Palliative care for patients with end-stage heart failure

PEOPLE with heart failure have a poor prognosis (Cleland et al, 1987), and when their condition becomes increasingly unstable it is necessary to change the focus of management. The National Service Framework for Coronary Heart Disease (Department of Health, 2000) identifies the need to ensure that ‘people with unresponsive heart failure and other malignant presentations of coronary heart disease receive appropriate palliative care and support’. It advises providing good symptom control and psychological support and ensuring open communication about outcomes to patients with heart failure. The ultimate aim is for a peaceful death, while maintaining good symptom control.

Heart failure can lead to many problems, which will affect patients in various ways. One issue surrounds the difficulty in defining at which point discussion of death should be broached. As there are few specific end-stage criteria or predictors of death in heart failure (Levenson et al, 2000; Gibbs et al, 1998), health professionals may be reluctant to discuss this with the patient or family.

Communication with the patient and those close to them is essential to identify any problems, but in practice this is generally perceived as being inadequate (Ward, 2002). Rogers et al (2000) explored communication difficulties for those with heart failure and found that lack of knowledge about the condition and prognosis can add to the patient’s depression and anxiety. Assessment undertaken with the patient will identify and prioritise areas of concern, and help identify mutually acceptable goals.

The palliative care team can offer input and advice, and GPs and consultants can refer to the palliative medicine consultant for an opinion, taking advantage of their experience of caring for the dying. Attendance allowance is available for those eligible, which should be completed by the doctor if the patient is not expected to live longer than six months. If the patient is under 65 years old the disability living allowance will apply.

Management of symptoms
Pain, dyspnoea and mental disturbance have been identified by McCarthy et al (1996) as the three most frequently reported symptoms. However, a range of symptoms will indicate a patient’s worsening condition (Box 1).

Breathlessness
If breathlessness is a problem, arrange for the patient to have home oxygen, humidified if possible, to avoid drying oral and pharyngeal tissues. It is preferable to use nasal cannulas to enable the patient to drink, eat and talk while using oxygen, and to avoid them feeling smothered by the mask.

Using protective cream around the nostrils and ears can reduce the risk of sores. The doctor will assess the patient and prescribe how much oxygen is needed; usually a low dose (3l) only is necessary for long periods. Two cylinders are ideal for use in different areas of the home and will ensure that there is no risk of running out.

Positioning is important. A patient will often find breathing easier sitting in a chair, well supported by cushions. When the patient is lying down in bed the abdominal contents relax, creating pressure on the diaphragm and inhibiting inspiration. If the legs are oedematous, fluid can drain towards the torso, increasing the pressure and causing discomfort.

Morphine is used for patients with acute heart failure and its haemodynamic properties can, at end stage, aid respiration and reduce anxiety (Davies and Curtis, 2000). Although the patient may be reluctant to use opiates, Ward (2002) states that ‘there is no practical reason why the regular use of morphine should not be considered as routine for the treatment of the dyspnoea of chronic heart failure’. The vasodilator action of morphine can improve cardiac function (Doyle et al, 1998), and Fischer (1998) suggests that ‘with the collaboration of patient, family and home health services, morphine therapy may prevent hospitalisation when other therapeutic options have been exhausted’. O’Brien et al (1998) suggest using oral morphine at night to ease breathlessness.

Noisy respiratory secretions in patients too weak to cough may be distressing for the patient and family. Hyoscine hydrobromide may help if given early enough, and may have a mildly sedative effect. It is important to

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**Box 1. Symptoms of worsening disease**

- Increased shortness of breath
- Profound weakness, lack of energy, fatigue
- Worsening renal function, low sodium
- Low mood, anxiety, loss of interest
- Confusion, mental disturbances, sleep disorders
- Loss of appetite, cardiac cachexia
- Constipation, dysuria
- Urinary, faecal incontinence
- Pain, general discomfort
- Deterioration of skin condition, poor tissue
- Immobility, inability to maintain comfort
- Symptomatic low blood pressure
- Poor response to adjusting medication viability, pruritus
nurse such patients by turning them from side to side. If the patient has experienced severe dyspnoea and a feeling of drowning in pulmonary oedema in the past during acute left ventricular failure, they will often fear that it could happen again, and this can prevent relaxation and sleep. The patient will need reassurance that should this recur help is near and can be administered quickly, via the GP or hospital A&E. While waiting for help, the patient should be sat up, with legs down and well supported, the windows should be opened or fans switched on (if it helps) and oxygen administered. Relaxation and breathing techniques can also help (Davies and Curtis, 2000).

Maintaining a cool room temperature can help relieve breathlessness, but skin and body temperature may be cold, therefore soft, non-irritant clothing and/or covers can be used to alleviate this. A dry cough can be soothed with simple or codeine linctus, or saline nebulisers. A cough may be part of the condition, but it may also be associated with the administration of ACE inhibitors if these have been recently prescribed or changed — this may be relieved by changing to an angiotensin II receptor antagonist such as losartan.

Fatigue
Assisting the patient with daily living activities is essential — the fatigue associated with heart failure can be overwhelming, and patients and families need to be warned of a possible complete lack of energy. It is important to note that fatigue is often compounded by medications such as beta-blockers. Practical considerations include the loan of a wheelchair, a commode and possibly a stairlift; however, the cost and waiting list can be a problem.

Upper-body movements, in particular, drain energy, and the patient may find it impossible to push, pull and lift things. In addition, bending to attend to feet or socks/shoes may cause discomfort and dyspnoea. Discussions with the patient, the family and occupational therapist should include energy conservation matters, such as moving the bed downstairs, using a backrest to aid comfort or hiring a high-backed recliner chair.

Worsening renal function
A patient’s worsening renal function with symptomatic low blood pressure will need to be considered alongside a review of medication. Diuretics are essential for symptoms of hypoxia and oxygen therapy may help. It often takes at least two weeks before symptoms of depression or anxiety are alleviated, and the benefit of these drugs at end stage is unknown. Referral to a clinical psychologist may be possible. Box 2 lists medication that can be used where appropriate. Confusion may be a result of hypoxia and oxygen therapy may help.

Sleep disorders
Assessing the patient for the cause of sleep disorders can reveal treatable issues, such as comfort, medication timings or the need for the toilet. Leg jerking during sleep is common and administration of baclofen may help. Quinine taken as a tablet or in tonic water may relieve cramp. Zopiclone can be used to help promote sleep and dexamorpine 2.5mg administered subcutaneously can aid relaxation. The patient may find it difficult to sleep at night in bed when it is quiet and dark, and may find it easier to rest or doze in daytime when others are around.

Loss of appetite
Loss of appetite can be caused by congestion, constipation or excess abdominal fluid that will cause bloating. In addition, absorption may be poor because of the overloading of the intestinal walls, resulting in the patient’s nutritional status being compromised. Oral medication may also be less effective and the patient may have difficulty swallowing. If this occurs, consider changing the method of administering medication to liquid, rectal, sublingual, buccal, transdermal or subcutaneous routes as appropriate to the clinical condition and stage of illness.

Constitution
To prevent constipation and straining at stool, an aggressive daily bowel regime should be initiated. The large bowel can be sluggish owing to poor perfusion and increased abdominal pressure, which may be exacerbated with the use of morphine. It may be difficult to avoid constipation: for example, increasing fluid intake is not always possible, encouraging mobility is unrealistic because of fatigue, and increasing fibre intake is difficult owing to poor appetite.

Early recognition of potential problems can ease the

BOX 2. MEDICATION FOR ALLEVIATING

- Diazepam 2mg daily for restlessness, 1–2mg twice daily or three times daily for anxiety;
- Morphine sulphate 2.5mg at night to help relax and induce sleep;
- Haloperidol 0.5mg-1mg three times daily, as needed for agitation;
- Midazolam 2.5mg subcutaneously as a stat dose or via a subcutaneous pump, 10mg over 24 hours at the end of life. This may benefit sleep disorders, mental disturbance and terminal restlessness.

REFERENCES


situation, and identifying the patient’s normal bowel habit and initiation of aperients is essential. If the patient has fair renal function then magnesium hydroxide with senna is recommended. Where the patient has poor renal function lactulose and senna should be used, but these require a fair fluid intake. Regular bowel care, including suppositories or enemas may be needed, because the energy to push may be absent.

Continence problems

Continence problems may occur as a result of exhaustion, loss of tone and continued use of diuretics. The practicalities of getting to the toilet need to be addressed, and the use of continence aids should be considered. The in dignity of the situation can contribute to a patient’s anxiety and depression, and cleanliness and comfort must be maintained wherever possible. The use of urinary catheters and urethral sheaths should also be considered.

Oedema

Fluid overload may be relieved with appropriate doses of diuretics. For example, a 24-hour intravenous infusion of frusemide can work well for cases of intractable oedema where oral doses are inappropriate. However, this may also mean 24-hour diuresis, with frequent visits to the toilet, so this technique must be used sparingly or a catheter or urethral sheath considered as well. It is essential to evaluate the need for continued monitoring of blood pressure and kidney function.

Spironolactone as a potassium-sparing diuretic is particularly useful for oedema control, especially when ascites and liver congestion are a problem, but care is needed if renal function is poor; potassium levels must be monitored to ensure that they do not rise too high. Spironolactone 25mg once daily is beneficial for symptom control in stage IV heart failure (Pitt et al, 1999).

Metolazone is effective as a powerful diuretic and is usually added to loop diuretics, but again close monitoring of renal function may be necessary. Increased doses of diuretics can be the cause of muscle cramps and in this situation quinine tablets or tonic water may help. Often oedema is not a problem at the very end stage, but there is a risk of dehydration.

Pain

Pain may be caused by pressure from fluid overload, cardiac (ischaemic) pain, or generalised discomfort as a result of lack of movement. Osteo- or rheumatoid arthritis is best controlled with simple analgesics such as paracetamol; non-steroidal anti-inflammatory drugs should be avoided. The pain scale used in palliative cancer care can be used for this group of patients (WHO, 1990).

Basic comfort measures will help. For example, elevating the legs to prevent dependent oedema or aid drainage can be uncomfortable as it may result in increased pressure around the internal organs owing to abdominal fluid, hepatic congestion or constipation. Thus, the patient may find a recliner chair used with a lower stool or cushions on the floor with intermittent elevation of the feet more comfortable. Increasing nitrates may help angina but may cause hypotension. Again, morphine sulphate can be a valuable analgesic and sedative, aiding relaxation and sleep. Addressing the issues contributing to anxiety will also help.

Skin

Tissue viability is poor at end stage, especially in the legs and sacrum if oedema has been a problem. As the skin is clearly at risk of breakdown, it is essential to maintain good skin care, as well as to use diuretics. Use of compression hosiery (when recommended by the doctor) may help and referral to the vascular technician may be necessary for Doppler investigations.

This approach, however, is not beneficial if the patient has gross leg oedema. In this condition, fluid can seep through the tissue — this can be distressing, uncomfortable and will create an ideal environment for infection. If fluid seepage is excessive, the legs should be exposed and rested on soft towels. Dressings can then be applied once seepage has eased. The following are suggestions for daily or twice daily dressings:

- Apply tubular gauze bandage directly on the skin: blue line for normal size, yellow line for larger legs;
- Apply wadding bandage to absorb fluid;
- Apply crepe bandage, not compression, loosely;
- Finally, place tubular gauze bandage over all dressings to hold all the layers in place.

It is essential to apply all dressings from toe to knee. If the skin is broken, non-adhesive dressings should be applied first. If the wound is necrotic or sloughy, use gel and non-adhesive dressings under the tubular gauze. Refer to appropriate wound-care dressing guidelines.

Pruritis can be severe and can result from liver congestion or kidney failure, but can also be due to medication. The patient should be advised to keep the skin cool and avoid hot baths, strong sunlight and rough clothes. Box 3 contains measures that may reduce discomfort, but always check with the doctor or specialist first.

**Conclusion**

Full individual assessment with the involvement of the patient is essential for identifying their physical, psychological and spiritual needs. Basic nursing care applied appropriately, together with experience and knowledge from the existing palliative care services, will contribute towards meeting the aims of the national service framework. Problems still remain, including defining end stage

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**Box 3. Treatments for Pruritis**

- Sedating antihistamines: chlorpheniramine
- Non-sedating antihistamines: acrivastine
- Cimetidine 400mg twice daily
- Menthol 0.5 per cent or 1 per cent in aqueous cream
- Topical steroid cream
- Cooling leg gel; peeled cucumber, applied topically
- Calamine lotion (in aqueous cream)
- Emollient bath additive

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**REFERENCES**