers to African-American and white patients, they are troubled by the evidence that women may be receiving sub-optimal care, and say it highlights the need for pre-hospital providers to be sensitive to the fact that women may have atypical symptoms. Since chest pain is a leading cause of emergency room visits in the United States, accounting for more than 8 million visits a year, the implications of the findings are broad.

"Women with heart attacks have higher death rates than men, so these findings are very concerning, and it's important for us to try to figure out why this is happening," says lead author Zachary Mesiel, MD, MPH, an emergency physician and Robert Wood Johnson Foundation Clinical Scholar and Senior Fellow at the Leonard Davis Institute of Health Economics at Penn.

Heart attack damage takes place gradually, as portions of the heart muscle are deprived of oxygen over several hours. Early interventions like aspirin therapy -- which reduces clotting around the ruptured coronary plaques that grow to block blood flow to the heart -- play an important role in preventing damage to this cardiac tissue. Recent national efforts underscore the maxim that in treatment of heart attacks, "time is muscle." Many EMS organizations, for instance, have outfitted ambulances with cardiac monitoring equipment that can send information about a patient's heart rhythm ahead to the hospital so the cardiac catheterization lab can be alerted to prepare for a patient who will need prompt treatment to open their blocked arteries. Initiatives like these have helped hospitals to reduce their so-called "door-to-balloon time," which describes the minutes between when the patient arrives at the hospital and is sent to the cardiac cath lab. The time patients spend being cared for by EMS personnel in the field or in an ambulance is also a vital part of that chain of care, so Meisel and his colleagues say emergency responders should strive to implement best practices for all chest pain patients.

The new Penn study examined 683 cases in 2006 and 2007 in which EMS was summoned for a complaint of chest pain and brought patients to one of three Philadelphia hospitals in the University of Pennsylvania Health System. The authors examined the frequency with each patients received four key EMS treatment and monitoring protocols which are called for in for chest pain patients over the age of 30. The measures included whether patients got aspirin and nitroglycerin, which relieves cardiac pain, and whether they received heart rhythm monitoring or had IV lines placed to begin medication delivery. Results showed that women were significantly less likely than men to receive aspirin while in the care of EMS - 24 percent of them were given the drug, compared to 32 percent of men. Twenty-six percent of women got nitroglycerin, compared to 33 percent of men, and 61 percent of women had an IV line placed, compared to 70 percent of men. Women who ultimately were

found to be having a heart attack upon arrival the emergency department were also significantly less likely to have received those treatments and interventions while being transported by EMS - in fact, none of them received pre-hospital aspirin. Even after the researchers adjusted for the possibility that age, race, and baseline medical risk could have played a role in these apparent disparities, the gender gaps in adherence to care protocols still remained. The gender of the medic involved in the case also did not appear to change the findings.

Previous studies have revealed gender disparities in diagnosis and treatment of chest pain and cardiac conditions in both inpatient and outpatient settings, partially because women's heart problems often present in uncommon ways that may be attributed to other, less severe illnesses or injuries. These same differences in symptoms could also account for the differences seen in the new study.

"I suspect some of the treatment differences between men and women may be related to differences is the way the chest pain symptoms are interpreted, both by the providers and by the patients themselves," Meisel says. "So if you are a patient, it's important to be direct and clear about your symptoms to all your medical providers -- even if it feels like you are telling the same story over and over again."

Source: University of Pennsylvania School of Medicine (news : web)