

Researchers find comparable long-term outcomes between diastolic and systolic heart failure patients

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A new study by researchers at Boston University School of Medicine (BUSM) and Boston Medical Center (BMC) found comparable long-term outcomes between congestive heart failure patients with preserved ejection fraction commonly known as "diastolic heart failure" and congestive heart failure with reduced ejection fraction also known as "systolic heart failure." The findings are published online in *The American Journal of Cardiology*.

Patients with normal percentage of blood leaving the heart each time it contracts and symptoms of [heart failure](#) are considered to have diastolic heart failure. Diastolic heart failure patients have not been as well studied as patients with [systolic heart failure](#). Systolic heart failure patients have impaired blood ejection with each contraction of the heart, and do not derive long term benefit from the same medications.

According to the researchers, heart failure affects six million people in the U.S. alone and half of those admissions are patients with diastolic heart failure. However, there are not yet any treatments for this condition. In addition, the number of people who will develop diastolic heart failure is expected to rise as the population ages and the incidence of obesity and hypertension increases.

"An incredible amount of expensive and time-consuming resources are being spent on reducing readmissions at a national level, but have not

translated into a reduction in heart failure mortality," said senior author Flora Sam, MD, associate professor of cardiovascular medicine at the Whitaker Cardiovascular Institute at BUSM and attending physician of cardiovascular medicine and heart failure at BMC.

The researchers gathered patient data from all heart failure admissions over a two-year period at BMC. Using the American Heart Association's Get-With-the-Guidelines quality improvement program, patients were reviewed for co-morbid conditions including kidney function, blood counts, and blood tests such as brain natriuretic peptide (BNP), a marker of heart failure.

The findings showed that in comparison to those with systolic heart failure, diastolic heart failure patients were older, more likely to be overweight, female and have hypertension. The one-year outcome of in-hospital morbidity and mortality was similar between diastolic and systolic heart failure patients. Though the early readmission rate in the 30 days after discharge was initially lower in patients with diastolic heart failure, this soon increased such that it was similar to those with systolic heart failure.

"This study shows the importance of refocusing our attention and resources on medication trials, which have historically reduced adverse long-term outcomes in [chronic heart failure](#) patients. Exploring medicinal treatment options for diastolic [heart failure patients](#) could potentially reduce readmissions, morbidity, mortality and long-term healthcare costs," said Sam.

Provided by Boston University Medical Center

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