

Implantable monitor may help in managing diastolic heart failure

11 December 2008

An implantable hemodynamic monitor (IHM) may help to guide medical treatment in a large subgroup of patients with heart failure—those with diastolic heart failure (DHF), reports a study in the December *Journal of Cardiac Failure* (<http://www.onlinejcf.com/>), published by Elsevier.

Led by Michael R. Zile, M.D., of Medical University of South Carolina, Charleston, the researchers analyzed data on DHF patients enrolled in a larger randomized trial evaluating the IHM for heart failure. The IHM is a surgically implanted device that continuously records data on heart function and other key variables. The data can then be downloaded for analysis by health care professionals, who can use it to make adjustments in medical therapy. The goal is to avoid sudden drops in heart function, called acute decompensation.

The main "COMPASS-HF" study included 274 patients with all types of heart failure. The original results showed that the risk of heart failure events was reduced by about 20 percent in patients treated with the IHM, although the difference was not statistically significant.

The new analysis focused on the subgroup of patients with DHF. In DHF, the heart still has normal pumping function (ejection fraction), but no longer relaxes sufficiently to fill with blood normally. In the COMPASS-HF study, 70 patients with DHF were randomly assigned to receive the IHM, while the rest were managed without the IHM.

As in the main study, DHF patients who received the IHM device had a 20 percent reduction in heart failure events, although the difference was not significant. A 29 percent reduction in the risk of hospitalization for heart failure was also nonsignificant.

The IHM did lead to some significant changes in patient management, including more frequent

adjustments in the dose of diuretics—a key part of treatment for heart failure. As in the larger study, the IHM device was safe in DHF patients, with a low complication rate.

Patients with chronic heart failure need careful medical management to avoid episodes of acute decompensation. Few studies have focused on patients with DHF, even though they account for about half of all patients with heart failure.

Based on the new analysis, there is as yet no evidence that using the IHM device to guide treatment reduces the risk of decompensation and heart failure events in patients with DHF. The IHM does appear safe for patients with heart failure, with a very low risk of complications. In addition, DHF patients receiving the IHM device show a trend toward lower rates of heart failure events, including hospitalization related to heart failure.

"This is very important study and the trends make sense," comments Barry M. Massie, M.D., Editor-in-Chief of *Journal of Cardiac Failure*. "Worsening of HF leading to hospitalization, usually as a result of pulmonary congestion and rising blood pressure, is often more abrupt in patients with preserved ejection fraction. Hemodynamic monitoring may provide an early clue and facilitate relatively simple and effective interventions."

Source: Elsevier

APA citation: Implantable monitor may help in managing diastolic heart failure (2008, December 11) retrieved 5 May 2021 from <https://medicalxpress.com/news/2008-12-implantable-diastolic-heart-failure.html>

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