

RELAX-AHF and PROTECT studies find targeting WHF may reduce readmissions and save lives

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Worsening symptoms and signs of heart failure (WHF) in patients admitted to a hospital is a common sign of treatment failure and can lead to long-term consequences for the patient, including longer length of hospitalization and a higher risk for readmission and death, according to a late-breaking study (RELAX-AHF, PROTECT) presented in Athens at the ESC's Heart Failure Congress 2014

Heart failure is the most common reason for admission to hospital in people over 65 years old and affects millions of people each year. Research has shown that the outcomes of patients admitted with Acute Heart Failure (AHF) are dire with significant time spent in the hospital and high rates of readmissions or death within 6 months. Currently available therapies such as i.v. diuretics and vasodilators, may relieve some of the symptoms of AHF including dyspnoea, but most probably do not affect short term outcomes.

"Worsening heart failure is a clinical event occurring during an admission for [acute heart failure](#) defined as worsening of the symptoms and signs that brought the patient to the hospital requiring additional intravenous or mechanical therapy," said Beth Davison, lead author on the RELAX-AHF study and vice president of Momentum Research Inc. "It prolongs the hospital stay and is associated with increased risk for [heart failure](#) readmission within 2 months and death within 6 months. Preventing this early event would not only reduce the patient's suffering

during the admission but possibly also reduce its longer-term consequences."

In data pooled from the PROTECT Pilot, PROTECT, Pre-RELAX-AHF, and RELAX-AHF studies the association of WHF with length of stay, mortality and HF re-hospitalization were examined. In 3691 patients, death or WHF occurred in 12.4%. WHF was associated with a mean increase in the length of [hospital](#) stay of 5.2 days (95% confidence intervals [CI] 4.6-5.8 days); a hazard ratio (HR) for 60-day HF readmission or CV death of 1.64 (CI 1.34-2.01) and a HR for 180-day mortality of 1.93 (1.55-2.41) – all P

The association of WHF with these outcomes remained robust after adjustment for changes in these markers at day 2 on top of adjustment for baseline characteristics. The association of WHF with mortality was significant regardless of what therapy was given for WHF, although patients who needed IV inotropes or mechanical support had higher mortality.

"Because WHF is associated with more adverse outcome physicians should monitor closely [patients](#) who develop WHF during admission," said Dr. Davison. "As suggested by the results of the RELAX-AHF study, future therapy may reduce the occurrence of WHF and some of its downstream effects."

Provided by European Society of Cardiology

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