Peak oxygen uptake and left ventricular ejection fraction, but not depressive symptoms, are associated with cognitive impairment in patients with chronic heart failure.

The aim of the present study was to assess cognitive impairment in patients with chronic heart failure (CHF) and its associations with depressive symptoms and somatic indicators of illness severity, which is a matter of controversy. Fifty-five patients with CHF (mean age 55.3 ± 7.8 years; 80% male; New York Heart Association functional class I-III) underwent assessment with an expanded neuropsychological test battery (eg, memory, complex attention, mental flexibility, psychomotor speed) to evaluate objective and subjective cognitive impairment. Depressive symptoms were assessed using the Structured Clinical Interview for Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (SCID) and a self-report inventory (Hospital Anxiety and Depression Scale [HADS]). A comprehensive clinical dataset, including left ventricular ejection fraction, peak oxygen uptake, and a 6-minute walk test, was obtained for all patients. Neuropsychological functioning revealed impairment in 56% of patients in at least one measure of our neuropsychological test battery. However, the Mini Mental State Examination (MMSE) could only detect cognitive impairment in 1.8% of all patients, 24% had HADS scores indicating depressive symptoms, and 11.1% met SCID criteria for a
depressive disorder. No significant association was found between depressive symptoms and cognitive impairment. Left ventricular ejection fraction was related to subjective cognitive impairment, and peak oxygen uptake was related to objective cognitive impairment. Cognitive functioning was substantially reduced in patients with CHF and should therefore be diagnosed and treated in routine clinical practice. Caution is advised when the MMSE is used to identify cognitive impairment in patients with CHF.