PRIMEVIEW

ACUTE HEART FAILURE

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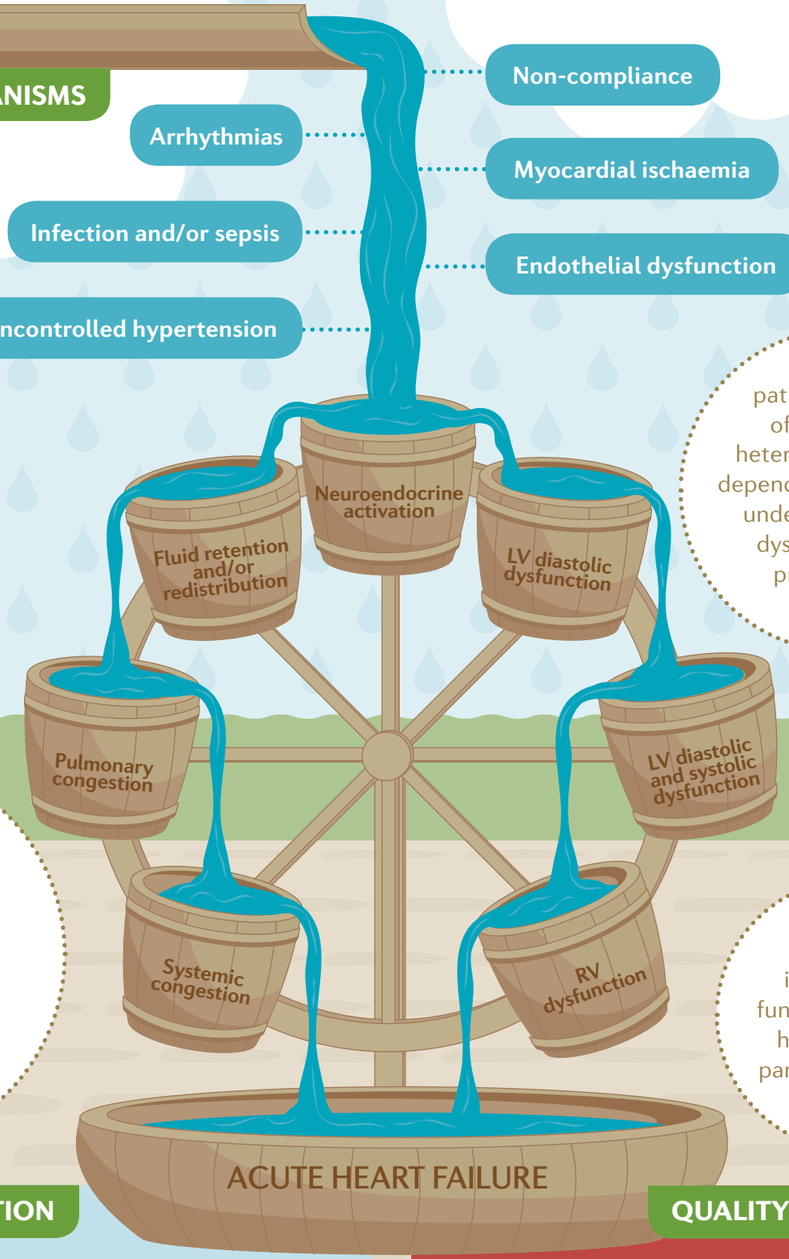
Acute heart failure (AHF) is a syndrome characterized by signs and symptoms of heart failure (HF). AHF can occur in individuals without a previous history of HF (de novo HF) when a new-onset cardiac dysfunction is sufficient to induce HF or an underlying but undiagnosed cardiac dysfunction is worsened by one or more precipitating factors. However, most cases of AHF occur in patients with chronic HF (acutely decompensated HF (ADHF)).

MECHANISMS

Precipitating factors can trigger the onset of AHF or suddenly worsen HF symptoms

- Non-compliance
- Arrhythmias
- Myocardial ischaemia
- Infection and/or sepsis
- Endothelial dysfunction
- Uncontrolled hypertension



The pathophysiology of AHF is very heterogeneous, as it depends on the specific underlying cardiac dysfunction and precipitating factors

As cardiac function deteriorates, fluid retention (in the interstitial space) and/or fluid redistribution (due to changes in the compliance of vascular beds) occur, leading to pulmonary and systemic congestion

Systemic congestion impairs organ function more than hypoperfusion, particularly kidney function

EPIDEMIOLOGY

The Global Burden of Disease study estimated >37 million cases of HF in 2010, and almost all hospitalizations for HF are related to signs of fluid retention, indicating probable AHF. Rehospitalization rates in the first 3 months after an episode of AHF can reach ~30%.

DIAGNOSIS

Individuals with systemic congestion (excessive fluid accumulation) present with dyspnoea (shortness of breath), orthopnoea (dyspnoea when lying down) and fatigue, often associated with peripheral oedema, jugular vein distention and pulmonary rales. No available biomarker is specific for AHF; thus, the diagnostic work-up should include a comprehensive assessment of the clinical manifestations, the underlying cardiac dysfunction and any precipitating factors.

PREVENTION

As ADHF accounts for most cases of AHF, prevention of worsening HF is paramount. Patient education should highlight the importance of compliance with drug therapy and avoidance of contraindicated drugs, how to recognize early signs and symptoms and when to contact the health-care system.

QUALITY OF LIFE

In addition to the physical symptoms, hospitalization can reduce the quality of life of patients with AHF and lead to or worsen cognitive impairment and depressed mood. In turn, poor quality of life can affect compliance with treatment.

MANAGEMENT

The cornerstone of AHF management is decongestive therapy, with diuretics in case of fluid retention and vasodilators for fluid redistribution. The underlying cause and any precipitating factors should also be addressed, and, whenever possible, a disease-modifying therapy should be started or updated during hospitalization. A long-term care plan should be in place before discharge; integrate the roles of the patient, health-care professionals and other care-givers; and aim to improve quality of life, delay disease progression and reduce the risk of rehospitalization.

LONG-TERM MANAGEMENT PLAN

- ✓ Take your medicines
- ✓ Eat healthy
- ✓ Check in with your doctor
- ✓ Know the signs
- × No smoking

OUTLOOK

No drug is formally approved for AHF, as most clinical trials had neutral or negative results; however, such results might stem from the difficulty in setting appropriate primary end points and drug administration regimens. New drugs are being investigated, as well as diagnostic and prognostic markers. As rehospitalization rates are high, particularly in the first months after an episode of AHF, risk stratification algorithms enabling clinicians to identify high-risk patients are being sought.

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