




Lightning Learning: Acute Heart Failure

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East Midlands Emergency Medicine Educational Media

STOP!

Heart failure is a condition that can be caused by heart muscle dysfunction (*systolic or diastolic*), arrhythmias, valvular dysfunction or rarer causes.⁽¹⁾

Patients admitted with acute heart failure have a mortality of up to 10%.

Following discharge, mortality increases up to 50% over the next 12 months.⁽²⁾

With this in mind, it is pertinent to establish ongoing treatment plans with patients as they are highly prone to deterioration.

It can present as new-onset heart failure without any known cardiac dysfunction or as acute decompensation of chronic heart failure.

SYMPTOMS INCLUDE...

- Progressive dyspnoea
- Chest pain
- Orthopnoea
- Oedema (*ankle/leg/sacral*)
- Fatigue

LOOK

HISTORY *Consider asking about...*

Pre-existing illness? Infective symptoms? Duration? Exercise tolerance? Orthopnoea, paroxysmal nocturnal dyspnoea? Chest pain? Compliance with medication?

INVESTIGATIONS

ECG (*serial ECGs if ischaemic changes*); Bloods (*consider serum BNP*) CXR. **Bedside echocardiogram is the key investigation** to confirm the diagnosis (*refer to your local guideline⁽²⁾ for ECHO features*).

MANAGEMENT

- Perform A-E assessment of the patient.
- Stepwise approach to medical management in acute setting, e.g. *Oxygen, IV furosemide (bolus/infusion), IV GTN*. Treat co-existing illness, e.g. *pneumonia with antibiotics*. Input/output monitoring, e.g. *patient weight, urine output*.
- When medical management not helping, discuss with senior doctor in Resus to initiate CPAP⁽³⁾ (refer to local guideline). Consider escalation status.
- Liaise with Cardiology for admission and ongoing management.

LEARN

CXR FINDINGS⁽⁴⁾ A good mnemonic to remember these principles is ABCDE...

A **Alveolar oedema** (*bat wing opacities*)

B **Kerley B lines**

C **Cardiomegaly**

D **Dilated upper lobe vessels**

E **Pleural effusion**

(1) bit.ly/2NS5hdk (3) bit.ly/33QXqJK

(2) bit.ly/33SUWU2 (4) bit.ly/2COtN8B

