St Helens and Knowsley Teaching Hospitals NHS Trust

# HEART FAILURE PATHWAY

Patient presents with breathlessness, oedema, raised JVP, basal crackles

RED flags for consideration for CCU / Urgent Cardiology review
- HF with unstable angina/ACS
- HF with AF and uncontrolled ventricular response
- HF with Cardiogenic shock
- HF with Severe Valve Disease (MR or AS)

Assessment suggests heart failure (HF)

- Symptom Relief e.g., diuretics (watch U&E's closely)
- Treat underlying condition e.g., arrhythmia, infection, anaemia, ACS, COPD
- Review medications – stop aggravating drugs (ie NSAID)
- If evidence of CCF, commence weight chart, fluid restriction, low Na diet

Routine tests **NT-proBNP**, U&E, FBC, LFT, Chol, TFT, Urine ACR, CXR, ECG

NT-proBNP <400pg/ml

Unlikely HF
Consider alternative diagnosis

NT-proBNP 400-2000pg/ml

NT-proBNP >2000

**REQUEST ECHO** - If ^NT-proBNP **and**
- Unconfirmed diagnosis of LVSD or HF
- No up to date echo in last 12months

**Request Cardiology bed / review for all known heart failure service patients**

**LVSD Confirmed on Echo**
**Commence Ace Inhibitor** – unless contra-indicated (Angiotensin Receptor Blocker can be used if intolerant of ACE inhibitor
**Commence Beta Blocker** – unless contra-indicated
**Consider Aldosterone Antagonist** – unless contraindicated
**Check Iron profile** - to assess suitability of Ferinject
https://www.nice.org.uk/guidance/ng106
Heart failure - chronic | Health topics A to Z | CKS | NICE

**Preserved Ejection Fraction on Echo**
Please refer to advice overleaf for management of these patients

- Discharge once clinical condition stable and management plan optimised
- Complete ICE discharge appropriately (see essential information below)
- Inform hospital heart failure team of discharge date
- ICE Discharge - Essential information required
  - Diagnosis and underlying aetiology
  - Details of future investigations and outpatient follow up
  - Result of Echo
  - Recent blood results – clear instructions regarding monitoring especially U&E
  - Admission & discharge weight
  - Future medical management plan – clear instructions regarding drug initiation / optimisation

**Refer for INPATIENT Cardiology Assessment if PRIMARY DIAGNOSIS is Heart Failure OR for any of the following**
- Clarification of diagnosis / HFpEF / HFnEF (as advice overleaf)
- Education of patient regarding condition, treatment, symptom management / monitoring, lifestyle changes
- Advice re complex inpatient heart failure management that is not primary problem
- Consideration of Sacubitril Valsartan / SGLT2 Inhibitors / Device Therapy
- On-going community management plan & referral for community heart failure team follow up at discharge **(Please note - This is not an emergency follow up /support service - all patients must be seen by Cardiologist to access)**

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# Heart Failure with Preserved Ejection Fraction

**Criteria for HFpEF/HFnEF**

1. Clinical evidence of heart failure i.e. raised JVP, pitting oedema, ascites, interstitial oedema etc.
2. Preserved ejection fraction on TTE >/= 50%
3. Likely aetiology - Diastolic dysfunction (defined by E/a ratio/ E/E' ratio on TTE), renal failure, diabetes mellitus, hypertension, atrial fibrillation/ atrial tachyarrhythmia

**Treatment of HFpEF**

1. There is evidence for the use of SGLT2 inhibitors along with marginal benefit with Spironolactone and Candesartan
2. Treatment is largely based on treatment with diuretics and management of underlying condition: treatment of DM, Hypertension, Renal Failure, rate / rhythm control of AF etc.
3. Refer for Cardiology assessment

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**Diagnostic criteria for Cor Pulmonale**

1. Clinical signs of right heart failure + history of chronic airways disease/ chronic PE – raised JVP, hepatomegaly, ascites, pitting oedema ( some or all of these)
2. TTE – Usually dilated RV with reduced right ventricular systolic dysfunction (based on visual assessment on TTE + reduced TAPSE (< 1.2 cm) and occasionally pulmonary hypertension

**Treatment of Cor Pulmonale**

1. Treatment is largely supportive with Furosemide & treatment of underlying airways disease / chronic PE. There is evidence for marginal benefit from Spironolactone
2. Refer for Cardiology assessment as required