

Time is muscle in acute heart failure

May 21 2015

Urgent diagnosis and treatment in acute heart failure has been emphasised for the first time in joint recommendations published today in *European Heart Journal*.

The consensus paper is the result of a novel collaboration between the Heart Failure Association (HFA) of the European Society of Cardiology (ESC), the European Society for Emergency Medicine and the Society for Academic Emergency Medicine in the USA.

Professor Alexandre Mebazaa, lead author and HFA board member, said: "This is the first guidance to insist that acute [heart failure](#) (AHF) is like [acute coronary syndrome](#) (ACS) in that it needs urgent diagnosis and appropriate treatment. In ACS when the coronary is occluded we say 'time is muscle' which means that the quicker the vessel is dilated, the more heart muscle is saved. The same principle is true for AHF."

He added: "By introducing the time to therapy concept together with new medications for AHF we hope to achieve the reductions in mortality and morbidity seen with ACS."

AHF presents as either an exacerbation of [chronic heart failure](#) or the abrupt onset of dyspnoea (shortness of breath) and significantly elevated blood pressure. It is a distressing and life-threatening condition that requires immediate medical attention and usually leads to urgent hospital admission.

Professor Abdelouahab Bellou, an author of the paper and past president

of EuSEM, said: "If we treat patients with AHF earlier we can expect a decrease in mortality and morbidity. Failure to treat quickly aggravates underlying chronic heart failure and can induce complications including cardiogenic shock and acute respiratory distress. Patients may need to be intubated which can increase their risk of mortality."

The paper published today outlines:

- An algorithm for the management of AHF
- Tests and treatments to be performed pre-hospital, and in the emergency department, coronary care unit (CCU) or intensive care unit (ICU)
- The role of nurses in the management of AHF
- How to use oxygen therapy and ventilatory support
- How to manage new and currently prescribed medicines
- Criteria for discharge from hospital and recommendations for follow up.

The paper advocates addressing patients' anxiety by answering questions promptly and providing clear information, and communicating with families. Professor Mebazaa said: "Dyspnoea causes more anxiety for patients, families and doctors than chest pain. Anxiety is also caused by low [oxygen levels](#) in the brain. Unfortunately there are no medications to relax patients without worsening their respiration and blood oxygen levels. But we can reduce anxiety by talking to patients and families and giving oxygen."

He added: "Patients' anxiety levels depend on how the family is coping. If it's a first episode of AHF we need to take time to explain the condition to families. For frequent fliers² we explain whether it's a similar or different episode to the last time."

Emphasis is given to follow up during the high risk period after

discharge from hospital. Professor Mebazaa said: "Many patients die from AHF during the first hospitalisation. Around 30-40% of discharged patients are back in hospital within 30 days. This is contrast to most conditions, where patients are treated and do not return. We need to do everything we can to avoid readmissions in the first 30 days."

This is the first time cardiologists, emergency physicians, intensivists and nurses from Europe and the USA have joined forces to agree a treatment algorithm for patients with AHF. Professor Mebazaa said: "Inconsistency in medicine is never good for patients. Many [patients](#) with AHF are hospitalised many times and may receive different treatment for the same event in the emergency room, ICU or CCU. We hope to standardise care by recommending best contemporary practices based on the latest evidence."

He concluded: "We are at the beginning of the road in AHF. By providing fast and appropriate treatment we hope to mimic the successful journey of ACS and achieve significant reductions in mortality and morbidity."

More information: ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012. *European Heart Journal*. 2012;33:1787-1847. [DOI: 10.1093/eurheartj/ehs104](https://doi.org/10.1093/eurheartj/ehs104)

Provided by European Society of Cardiology

Citation: Time is muscle in acute heart failure (2015, May 21) retrieved 6 May 2024 from <https://medicalxpress.com/news/2015-05-muscle-acute-heart-failure.html>

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