Case Presentations in Heart Failure

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Case 1

- 82 year old woman
- Longstanding hypertension
- Treatment for UTI
- Otherwise well

- Increasing shortness of breath
- Leg swelling
- Palpitations
Clinical exam
- Irregular rhythm, 110bpm
- BP 160/90mmHg
- Mild pitting oedema. No murmur. JVP +4cm. Bibasal crackles

ECG
- Atrial fibrillation, LVH.

Troponin
- Normal

N-BNP
- 120

CXR
- Mild cardiomegaly
- Mild interstitial oedema
Diagnosis – “Heart failure”
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- Clinical assessment
- Supported by investigations so far
What is the likely cause?

- **Common things occur commonly**
  - Hypertension
    - LVH, LV diastolic dysfunction, left atrial dilatation.
  - Coronary artery disease
    - LV systolic / diastolic dysfunction
  - Valve disease
    - LV systolic / diastolic impairment.

- **Precipitating factors**
  - Recent UTI
  - Atrial fibrillation
  - Check thyroid function
What additional investigation(s) are needed?

**Echocardiogram**

- LV size and systolic function - often normal LVEF
- LVH. LV diastolic function.
- LA size
- Valves
- Right heart
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**24 hour holter monitor**
- After rate control

**Exercise test**
- Consider after acute factors managed
Treatment

- **General**
  - Diuresis
  - Rate control of the atrial fibrillation
  - Ensure the UTI is controlled
  - Optimise blood pressure

- **Specific**
  - Depend on other results
  - Rate vs rhythm control (LA size)
  - Possible coronary artery disease
Case 2

- 24 year old man
- No past history of note
- Physical job
- Non-smoker
- Minimal alcohol

- Tires easily, short of breath on exertion
Clinical exam

- Regular rhythm 110bpm
- BP 95/60 mmHg
- Multiple murmurs
- No pitting oedema. JVP angle of jaw. Clear chest

ECG

- Sinus tachycardia, LVH

N-BNP

- 1120

CXR

- Moderate cardiomegaly
- Pulmonary oedema
Diagnosis

- Heart failure

What is the likely cause?

- Common things occur commonly
  - Valve disease – LV and/or RV impairment.
  - Hypertension – LV diastolic dysfunction +/- atrial fibrillation
  - Coronary artery disease – LV systolic/diastolic dysfunction

What additional investigation(s) are needed?

- Echocardiogram

Treatment

- General
- Specific
Treatment

- **General**
  - Diuresis
  - ACE inhibitor / ARB
  - Beta blocker

- **Specific**
  - Valve replacement
Heart Failure

- The diagnosis heralds the beginning, not the end, of the medical journey
- Clinical diagnosis supported by investigations
- Specific management depending on the cause
- High mortality, especially if not assessed and managed properly
Diagnosis

- “Heart failure”

What is the likely cause?

- Always consider underlying cause and precipitating factors

What investigation(s) are needed?

- Confirm diagnosis
- Mechanism – guides management
- Determine severity / prognosis

Treatment