Breathlessness

Scottish Palliative Care Guidelines

Healthcare Improvement Scotland

Close allsections

Introduction

Breathlessness is a common symptom for patients with advanced cancer, chronic obstructive pulmonary disease (COPD), pulmonary fibrosis and heart failure. It can be associated with any combination of physiological, psychological, social and spiritual factors. The impact and distress caused by breathlessness is often underestimated.

Assessment

- Undertake a holistic assessment using a multi-professional approach.
- Ask the patient to rate symptom severity and assess the level of associated distress/anxiety use appropriate scales i.e. MRC Dyspnoea Scale.
- Explore the patient's understanding of the reasons for breathlessness, fears, impact on functional abilities and quality of life.
- Clarify pattern of breathlessness, precipitating/alleviating factors and associated symptoms.
- Look for any potentially reversible causes of breathlessness, such as infection, pleural effusion, anaemia, arrhythmia, pulmonary embolism, bronchospasm or hypoxia (check oxygen saturation levels using pulse oximeter).
- Determine if treatment of the underlying disease is appropriate. Seek advice if in doubt.
- If in last days of life, refer to Care in the last days of life guideline.

Management

- Treat any potentially reversible causes if appropriate.
- Optimise current therapy (non-pharmacological and pharmacological management).
- Acknowledge fear and anxieties and provide supportive care. For example, offer verbal explanation of symptom and written information.

Management of superior vena cava obstruction or stridor

- If stridor or signs of superior vena cava obstruction (SVCO), refer urgently to the appropriate specialist for consideration of, for example, stenting or radiotherapy.
- Give high-dose corticosteroids:

    - †dexamethasone 16mg orally or equivalent parenteral dose, or
    - †prednisolone 60mg orally
    - consider gastric protection

Management of people with breathlessness related to end-stage heart failure

- Patients with breathlessness or oedema related to heart failure, who are no longer able to take, or are not responsive to, oral diuretics may achieve symptom benefit through continuous sub-cutaneous infusion (CSCI) of furosemide.
- The dosing of CSCI furosemide would be a 1:1 conversion from the oral dose (i.e. oral 120mg daily would be 120mg/24hrs CSCI), dosing may be limited by the available volume that can be given via this route.
- Furosemide injection should be (if needed) diluted with sodium chloride 0.9% and the solution should be protected from light. A yellow solution should be discarded.
- Monitoring could include patients' weight, standard (BP, pulse respiratory rate) observations and bloods (U+E's) but only as indicated by the patient's condition. Regular infusion site monitoring is advised.

Non-pharmacological management

- Consider a self-management plan (+/- support from appropriate other health professionals)
    - Including smoking cessation advice if appropriate, advise smoke free environment where possible
- Support and encourage coping and breathlessness management techniques such as pursed lip breathing, using a handheld fan/opening a window, positioning, and strategies to manage anxiety and fatigue
- Advice to manage and try to maintain activity levels
- Consider the need for equipment and package of care
- Consider referral to Allied Health Professionals for palliative rehabilitation and management of breathlessness and function
    - Refer to breathlessness support and rehabilitation services (such as Pulmonary Rehabilitation or Hospice) as appropriate
- Acupuncture and/or topical menthol, e.g. menthol cream applied to face and chest, has shown some benefits in helping to manage breathlessness so should be considered when available.

Medication

Pharmacological management

Opioids:

- Can reduce breathlessness at rest and in the end-of-life phase.
- Give as a therapeutic trial; monitor patient response and side effects.
- Consider proactive prescribing for constipation, and nausea and vomiting.

Tables are best viewed in landscape mode on mobile devices

Patient	Drug	Route	Dose	Frequency
Has not taken opioid before and is able to take oral medication	†Immediate release morphine	Oral	2mg; titrate by 30 to 50% if required and tolerated	Every 4 to 6 hours and/or 2 hourly as required
Has not taken opioid before and is unable to take oral medication	†Morphine sulfate	Subcutaneous	1mg to 2mg; titrate as above	Every 4 to 6 hours and/or 2 hourly as required
Takes an opioid regularly for pain control	• Use the existing immediate-release breakthrough analgesic dose (oral if able, or subcutaneous bolus injection equivalent) for the relief of breathlessness • A maximum of six doses can be taken in 24 hours for all indications (pain, breathlessness and cough) • Titrate both regular and breakthrough dose according to response			
Is frail/elderly	†Immediate release morphine	Oral	1mg to 2mg; titrate cautiously	Every 6 to 8 hours as required – monitor closely for side effects
Has impaired renal function	Refer to Renal care guideline			
Cannot tolerate morphine due to side effects	Second-line opioids may be effective for breathlessness (refer to Choosing and changing opioids guideline)			
Has ongoing breathlessness	Try modified release (long-acting) †oral morphine, plus a 4 hourly equivalent dose of immediate			

	release †oral morphine as required for additional episodes of breathlessness

Corticosteroids:

- Trial †dexamethasone 8mg to 16mg daily orally (or parenteral equivalent) for lymphangitis or tumour-associated airway obstruction. Consider gastric protection.
- Unless starting emergency therapy, give corticosteroids in the morning.
- Review after 1 week and reduce gradually to lowest effective dose where appropriate.
- If no effect, stop treatment.

Benzodiazepines:

- May relieve anxiety and panic associated with severe breathlessness but are less effective than opioids for breathlessness and should be a third-line treatment for patients with symptoms unresponsive to non-drug measures and opioids. The following can be considered:
    - lorazepam (scored tablet) sublingual 500 micrograms, given 4 to 6 hourly as required (The Genus, PVL and TEVA brands are all blue, oblong, scored tablets and are suitable for †sublingual use).
    - diazepam oral 2mg to 5mg at night, if there is continuous distressing anxiety.
    - †midazolam subcutaneously 2mg to 5mg, given 4 to 6 hourly as required, if oral or sublingual routes are not available.

Oxygen:

- Should only be given after careful individual patient assessment, including if the individual or co-habittors/visitors are smokers.
- Important to avoid psychological dependence.
- If oxygen saturation is less than 92%, consider a trial of oxygen for symptom relief. Be aware that there may be a poor relationship between hypoxaemia and breathlessness and response to oxygen.
- For emergency oxygen treatment in adults in hospital please refer to local guidelines where applicable.

Inhaled therapy:

- Reassess current inhaler technique and appropriateness of devices.
- Nebulised †sodium chloride 0.9% 5ml as required may aid expectoration.
- If wheeze or COPD, give 2.5mg to 5mg salbutamol nebules four times per day.
- If still wheezy, add ipratropium bromide 250 microgram to 500 microgram nebules four times per day.

Practice points

- Non-pharmacological management techniques that help patients and families cope are essential. Using a self-management plan can help with symptom relief.
- However, as the illness progresses, medication to relieve breathlessness may be required.
- Starting opioids at a low dose and titrating carefully is safe and does not cause respiratory depression in patients with cancer, COPD or heart failure.

Patient/carer advice points

- Becoming breathless on exertion is not harmful and will settle with rest after a few minutes.
- It is important to maintain activity levels.
- Keep rooms well ventilated: open a window, use a fan and keep the face cool.
- Carefully explain that while breathlessness, anxiety and panic are distressing they do not cause harm or worsen the patient's condition.

Resources

- Enhanced Palliative Care online learning module: https://learn.nes.nhs.scot/64382/pharmacy/enhanced-palliative-care-module
- Macmillan Cancer Support: http://www.macmillan.org.uk
- Roy Castle Lung Foundation: http://www.roycastle.org
- Chest Heart and Stroke Scotland: http://chss.org.uk
- British Lung Foundation: https://www.blf.org.uk/
- NHS Inform: https://nhsinform.scot/care-support-and-rights/palliative-care/symptom-control/breathlessness

References

Allard P, Lamontagne C, Bernard P, Tremblay C. How effective are supplementary doses of opioids for dyspnea in terminally ill cancer patients? A randomized continuous sequential clinical trial. J Pain Symptom Manage. 1999;17(4):256-65. Available from: https://doi.org/10.1016/s0885-3924(98)00157-2

Booth S, Bausewein C, Higginson I, Moosavi SH. Pharmacological treatment of refractory breathlessness. Expert review of respiratory medicine. 2009;3(1):21-36. Available from: https://doi.org/10.1586/17476348.3.1.21

Chan KS, Tse DMV, Sham MMK, Thorsen AB. Palliative medicine in malignant respiratory diseases. In: Hanks G, Cherny N, Christakis NA, Fallon M, Kaasa S, Portenoy RK, editors. Oxford Textbook of Palliative Medicine. 4th ed. Oxford: Oxford University Press; 2010. Available from: https://doi.org/10.1093/med/9780198821328.001.0001

Dorman S, Jolley C, Abernethy A, Currow D, Johnson M, Farquhar M, et al. Researching breathlessness in palliative care: consensus statement of the National Cancer Research Institute Palliative Care Breathlessness Subgroup. Palliat Med. 2009;23(3):213-27. Available from: https://doi.org/10.1177/0269216309102520

Johnson MJ, Abernethy AP, Currow DC. Gaps in the evidence base of opioids for refractory breathlessness. A future work plan? J Pain Symptom Manage. 2012;43(3):614-24. Available from: https://doi.org/10.1016/j.jpainsymman.2011.04.024

Mahler DA, Selecky PA, Harrod CG, Benditt JO, Carrieri-Kohlman V, Curtis JR, et al. American College of Chest Physicians consensus statement on the management of dyspnea in patients with advanced lung or heart disease. Chest. 2010;137(3):674-91. Available from: https://doi.org/10.1378/chest.09-1543

Rocker G, Horton R, Currow D, Goodridge D, Young J, Booth S. Palliation of dyspnoea in advanced COPD: revisiting a role for opioids. Thorax. 2009;64(10):910-5. Available from: https://doi.org/10.1136/thx.2009.116699

Simon ST, Bausewein C, Schildmann E, Higginson IJ, Magnussen H, Scheve C, et al. Episodic breathlessness in patients with advanced disease: a systematic review. J Pain Symptom Manage. 2013;45(3):561-78. Available from: https://doi.org/10.1016/j.jpainsymman.2012.02.022

Simon ST, Higginson I, Booth S, Harding R, Weingartner V, Bausewein C. Benzodiazepines for the relief of breathlessness in advanced malignant and non-malignant diseases in adults. 2016 [Accessed 16 October 2024]; Available from: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD007354.pub3/epdf/standard.

Spathis A, Davies HE, Booth S. Respiratory Disease: From advanced disease to bereavement. 5th ed. Oxford: Oxford University Press; 2011. Available from: https://doi.org/10.1093/med/9780199564033.001.1

Howard P and Willcock A. Palliative Care Formulary. England: Medicines Complete, 2024. [Accessed 16 October 2024]; Available from: Palliative Care Formulary | Pharmaceutical Press