All water pills not equally effective against heart failure

Yale UniversityYale University

Loop diuretics, more commonly known as water pills, are the most widely prescribed heart failure medications, but few studies had extensively compared their effectiveness until Yale School of Medicine researchers examined three approved loop diuretics and found that even though one of them might offer more benefit, it is rarely prescribed.

Published in the April 1 early edition of the Journal of the American College of Cardiology, the research compared the potential benefits of using one of three loop diuretics: toresemide, furosemide, and bumetanide.

“Loop diuretics are a cornerstone of heart failure treatment, so it is vital to understand the comparative effectiveness and real-world use of the drugs within this class,” said lead author Dr. Behnood Bikdeli [1], postdoctoral associate in cardiovascular medicine at the Yale Center for Outcomes Research and Evaluation [2] (CORE).

With over 5 million Americans suffering from heart failure, Bikdeli said that improving existing treatment options is key to providing the best care.

The team found that among 274,515 hospitalizations for heart failure during 2009 and 2010 across a large group of U.S. hospitals, 92% received loop diuretics during their hospital stay. Of those, 87% received furosemide as their only loop diuretic, 3% received bumetanide, and only 0.4% received torsemide, while 10% received a combination of these agents.

Although torsemide is slightly more expensive, the few available studies suggest that it lasts longer, is better tolerated, and might be associated with better clinical outcomes compared with the two other available water pills.

“There appears to be potential benefits from using torsemide compared with furosemide, but it is rarely used in practice,” said Bikdeli. “Furosemide is the dominantly used loop diuretic in practice; however, if the potential advantages of torsemide over furosemide are proven in subsequent comparative effectiveness studies, this drug might become the preferred treatment of chronic heart failure.”

Other authors on the study include Kelly Strait, Kumar Dharmarajan, Chohreh Partovian, Steven Coca, Nancy Kim, Shu-Xia Li, Jeffrey Testani, Usman Khan, and Harlan Krumholz.

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