Heart failure - suspected

Patient presents in primary care

History

Examination

Consider differential diagnosis

Patient shows alarm features

NT-pro BNP positive

Refer for Echo

Results

Consider differential diagnosis

Patient shows alarm features

Heart Murmur

MICE criteria

NT-pro BNP negative

Normal Echo

Heart failure unlikely - consider referral to cardiologist if in doubt

Abnormal Echo

Suspected diastolic heart failure

Refer for specialist opinion

Go to Pharmacological treatments

NYHA I - II

NYHA III - IV

Refer to community heart failure nurse

Appointment made for initial assessment

Patient assessed

Treatment plan developed and GP informed

Condition stable

Condition unstable

Patient's GP to provide ongoing monitoring

Heart failure team to monitor intensively at home or within a clinic setting

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1 Patient presents in primary care

Quick info:
Practice of 5000 expected to have 25 patients with heart failure and 6 new patients per year.

Heart failure can present as acute or chronic.

Out of scope of this pathway: diastolic heart failure.

2 History

Quick info:
Ask about:
- onset and duration of symptoms
- dyspnoea (shortness of breath):
  - level of activity required to cause dyspnoea
  - exacerbating factors, eg. walking up a hill
  - whether it occurs at rest or only with exertion
  - the effect on daily life
- disturbance of sleep
- number of pillows needed
- is there paroxysmal nocturnal dyspnoea
- peripheral oedema:
  - severity
  - association to time of day
- fatigue, lethargy
- weight loss
- associated symptoms:
  - chest pain
  - palpitations
  - syncope, dizziness or altered consciousness
  - cough or wheezing
  - gastrointestinal disturbance, eg. appetite loss or early satiety, nausea and vomiting
- general systemic health
- past medical history:
  - ischaemic heart disease (IHD)
  - diabetes
  - hypertension
  - hyperlipidaemia
  - past transient ischaemic attack (TIA) or ischaemic stroke
  - chronic obstructive pulmonary disease (COPD)
  - hyperthyroidism
  - rheumatic fever
  - congenital heart disease
  - systemic disorders, eg. amyloid or sarcoidosis
  - treatment with chemotherapy agents
  - family history, eg. ischaemic heart disease, cardiomyopathy, sudden death
- smoking and alcohol intake
Heart failure - suspected
Medicine > Cardiology > Heart failure

• current medications

References:


National Institute for Health and Clinical Excellence (NICE). Short-term circulatory support with left ventricular assist devices as a bridge to cardiac transplantation or recovery. NICE Intervventional Procedure Guidance IPG177. NICE; 2006.

3 Examination

Quick info:
Look for:
• general appearance and respiratory rate
• pulse – rate, rhythm (eg. atrial fibrillation), volume and character (eg. the slow rising pulse of aortic stenosis)
• blood pressure (BP)
• assess for elevated jugular venous pressure
• assess for carotid bruit
• displaced or prominent apex beat
• palpate for thrills and parasternal heave
• heart sounds:
  • murmurs
  • third heart sound (gallop rhythm)
• chest auscultation:
  • wheeze
  • fine inspiratory crepitations or rales
• palpate abdomen:
  • ascites
  • right upper quadrant tenderness and hepatomegaly/sacrocaecal or scrotal oedema
  • pitting peripheral oedema
• peripheral perfusion
• assess for signs of systemic disease

References:


4 Consider differential diagnosis

Quick info:
Heart failure (HF) is usually suspected from suggestive symptoms and signs interpreted in the context of a relevant medical history – however as presentation can be non-specific, differentials to consider may include:

- for dyspnoea:
  - respiratory disease, eg. chronic obstructive pulmonary disease (COPD), Asthma, pulmonary fibrosis
  - pulmonary embolism
  - angina
  - severe anaemia
  - acute renal failure or nephrotic syndrome (volume overload)
  - sleep apnoea
  - obesity or poor fitness
  - psychogenic causes, eg. anxiety

- for peripheral oedema:
  - dependent oedema
  - venous insufficiency
  - hypoalbuminaemia
  - drug related, eg. NSAIDs, dihydropyridine calcium channel blockers
  - nephrotic syndrome
  - Thyroid disease

References:

5 Initial investigations

Quick info:
Investigations
- ECG and chest X-ray
- B-type natriuretic peptide (BNP)
- Blood screen
  - full blood count (FBC)
  - urea and electrolytes
  - liver function tests (LFTs)
- fasting lipids
- fasting glucose
- urinalysis
- TFT
Consider spirometry

6 MICE criteria
Quick info:
Male gender, hx myocardial Infarction, basal Crepitations, oEdema

11 NT-pro BNP positive

Quick info:
Chronic thresholds for positive result:

Under 60 years old: >50pg/ml
Between 60 and 75 years old: >100pg/ml
75 years or older: >250pg/ml

Acute thresholds for positive result:

All ages: >300pg/ml

NB: URGENT REFERRAL IS NT-PRO BNP >2000PG/ML

14 Refer for Echo

Quick info:
Link to referral form to be added

15 Consider differential diagnosis

Quick info:
Heart failure (HF) is usually suspected from suggestive symptoms and signs interpreted in the context of a relevant medical history – however as presentation can be non-specific, differentials to consider may include:

- for dyspnoea:
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  - venous insufficiency
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  - drug related, eg. NSAIDs, dihydropyridine calcium channel blockers
  - nephrotic syndrome
  - Thyroid disease

References:
19 Heart failure unlikely - consider referral to cardiologist if in doubt

Quick info:
- heart failure unlikely
- if doubt regarding diagnosis consider diastolic dysfunction and consider referral for specialist treatment for advanced echo screen

20 Heart failure diagnosis

Quick info:
- heart failure diagnosis confirmed by echocardiogram evidence of left ventricular dysfunction in a symptomatic patient

22 Provide information about condition to patient

Quick info:
Local info to be added:

PILS etc...

Local administrative info:
Everyday guide to living with heart failure available here:

www.tamesideandglossop.nhs.uk/Templates/FileListing____4280.aspx

24 Include on HF register

Quick info:
Code G58 followed by LVSD G581

25 Assess severity of disease

Quick info:
Severity of HF has traditionally been categorised using the New York Heart Association (NYHA) classification:

- class I – asymptomatic
  - no limitations. Ordinary physical activity does not cause symptoms of heart failure
- class II – symptomatic 'mild' HF
  - Slight limitation of physical activity. such patients are comfortable at rest. Ordinary physical activity may result in symptoms of heart failure (fatigue, SOB).
- class III – 'moderate' HF
  - no limitation at rest but less than ordinary activity causes symptoms
- class IV – 'severe' HF
  - symptoms are present even at rest and increase in severity with any level of activity so that no physical activity is possible without discomfort
28 Refer to community heart failure nurse

Local administrative info:
The Community Heart Failure Service aims to provide excellent treatment and care to patients of Tameside and Glossop who have a confirmed diagnosis of heart failure. The community based service will be delivered by a team of advanced practitioners and community nurses who have a special interest in heart failure and have undertaken further education and training. The team aims to provide evidence-based, patient centred and holistic care. This will support patients to develop self-management skills and will help to improve their quality of life. [http://www.communityheartfailureservice.co.uk/](http://www.communityheartfailureservice.co.uk/)

Referral form:
[www.communityheartfailureservice.co.uk/files/T&G_HeartFailureREFER%20Form.pdf](http://www.communityheartfailureservice.co.uk/files/T&G_HeartFailureREFER%20Form.pdf)

30 Patient assessed

Quick info:
Heart failure nurse then reviews the patient, ensuring all appropriate titrations have been done.

Local administrative info:
Refer to cardiac rehabilitation service:
[www.tamesideandglossop.nhs.uk/Templates/FileListing__4280.aspx](http://www.tamesideandglossop.nhs.uk/Templates/FileListing__4280.aspx)

35 Heart failure team to monitor intensively at home or within a clinic setting

Local administrative info:
Refer the patient to cardiology (A multi-disciplinary team meeting also occurs monthly) Clear indication if palliative and involve the Gold Standards Framework team.
Heart failure - suspected

Medicine > Cardiology > Heart failure

Key Dates

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References

This is a list of all the references that have passed critical appraisal for use in the pathway Heart failure

<table>
<thead>
<tr>
<th>ID</th>
<th>Reference</th>
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<tr>
<td>11</td>
<td>Freemantle N, Tharmanathan P, Calvert MJ et al. Cardiac resynchronisation for patients with heart failure due to left ventricular systolic dysfunction - a systematic review and meta-analysis. Eur J Heart Fail 2006; 8: 433-40. <a href="http://www.sciencedirect.com/science?_ob=ArticleURL&amp;_udi=B6VS9-4JCCH3D-3&amp;_user=10&amp;_coverDate=06%2F30%2F2006&amp;_rdoc=1&amp;_fmt=&amp;_orig=search&amp;_sort=d&amp;view=c&amp;_acct=C000050221&amp;_version=1&amp;urlVersion=0&amp;userid=10&amp;md5=284937c05b7154af499bc58f11a9f1ce4">http://www.sciencedirect.com/science?_ob=ArticleURL&amp;_udi=B6VS9-4JCCH3D-3&amp;_user=10&amp;_coverDate=06%2F30%2F2006&amp;_rdoc=1&amp;_fmt=&amp;_orig=search&amp;_sort=d&amp;view=c&amp;_acct=C000050221&amp;_version=1&amp;urlVersion=0&amp;userid=10&amp;md5=284937c05b7154af499bc58f11a9f1ce4</a></td>
</tr>
<tr>
<td>13</td>
<td>Holland R, Battersby J, Harvey I et al. Systematic review of multidisciplinary interventions in heart failure. Heart 2005; 91: 899-906. <a href="http://heart.bmj.com/cgi/content/abstract/91/7/899">http://heart.bmj.com/cgi/content/abstract/91/7/899</a></td>
</tr>
</tbody>
</table>
ID Reference
http://www.bmj.com/cgi/content/full/328/7433/189
http://www.theannals.com/cgi/content/abstract/39/3/460
http://www.sign.ac.uk/pdf/sign95.pdf
29 Veterans Health Administration Department of Veterans Affairs. The pharmacologic management of chronic heart failure. Washington, DC: Veterans Health Administration, Department of Veterans Affairs; 2003.
http://eurheartj.oxfordjournals.org/cgi/content/full/27/5/596

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