

More hospitalizations, deaths for US heart failure patients in winter

March 8 2017

Patients with heart failure in the United States are more likely to be hospitalized and more likely to die during the colder winter months, according to two studies scheduled for presentation at the American College of Cardiology's 66th Annual Scientific Session. One study also shows the costs per hospitalization for heart failure also increase during winter.

Although studies from Europe, Australia, Asia and elsewhere have shown similar seasonal trends in heart failure hospitalizations and deaths, these studies are the first to look at these trends in the U.S. Previous research has also shown that heart attacks, sudden cardiac death and cholesterol levels tend to increase during the winter months in the U.S.

"Over 5 and a half million people live with heart failure in the U.S., and it's one of the leading causes of hospitalization. But little to nothing has been known about how seasonal variation impacts hospitalization outcomes nationally," said Emmanuel Akintoye, MD, resident physician in internal medicine at Wayne State University/Detroit Medical Center and the lead author of one of the studies. Understanding these patterns can help doctors, hospital administrators and patients plan for and perhaps prevent excess admissions in winter, he said.

Akintoye and his colleagues examined data from approximately 600,000 hospital admissions for heart failure collected between 2011 and 2013 from the Nationwide Inpatient Sample, which includes the health records of patients admitted at more than 1,000 hospitals comprising about 20

percent of U.S. medical centers. They found that the likelihood of dying during hospitalization for heart failure, as well as the cost and length of that hospitalization, all spiked during the winter. A patient with heart failure admitted in winter had a 6 percent higher risk of dying than one admitted in spring, as well as an 11 percent higher risk of dying than one admitted in summer or fall. The median cost for heart failure-related hospitalizations in the winter was \$7,459, while for summer it was \$7,181, a statistically significant difference.

Akintoye said that while the study design didn't allow them to explore reasons for these upticks in mortality and cost, the increased prevalence of co-morbidities such as respiratory infections in winter, which can exacerbate [heart failure symptoms](#), likely play a role. So do cold temperatures, he added, which can lead to increased heart rate and increased blood pressure, further taxing an already overworked heart.

A second study, led by Soumya Patnaik, MD, internal medicine physician at the Albert Einstein Medical Center in Philadelphia, found similar results. Patnaik and her colleagues looked at data from almost 2 million hospitalizations for heart failure between 2002 and 2011 from the National Institutes of Health database. In their sample, hospitalizations and deaths from heart failure while in hospital were both highest in winter and lowest in late summer.

The researchers further analyzed heart failure hospitalizations by geographical region—the Northeast, Midwest, South and West. Interestingly, in their dataset, the South had the largest number of overall admissions for heart failure, but the Northeast had the highest mortality: 4.3 percent of admitted patients died, compared to a national average of 3.8 percent. This risk of death was highest in January and February, even in parts of the country with overall warmer temperatures.

"Based on our findings, it's fair to suggest that heart failure patients

should take extreme caution in wintertime—being extra cautious about taking timely medications, not getting exposed to cold [temperatures] if it's not necessary, and being careful about their diet as well, such as limiting salt and not overindulging over the holiday season," Patnaik said.

Clinicians should also be careful to counsel patients about medication and diet compliance during winter and, if appropriate, implement more frequent follow-up for [heart failure patients](#) at high risk of hospitalization, she said.

Neither research group tracked how patients fared after discharge from the hospital, nor were they able to factor in whether patient hospitalizations were due to acute episodes of heart failure or readmissions. Currently, the Centers for Medicare and Medicaid Services penalizes hospitals for 30-day readmissions for heart failure.

Researchers said they believe awareness of these trends in heart failure admissions could enable policymakers and health care providers to anticipate the surge of hospitalizations and poorer outcomes during winter and plan ahead, Akintoye said. In addition, he said, if this seasonal variability is well appreciated, that could stimulate research into its causes.

"Once we understand the causes, we can work towards trying to address the problem and increase survival for patients with [heart failure](#)," he said.

Akintoye will present the study, "Seasonal Variation in In-Patient Mortality, Cost of Hospitalization and Length of Stay in Heart Failure Patients in the United States," on Friday, March 17, at 1:30 p.m. ET at Poster Hall C at the American College of Cardiology's 66th Annual Scientific Session in Washington. The meeting runs March 17-19.

Provided by American College of Cardiology

Citation: More hospitalizations, deaths for US heart failure patients in winter (2017, March 8)
retrieved 18 April 2024 from

<https://medicalxpress.com/news/2017-03-hospitalizations-deaths-heart-failure-patients.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.