

Obesity Paradox Deemed Irrefutable In Patients With Acute Heart Failure

BY BRUCE JANCIN
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DALLAS — The obesity paradox previously described in patients with chronic systolic heart failure has, for the first time, been shown to be strikingly evident in acute heart failure as well, Dr. Gregg C. Fonarow said at the annual scientific sessions of the American Heart Association.

An analysis of 108,927 hospitalizations recorded in the Acute Decompensated Heart Failure Registry (ADHERE) showed that in-hospital mortality decreased in near-linear fashion with increasing body mass index (BMI) quartile.

The same drop in in-hospital mortality seen in heavier ADHERE participants who had reduced systolic function was also seen in those with preserved systolic function, added Dr. Fonarow, professor of medicine at the University of California, Los Angeles, and director of the Ahmanson-UCLA Cardiomyopathy Center.

The paradox lies in the fact that obesity is a well recognized independent cardiovascular risk factor in the general population, yet in the setting of chronic or acute heart failure, it is somehow protective.

The bottom line is that the paradox in acute heart failure is a real phenomenon. "Given the huge number of hospital episodes we're looking at here, the results are irrefutable," Dr. Fonarow said.

The obesity paradox has potentially enormous clinical implications for the management of acute decompensated heart failure, which is the primary or secondary diagnosis in 3 million hospitalizations annually in the United States. The next step in the research is to provide acute nutritional support when normal-weight or underweight patients—those with, say, a BMI below 27 kg/m²—present at the hospital in acute heart failure, and then to study whether their short-term mortality is reduced as a consequence.

"The broad implication is that this represents half of all acute heart failure hospitalizations," Dr. Fonarow said in an interview.

"We're seriously thinking of doing some pilot studies looking at whether we can improve measures of cardiac function and nutritional status in these patients through acute nutritional support—and if that looks promising, to go forward with an interventional trial," he said.

Only through such studies will physicians learn whether obesity is causative of reduced mortality in acute heart failure patients or whether it is merely a marker for lower risk. It is worth noting, though, that even after adjustment for known predictors of in-hospital mortality in acute heart failure—including age, gender, blood urea nitrogen, creatinine, blood pressure, and dyspnea at rest—patients in the lowest BMI quartile had a highly significant 46% greater in-hospital mortality than did those in the top quartile, who had a BMI of at least 33.4.

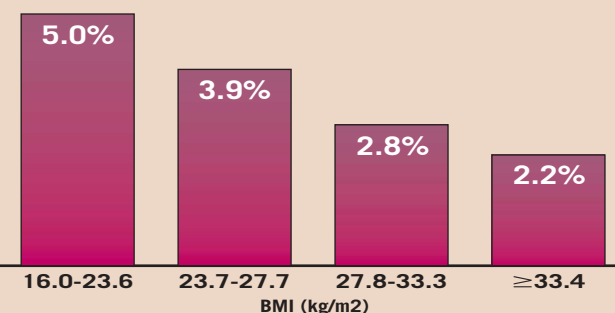
The same held true when patients were grouped by World Health Organization BMI category rather than by quartile. Un-

derweight patients—those with a BMI less than 18.5—had an in-hospital mortality of 6.3%. The rate was 4.6% in normal-weight patients (BMI 18.5-24.9), 3.4% in overweight patients (BMI 25.0-29.9), and 2.4% in obese patients. The obesity paradox in acute heart failure cannot be explained merely as

a reflection of cachectic patients being unable to handle the stress of acute illness. After all, in-hospital mortality was increased even in normal-weight patients, compared with those who were overweight or obese, Dr. Fonarow said.

ADHERE is funded by Scios Inc. ■

In-Hospital Mortality by BMI in ADHERE



Note: Based on data from 108,927 patients hospitalized with acute decompensated heart failure.
Source: Dr. Fonarow

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