

Age and severity of heart failure associated with impairment in verbal memory

August 9 2011

(Medical Xpress) -- Older patients with lower rates of left ventricular ejection fraction (a measure of how well the left ventricle of the heart pumps with each contraction) appear more likely than younger patients to have significantly reduced verbal memory function, according to a report in the August issue of *Archives of Neurology*, one of the JAMA/Archives journals.

Three decades ago, researchers began investigating the association of [heart failure](#) with [cognitive decline](#), according to background information in the article. Thirty to 80 percent of patients with heart failure may experience some cognitive deficits. However, research seeking to clarify the correlation of cognitive impairment with decreased left ventricular ejection fraction (EF), a measurement of the severity of heart failure, has generated inconsistent results. "Conflicting evidence about the association of EF with cognitive function suggests a complex relationship between patient variables and the cardiovascular factors that influence cognition," write the authors.

Joanne R. Festa, Ph.D., from St. Luke's–Roosevelt Hospital Center, New York, and colleagues conducted a cross-sectional study to investigate the relationship between age, EF and memory among patients with heart failure. The participants, all adult patients with heart failure, underwent neurocognitive assessment while being evaluated for potential heart transplantation candidacy between September 2006 and September 2008. The testing included verbal and visual memory, attention, executive functioning and self-reported depressive symptoms.

Researchers also recorded participants' EF, heart failure cause, medical history, current medications and demographic information.

Echocardiography was used to measure EF, which was scored at less than 30 percent or at 30 percent or greater. Age quartiles used by the researchers were 45 years or younger, 46 to 55 years, 56 to 62 years and 63 years or older.

A total of 207 participants were included in the final analysis of the study; 38 had an EF of 30 or greater, and 169 had an EF of less than 30. Stable [memory function](#) was maintained across EF levels in patients younger than 63 years, but in older patients a significant association with worse memory performance was noticed when EF was less than 30 percent. Analysis of the results demonstrated that the components of memory with which low EF had the greatest association were verbal delayed recall and recognition.

"In summary, an interaction exists between the age and EF such that older patients with low EF had significantly reduced memory, particularly verbal delayed recall and recognition," write the researchers. However, the association of low EF with "memory in these patients is not entirely explained by EF." The authors suggest further research into additional mechanisms of cognitive dysfunction in [patients with heart failure](#).

More information: *Arch Neurol.* 2011;68[8]:1021-1026

Provided by JAMA and Archives Journals

Citation: Age and severity of heart failure associated with impairment in verbal memory (2011, August 9) retrieved 25 April 2024 from <https://medicalxpress.com/news/2011-08-age-severity-heart-failure-impairment.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.