

PODCAST No. 10

INTRODUCTIONS:

FEEDBACK:

TOPIC: Heart failure

TIP: Check the ankles for swelling in patients with SOB

DISCUSSION:

A 54-year-old man presents with a three-month history of worsening exertional dyspnoea (SOB). He is a current smoker with 40 cigarettes a day and a positive family history of IHD. There was no history of hypertension or diabetes.

He started getting SOB on walking up slopes about three months ago; this had progressed to SOB on walking a mile on flat ground (NYHA class 2).

He had no associated chest pain, cough or orthopnoea (pillows), but there had been five episodes of waking in the night gasping for breathing, making him get up from bed (paroxysmal nocturnal dyspnoea).

O/E BP was 124/60mmHg

Pulse was 96bpm and regular.

Normal heart sounds, bibasal creps, mild ankle swelling

Clinical diagnosis of HF.

What is HF? Heart failure (HF) occurs when the heart fails to pump enough blood around the body. Clinical symptoms are SOB, orthopnoea, PND, reduced ex tolerance, fatigue, SOA. Less common nocturnal cough, wheeze and loss of appetite.

The prevalence of HF in the UK is 8.3 per 1,000 population & is rising with the ageing population and improved survival of ischaemic events.

IHD and hypertension are the two main causes of HF.

Other cardiac causes include: AF, valve disease and cardiomyopathies.

Other causes may be

- endocrine (thyroid disorders, diabetes, adrenal disorders),
- toxins (alcohol, recreational drugs),
- nutritional (thiamine deficiency), anaemia
- end stage renal failure.

Investigations

Blood tests:

- FBC,
- renal function
- TFTs
- LFTs
- glucose,
- fasting lipids

ECG looking for evidence of a previous MI or arrhythmias, such as AF.

Chest X-ray to assess pulmonary congestion and cardiomegaly, and exclude other causes of SOB.

Echocardiography for information on systolic and diastolic function, valve pathology.

There are two types of heart failure. The distinction is made via echo depending on ejection fraction (amount of blood pumped out of the ventricles with each contraction). A normal ejection fraction is 50% or above:

Left ventricular systolic dysfunction (LVSD)): a large flabby heart that contracts poorly. Mostly caused by infarction.

Heart failure with preserved or normal ejection fraction (HFPEF): also called diastolic failure. Normal LV ejection fraction but with left ventricular hypertrophy and left atrial enlargement on echo. Mainly caused by hypertension which causes slow and gradual remodelling.

Why distinguish-evidence for treatment only for LVSD.

Our patient: started on furosemide 40mg twice daily (am and lunchtime to avoid night-time diuresis) with follow-up in 2 weeks

Offered lifestyle advice: reduce salt and alcohol. Stop smoking, increase exercising (low intensity)

Self-weighing: daily first thing after toileting. If >1.5-2kg over 2 days to increase diuretics

and requested investigations as above (if available)

HFPEF

No drug therapy improves survival. Treat underlying cause eg HTN, AF, anaemia

Use diuretics for symptoms

LVSD

ACE (poor evidence in afro-Caribbean and ideally need U+E checking)

B blocker as tolerated according to BP and pulse

Evidence in Africans more likely to be HTN so hydralazine/ISMN better choice than ACE.

Add diuretic for symptoms (furosemide and if at max dose can consider spironolactone but risk high potassium so need to monitor U+E).

Our patient-ECG shows old MI. Start b blocker (cardio-selective if available e.g carvedilol or metoprolol) low dose once daily (if no contra-indications). Review and increase dose according to BP and pulse.

Prognosis

A diagnosis of HF confers a poor prognosis.

Despite significant advances in management options, more than half of patients with severe HF die within a year.

End of life care: Consider using oral morphine for SOB in end stages and de-prescribing non-essential drugs (eg b blocker)

GOODBYES: