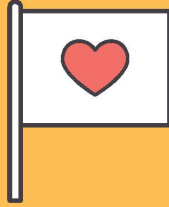


HEART FAILURE

DIAGNOSIS



Natriuretic peptides (BNP & NTproBNP) help rule out heart failure. If their level is normal it is highly unlikely the person has heart failure. If their level is elevated they may have heart failure but there are many causes of raised natriuretic peptides. To confirm the diagnosis you need an echocardiogram. This is also important because treatment depends on ejection fraction which is only possible to evaluate on cardiac imaging. It is also important to identify the cause of heart failure as treating the underlying cause (e.g. ischaemia or hypertension) is key.

WHY DOES EJECTION FRACTION MATTER?



Heart failure has traditionally been classified based on the ejection fraction. This is the percentage of blood that is pumped out of the left ventricle with each beat and it is normally 50-70%. Most studies in heart failure have been done in people with an ejection fraction <40% and this is known as heart failure with reduced ejection fraction (HF-REF). People with HF-REF benefit from the use of medications such as ACE inhibitors and beta-blockers routinely. Recent guidelines have also described heart failure with mid range ejection fraction (HF-mrEF) (40-50%) and heart failure with preserved ejection fraction (HF-PEF) (>50%). Fewer studies have been done on these types of heart failure and no convincing therapies found to improve prognosis.

TREATMENTS FOR ALL PATIENTS



All patients with heart failure benefit from self care advice and immunisations (influenza and pneumococcal vaccine). Diuretics help relieve congestion. Important self care advice includes:

- Avoid excessive salt
- No smoking
- Exercise regularly
- Do not advise fluid restriction routinely

TREATMENTS FOR HF-REF



Heart failure where the ejection fraction is <40% at initial diagnosis is called heart failure with reduced ejection fraction (HF-REF). All patients with HF-REF benefit from the use of ACE inhibitors/angiotensin receptor blockers and betablockers independent of their blood pressure and other CV risk factors. Those with a persistently low ejection fraction after treatment with these may benefit from other treatments such as mineralocorticoid receptor antagonists, angiotensin receptor/neprilysin inhibitors and device therapies such as cardiac resynchronisation therapy (CRT) & implanted cardioverter defibrillators.

TREATMENTS FOR HEART FAILURE WITH AN EJECTION FRACTION >40%



For patients who are diagnosed with heart failure and their initial ejection fraction is >40% the treatment is less clear. Many will be on medications such as ACE inhibitors/angiotensin receptor blockers and beta blockers for other cardiac conditions but, unlike HF-REF, there is no evidence currently that they benefit from these medications routinely unless needed for other conditions such as hypertension or atrial fibrillation. The focus of management in HF-PEF is on treating other CV conditions appropriately.

FURTHER INFORMATION:

ICGB Quick Reference Guide on Heart Failure

