Palliation of lung cancer symptoms

Specialist palliative care improves quality of life and leads to a reduction in hospital readmission, writes Dr Elaine Wallace

The prevailing attitude to lung cancer, even among healthcare professionals, is one of pessimism due to poor overall survival rates. Irish five-year survival figures for lung cancer are approximately 8% for men and 10% for women.1 Lung cancer is the most common cancer worldwide.2 It is also the leading cause of cancer mortality in Ireland, representing approximately 20% of all deaths due to cancer.1

Palliative care is defined as “an approach that improves the quality of life of patients and their families facing the problems associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.”3

Palliative care aims to achieve the best quality of life for the patient and their family. Involvement of specialist palliative care has been shown to result in improved quality of life, improved symptom control and a reduction in hospital readmission rates.4-11

A recent trial of early versus standard referral to specialist palliative care has shown that early palliative care intervention results in improved quality of life and survival.1 All patients with lung cancer should therefore have ease of access to a specialist palliative care team.

Symptoms

Patients with lung cancer are reported to experience more symptom distress than other types of cancer.4 These symptoms may differ at various points in the disease trajectory and among various treatments. In addition symptoms often cluster together.4

Patients with lung cancer also very often have multiple comorbidities. The histologic type, biological behaviour and the anatomic location of the cancer determines the type and severity of symptoms experienced. As a high symptom burden can impact on a patient’s ability to perform activities of daily living, regular symptom assessment will help patients achieve the highest functional status and maintain quality of life.

Lung cancer symptoms requiring palliation include those caused by the primary tumour itself (ie. pain, dyspnoea, haemoptysis or cough). Locoregional metastases may also cause symptoms (ie. superior vena cava obstruction or symptomatic pleural effusion). Symptoms may also be present due to distant metastases (ie. to bone, brain or liver).

Complications of lung cancer treatment, ie. radiotherapy and chemotherapy, and co-morbid conditions, such as chronic obstructive pulmonary disease (COPD) and congestive cardiac failure, may also contribute to respiratory symptoms.

Pain

Pain is a common symptom in lung cancer patients with up to 75% of patients reported to experience pain.11 Inadequate pain management is however prevalent, and can be harmful to patients, as well as being costly.14 The potential causes of cancer pain are multiple and can include disease progression and related pathology (eg. nerve damage), surgery, and toxic effects of chemotherapy or radiotherapy. Effective management of cancer pain can be achieved in most patients.

The World Health Organisation (WHO) analgesic ladder is considered the gold standard in pain control.15 This approach is based on the assumption that pain will increase as the illness progresses and that the increase in pain intensity should be matched by the stepwise introduction of progressively stronger analgesics. Guiding principles recommend that analgesics be administered:

• By the mouth – the oral route is preferred unless there is a contraindication (ie. nausea and vomiting)

• By the clock – analgesia should be given on a regular schedule rather than on an ‘as required’ basis

• By the ladder – this provides a rational simple stepwise approach to pain. The level at which the patient enters the ladder is determined by the pain intensity.

• An individualised approach – individual dose titration must be used for each patient. The aim is to relieve symptoms with minimal analgesic side effects.

• Attention to detail – a continuous cycle of prescription, review, and titration is necessary.

The use of opioids for moderate to severe pain is dictated by therapeutic need and response, not by the brevity of prognosis. Opioids for moderate to severe pain do not have a ceiling effect, thus there is no upper limit.

Morphine remains the gold standard and the most frequently prescribed opioid for moderate to severe pain.14 It is the first choice opioid for reasons of familiarity, availability and cost, rather than proven superiority.16

The dose should be titrated until effective analgesia is achieved or side effects prevent further escalation. Adjuvant medications may be used at any stage to enhance the efficacy of opioids. Non-pharmacological interventions, including aromatherapy, massage and relaxation also have a role in achieving pain control.

Dyspnoea

Dyspnoea is the subjective experience of difficulty breathing. Up to 90% of patients with non-small cell lung cancer (NSCLC) experience dyspnoea towards the end of life, regardless of the cancer stage. Dyspnoea can significantly impact on a patient’s physical, social and psychological wellbeing.11

The treatment of dyspnoea should follow a stepwise approach, starting with treatment of the specific cause, if one can be identified.17,18 If the specific cause of the dyspnoea cannot be identified, pharmacological treatments such as bronchodilators, corticosteroids, anxioytics and opioids should be initiated.

It is unclear if all opioids are equally efficacious in reducing
dyspnoea perceptions in lung cancer patients. Non-pharmacological interventions in the management of dyspnoea should also be considered.

Cough

Cough is a frequent and distressing symptom in patients with lung cancer.13 Patients should be evaluated for potentially reversible causes. If the patient also has underlying COPD, standard bronchodilator therapy may help alleviate cough and any associated wheeze.13 Cough suppressants may be effective in a small number of patients. Opioids are also effective cough suppressants in patients with lung cancer.13

Hoemoptysis

Hoemoptysis is usually interpreted as a serious symptom by patients and is the presenting symptom in 7%-10% of lung cancer patients.13,19 Approximately 20% of patients will have hoemoptysis at some time during their clinical course with 3% having terminal massive haemoptysis.20-23 Bronchoscopy is used for both diagnostic and therapeutic purposes and may identify the source of bleeding which can be treated with laser or electrocautery.13 External beam radiotherapy may also be used in the management of bleeding.13

Malignant pleural effusion

Malignant pleural effusions occur in 7%-15% of lung cancer patients with dyspnoea being the most common presenting symptom.24-26 Other symptoms caused by a pleural effusion include orthopnoea, cough, chest discomfort and pain.13 Therapeutic pleural drainage (thoracocentesis) should be performed. In patients with symptomatic effusions that recur after thoracocentesis, chest tube drainage or talc pleurodesis should be considered.13

Bone metastases

The presence of bone metastases predicts the presence of pain and is the most common cause of cancer-related pain. In addition to pain, common complications include loss of mobility, skeletal fractures, hypercalcaemia and spinal cord compression, all of which may impair a patient's quality of life. A multifactorial approach to the management of bone metastases is recommended, incorporating radiotherapy, bisphosphonates and radioisotopes, coupled with analgesics.13 Bone pain not complicated by any neural involvement is a somatic pain, and is typically opioid responsive.

Brian metastases

Brain metastases occur in approximately one-third of patients with NSCLC. In 10% of patients with small cell lung cancer (SCLC), brain metastases are the presenting clinical feature.22,24 Neurologic deterioration can occur quite quickly if brain metastases are not treated.13 Two-thirds of patients will have improvement in neurologic signs and symptoms with the use of corticosteroids.28 Patients with multiple brain metastases are generally treated with whole-brain radiotherapy.

Spinal cord compression

Spinal cord compression occurs in 3%-5% of patients with advanced cancer, with cancers of the breast, prostate and lung accounting for 40%. It is considered a medical emergency with the outcome depending on the symptoms at presentation and the speed of treatment.13 Therapeutic options include corticosteroids and radiotherapy.

Dexamethasone is given in high doses initially and may bring about early improvement in physical signs and pain relief by reducing peritumour inflammation. Radiotherapy brings about improvement more slowly by reducing tumour size. Surgical decompression may be considered in certain circumstances.

Quality of life

The majority of patients with lung cancer will have one or more symptoms or complications from metastatic disease. These symptoms can severely alter the patient’s quality of life. The introduction of palliative care is applicable early in the disease trajectory in conjunction with other cytotoxic treatments. Symptoms should be assessed regularly and appropriate interventions initiated by the full multidisciplinary team. These initiatives will result in improved palliation and will ultimately improve the patient’s quality of life.

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References