High Blood Pressure Medicines Show Promise for Treating Heart Disease

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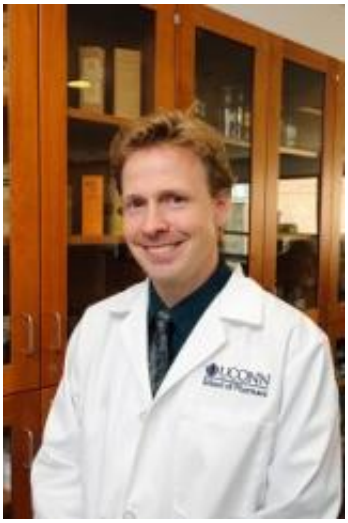

C. Michael White, professor of pharmacy practice. Photo by Peter Morenus

(PhysOrg.com) -- Two medications commonly used to treat high blood pressure appear to be effective in treating one of the most common and potentially deadly forms of heart disease, according to a report by UConn scientists.

Treatment featuring the two medications - angiotensin-converting enzyme inhibitors, or ACE inhibitors, and angiotensin receptor blockers, or ARBs - can lead to a reduction in risk of death, risk of heart attack, and risk of stroke, and fewer hospitalizations for heart failure for patients suffering from stable ischemic heart disease, the researchers say

in an article published this month in *Annals of Internal Medicine*.

However, the drugs have risks of their own. Risks associated with ACE inhibitors include a persistent cough, sudden fainting, too much potassium in the blood, and dangerously low blood pressure (hypotension). Risks associated with ARBs include too much potassium in the blood and low blood pressure.
Center director C. Michael White, a professor of pharmacy practice at UConn, says people with stable ischemic heart disease may not need to take both medications to achieve the most beneficial results.

“People with advanced coronary artery disease benefit from adding ACE inhibitor or ARB therapy to the standard drugs they are already taking,” White says. “However, we found there are no additional benefits and an increased risk of side effects to taking both drugs together.”

White was joined in the research by Craig Coleman, an associate professor of pharmacy practice at UConn and the Center’s co-director, and William Baker, a senior research scientist and an assistant professor of pharmacy practice at the University. The study, a comparative effectiveness review of recent research, was funded by the U.S. Department of Health and Human Services’ Agency for Healthcare Research and Quality (AHRQ).

“Stable ischemic heart disease is a major cause of death in the United States, so these findings are very encouraging,” says AHRQ Director Carolyn M. Clancy. “This comparative effectiveness report will be a useful tool for patients to help them work with their clinicians to make choices on treatment.”

Stable ischemic heart disease occurs when the flow of oxygen-rich blood to the heart is reduced because of narrowed or blocked arteries. Symptoms of stable ischemic heart disease include decreased tolerance

of exercise, and severe chest pain on exertion (known as angina), which afflicts about 9 million U.S. adults. Long-term risks of stable ischemic heart disease include heart failure and heart attack. Overall, heart disease is among the nation's most common and deadly illnesses, afflicting nearly 80 million Americans and killing nearly 2,400 every day.

Standard treatment for stable ischemic heart disease consists of a modification of diet, exercise, and medications including aspirin, anti-cholesterol drugs, nitroglycerin, and beta blockers. These can keep the disease from worsening. However, while standard treatment usually alleviates chest pains, it is not universally successful in reducing risk of heart failure or heart attack.

For patients with advanced stable ischemic heart disease, treatment can include heart surgery or angioplasty (a procedure in which a catheter is used to inflate a balloon inside the plaque-narrowed artery).

ACE inhibitors and ARBs, commonly prescribed to combat high blood pressure, also are used for treatment of a heart attack and chronic heart failure. ARBs, first approved for use in the United States in the mid-1990s, often are prescribed when a patient has adverse effects to ACE inhibitors, but ACE inhibitors are used more commonly.

UConn researchers found that patients with stable ischemic heart disease who take an ACE inhibitor in addition to standard treatment can reduce the likelihood of several negative outcomes, including death from heart attack or heart failure, non-fatal heart attacks, hospitalization for heart failure, and revascularization (surgeries that reroute blood to the heart). Patients who take an ARB in addition to standard medications can reduce their risk of death from a heart-related cause, heart attack or stroke.

"Both types of drugs reduce blood pressure, help maintain potassium

levels in the blood, and help the heart remodel better after being damaged by a heart attack," says Baker. "ACE inhibitors prevent angiotensin II from being made, while ARBs block angiotensin II from having their deleterious effects on the body."

While some patients and clinicians pursue a course of treatment using both ACE inhibitors and ARBs, the researchers found that combined treatment does not show any benefit over an ACE inhibitor alone, and that risks include fainting, diarrhea, low blood pressure, and kidney problems.

"In some diseases, like heart failure and diabetic kidney disease, using an ACE inhibitor and ARB together is better than either drug alone," says White, a University Teaching Fellow and Fellow of the American College of Clinical Pharmacists and American College of Clinical Pharmacologists. "However, that is not the case here. We found no additional benefits from using two of them versus only one of them, while there is an increased risk of side effects."
The researchers found that existing studies provide little data on the medications' benefits or harms in specific populations such as people of different genders, ethnicity, diabetic status, or those who have or don't have high blood pressure.

More information: The Annals of Internal Medicine report can be found at: Comparative Effectiveness of Angiotensin-Converting Enzyme Inhibitors or Angiotension II-Receptor Blockers for Ischemic Heart Disease.

Provided by University of Connecticut (news : web)