MANAGEMENT OF HEART FAILURE

Definition:

Structural or functional impairment of ventricular filling or ejection of blood

Classification:

1. Heart failure with reduced ejection fraction (EF < 40%)
2. Heart failure with preserved ejection fraction: also referred as diastolic heart failure

ICU patients usually present in late stage of the disease with acute cardiogenic pulmonary oedema or cardiogenic shock

General measures

1. Organ support: airway, breathing, circulation
   - Non-invasive ventilation: reduces preload and afterload
2. Identify and treat underlying/contributing conditions eg.
   - Myocardial ischemia, rapid AF, valvular heart disease, diastolic dysfunction, concurrent sepsis eg pneumonia
   - Treatment of cardiogenic shock, ischaemia, hypertension, arrhythmia (see relevant chapters)

Investigations

CXR
Serial ECG and cardiac enzyme
Echocardiogram
Septic work-up if infection suspected/viral studies/atypical pneumonia serology
New cardiac marker: BNP or NT-pro-BNP: for diagnosis and prognosis

Treatment of Symptomatic Left Ventricular Systolic Dysfunction

- **Please refer to AHA latest guideline 2013**

https://circ.ahajournals.org/content/128/16/e240.full.pdf+html

- **Class I recommendation:**
    - **AECI, if not tolerated, use ARB**
    - **Beta blocker**
    - **Statin**
    - **Fluid overload, NYHA class II-IV: loop diuretics**
    - **Persistent symptomatic, afrian americans, class III-IV: hydral-nitrates**
    - **NYHA class II-IV, estimated CrCl>30ml/min and K<5: aldosterone antagonist**