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Improving the management of chronic heart failure

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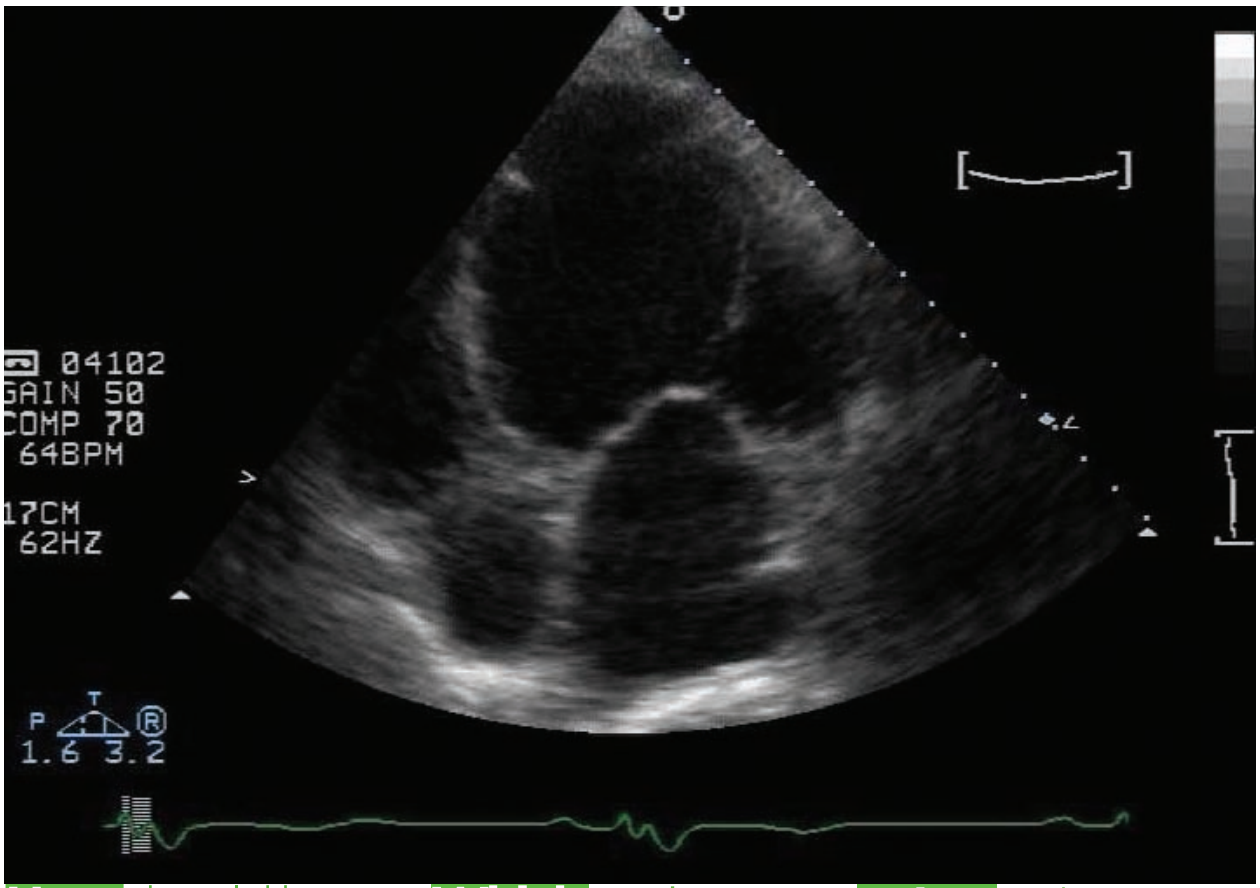


FIGURE 1
Echocardiogram showing dilated left ventricle

How should heart failure be diagnosed?

NICE HAS UPDATED ITS GUIDELINE ON THE MANAGEMENT OF CHRONIC HEART FAILURE.[1] The principal changes from the 2003 guideline include more directive advice on how to improve the quality and timeliness of diagnosis. There is greater encouragement to use beta-blockers, more emphasis on rehabilitation and better access to specialist advice - particularly at the time of diagnosis, admission to hospital, and where symptoms do not respond to first-line therapy with diuretics, ACE inhibitors and beta-blockers.

Which patients should be referred?

DIAGNOSIS

The new guideline gives a very strong recommendation on how a non-specialist should triage individuals with new symptoms to appropriate investigation (see figure 2, p30).

A full history should be taken and clinical examination carried out. Patients with a past history of MI, or those with a high plasma BNP or NTproBNP value (above 400 pg/ml or 2,000 pg/ml, respectively), should be referred to be seen within two weeks for echocardiography and specialist opinion. The specialist should determine: whether heart failure is present; its likely aetiology; precipitating factors; type of cardiac dysfunction; correctable causes; relevant comorbidity and prognosis.

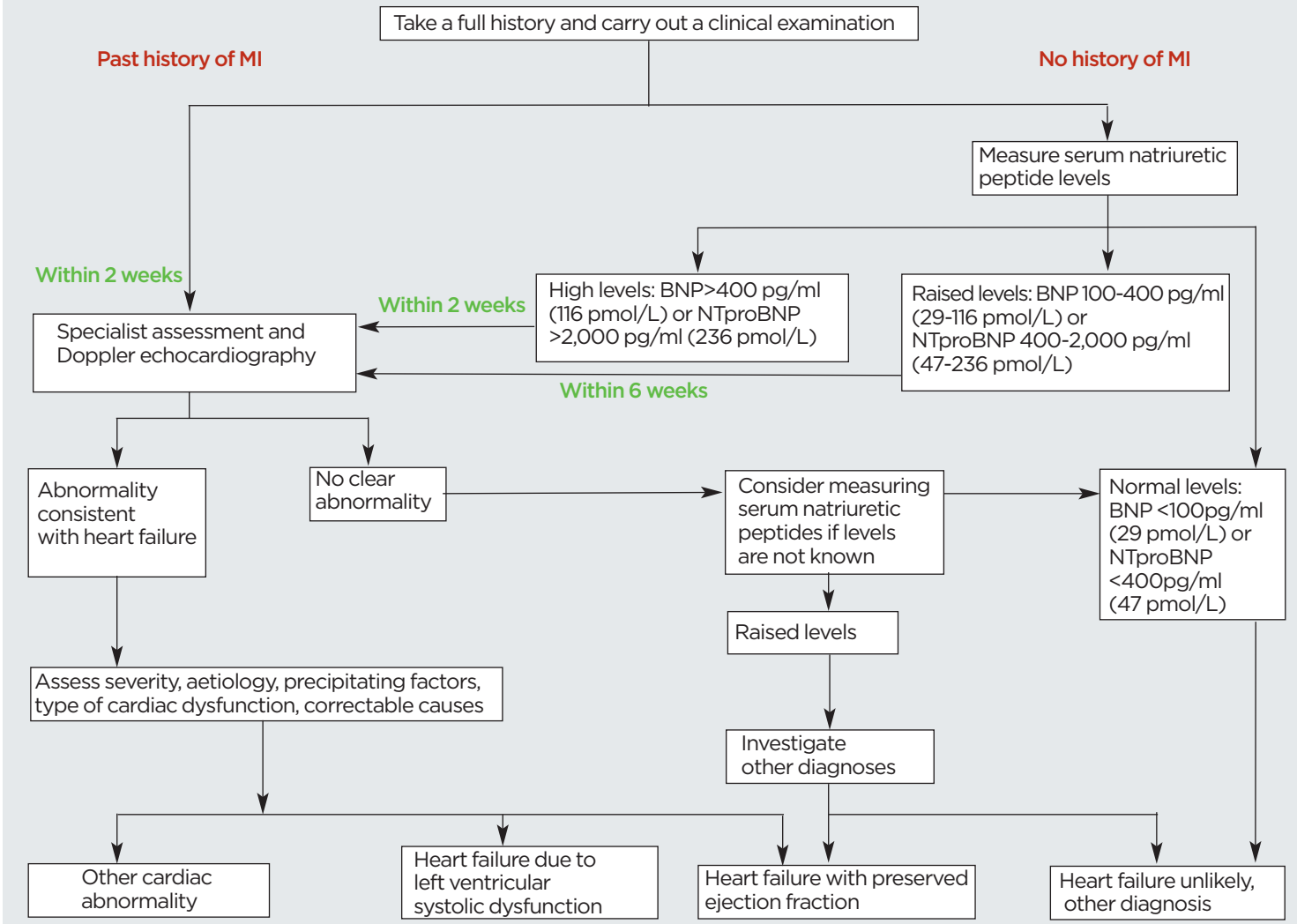
Patients with no history of MI but an elevated plasma BNP or NTproBNP value (100-400 pg/ml or 400-2,000 pg/ml, respectively), should be referred to be seen within six weeks for such assessment.

Those with a low BNP or NTproBNP value (below 100 pg/ml or 400 pg/ml, respectively) are unlikely to have heart failure, and should be considered »

What is the role of rehabilitation?

Figure 2

Algorithm for the diagnosis of heart failure



Adapted from NICE CG108. Management of chronic heart failure in adults in primary and secondary care[1]

for other investigations. Access to BNP or NTproBNP testing will, therefore, have to be provided for all GPs.

TREATMENT

For patients with systolic heart failure ('low EF' heart failure), ACE inhibitors and beta-blockers are still recommended as first-line therapies (see figure 3, opposite). Angiotensin receptor blockers (ARBs) should be considered only if ACE inhibitors are not tolerated.

Importantly, if the patient is still symptomatic despite such therapy, a more specialist assessment is advised, with consideration of the addition of either an ARB (such as candesartan), aldosterone antagonist, or a combination of a nitrate and hydralazine. Such additions are likely to require more frequent monitoring.

Underutilisation of beta-blockade is tackled by three firm recommendations:

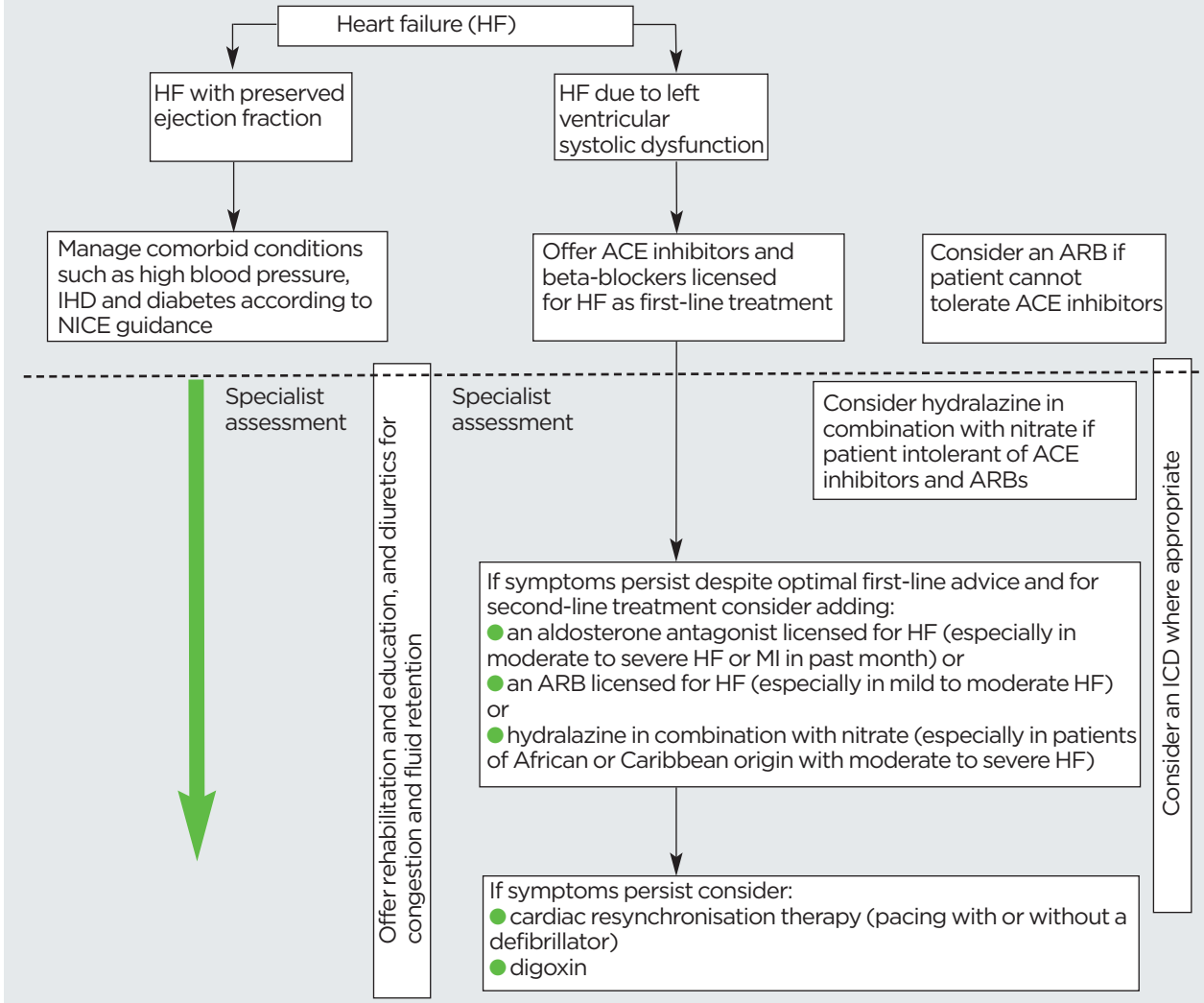
- Older adults, and patients with peripheral vascular disease, erectile dysfunction, diabetes mellitus, interstitial pulmonary disease and COPD without reversibility are specifically mentioned as those who should be considered for such therapy
- A start low, go slow approach is recommended, with clinical review after each titration
- NICE also recommends switching stable patients already taking a beta-blocker for another reason, e.g. atenolol for angina or hypertension, to a beta-blocker licensed for heart failure i.e. carvedilol, bisoprolol, metoprolol or nebivolol.

There are few new data on how best to manage heart failure due to preserved systolic function (previously termed 'diastolic heart failure'). The guideline suggests managing comorbid conditions such as high blood pressure, ischaemic heart disease and diabetes mellitus, and notes that such patients will usually be managed with a low to medium dose of loop diuretic.

Importantly, a subset of patients with symptoms despite ACE inhibitors and beta-blockers, and with a broad QRS complex on the ECG should be considered for cardiac resynchronisation therapy (CRT). An implantable defibrillator should be considered for those at high risk of sudden death, with reference to the relevant

Figure 3

Algorithm for the treatment of heart failure



Adapted from NICE CG108. Management of chronic heart failure in adults in primary and secondary care[1]

technology appraisals from NICE.[4,5] This device guidance is looking increasingly dated, and is likely to be reviewed by NICE within the next two years. It is, however, useful to have such therapies on the algorithm, at least to act as a reminder that they may have a role to play.

Guidelines are always a hostage to timing, and the publication of the results from SHIFT (ivabradine) in August (see clinical reviews, p7), and EMPHASIS (eplerenone) expected in November changes the evidence base, but does not invalidate the recommendations as they stand. Clinicians will have to integrate new evidence into the algorithm, and undoubtedly updates of international guidelines will occur in the near future that can take account of this new evidence.

MONITORING

The 2003 guideline made important recommendations on the need for periodic review of patients with heart failure, and the update does likewise. Monitoring should include a clinical assessment, medication review, and a check of renal function as a minimum. Such a review should take place at least six monthly but may have to be much more frequent if there is a change in drug prescription or clinical status.

A new recommendation in the 2010 guidance is that when a patient is admitted to hospital because of heart failure, a specialist should provide advice on the management plan. Hospitalisation is a very useful opportunity to fine tune therapies, educate patients and their families, and to review other possible treatment options, or the need for increased palliation of symptoms.

DISCHARGE PLANNING

As in the previous guideline, problems around the time of hospital discharge are flagged up, with reiteration of the previous recommendation that patients should generally only be discharged when their condition is stable and the management plan is optimised. The timing of discharge should take into account patients' and carers' wishes, and the level of care and support that can be provided in the community. »

SPECIAL REPORT
HEART FAILURE

key points

SELECTED BY
Dr Peter Saul
GP, Wrexham and associate GP Dean for North Wales

NICE has updated its guideline on heart failure. The principal changes from the 2003 guideline include more directive advice on how to improve the quality and timeliness of diagnosis. There is greater encouragement to use beta-blockers, more emphasis on rehabilitation, and better access to specialist advice – particularly at the time of diagnosis, admission to hospital, and where symptoms do not respond to first-line therapy with diuretics, ACE inhibitors and beta blockers.

A full history should be taken and clinical examination carried out. Patients with a past history of MI, or those with a high plasma BNP, should be referred to be seen within two weeks for echocardiography and specialist opinion. The specialist should determine: whether heart failure is present; its likely aetiology; precipitating factors; type of cardiac dysfunction; correctable causes; relevant comorbidity, and prognosis. Those with no history of MI but an elevated plasma BNP should be referred to be seen within six weeks for such assessment.

For patients with systolic heart failure, ACE inhibitors and beta-blockers are still recommended as first-line therapies. Angiotensin receptor blockers (ARBs) should be considered only if ACE inhibitors are not tolerated. If the patient is still symptomatic despite such therapy, a more specialist assessment is advised, with consideration of the addition of either an ARB (such as candesartan), aldosterone antagonist, or a combination of a nitrate and hydralazine.

Older adults, and patients with peripheral vascular disease, erectile dysfunction, diabetes mellitus, interstitial pulmonary disease and COPD without reversibility are specifically mentioned as those who should be considered for beta-blocker therapy. A start low, go slow approach is recommended, with clinical review after each titration.

A subset of patients with symptoms despite ACE inhibitors and beta-blockers, and with a broad QRS complex on the ECG, should be considered for cardiac resynchronisation therapy. An implantable defibrillator should be considered for those patients at high risk of sudden death.

Monitoring should include a clinical assessment, medication review, and a check of renal function as a minimum. Such a review should take place at least six monthly but may have to be much more frequent if there is a change in drug prescription or clinical status.

A new recommendation is that patients with stable heart failure should be offered a supervised group exercise-based rehabilitation programme designed for such patients. This should include a psychological and educational component, and could be incorporated within an existing cardiac rehabilitation programme.

Table 1

Summary of new key recommendations in the updated NICE guideline

- Refer patients with suspected heart failure and previous MI to have echocardiography and a specialist opinion within two weeks
- Measure serum natriuretic peptides in patients with suspected heart failure without previous MI and refer according to level (see figure 2, p30)
- Offer both an ACE inhibitor and a licensed beta-blocker to all patients with heart failure due to left ventricular systolic dysfunction
- Seek specialist advice if the patient remains symptomatic despite optimal therapy with an ACE inhibitor and beta-blocker
- All patients with heart failure require monitoring
- When the patient is admitted to hospital with heart failure specialist advice should be sought on their management
- Patients should be discharged from hospital only when stable and the management plan has been optimised
- Offer supervised group exercise-based rehabilitation to all patients with heart failure

Since 2003 this level of support has improved in many, if not all, areas but this does not obviate the need for good communication and providing a clear explanation to the patient, family, and primary care team of the plans.

Repeatedly we are told that accessing healthcare is confusing and difficult for many patients, and improvement in post-discharge care is much needed.

REHABILITATION

A new recommendation is that patients with stable heart failure should be offered a supervised group exercise-based rehabilitation programme designed for such patients.

This should include a psychological and educational component, and could be incorporated within an existing cardiac rehabilitation programme. This recommendation is likely to be picked up in the, as yet unpublished, 'Commissioning Pack' for Cardiac Rehabilitation, and will lead to pressure locally on services to include heart failure patients.

It is helpful that NHS Improvement has identified both heart failure and cardiac rehabilitation as priorities for 2010/11, but ultimately much of the responsibility for commissioning this new service will fall to primary care.

COMMISSIONING SERVICES

NICE will publish quality standards for heart failure in 2011, to help in the commissioning of high-quality services – in all likelihood picking up on recommendations in the guideline, and related policy initiatives.

With an increase in commissioning decisions being taken by GPs, they will be the ones who will judge the quality of services provided across sectors of care, and they should be able to identify inequalities across an area – such as provision for elderly patients.

It is likely that the Quality and Outcomes Framework will continue to provide rewards for the use of ACE inhibitors and beta-blockers, and echocardiography in those with a confirmed diagnosis, and will continue to bolster high-quality care.

For secondary care, readmission within 30 days will be penalised, which should focus attention on discharge planning, communication across sectors of care, and optimisation of clinical state prior to discharge. The national heart failure audit of hospitalised patients[6] should also support commissioning decisions and identify problem areas.

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6 National Heart Failure Audit 2008/9. The NHS Information Centre. 2009

Useful information

British Society for Heart Failure
www.bsh.org.uk
British Heart Foundation
www.bhf.org.uk
Heart Failure Association of European Society of Cardiology (patient website)
www.heartfailurematters.org