

Breathlessness (Dyspnea)

What Is It?

A subjective sensation of difficult or uncomfortable breathing

- It is estimated that 50-70% of all terminal cancer patients experience dyspnea.
- Breathlessness inhibits the patient's ability to engage in normal activities which can lead to social isolation and decreased quality of life.
- Breathlessness is usually inadequately assessed and therefore poorly managed.
- As with pain, the patient is the only one who is able to determine the level of breathlessness experienced.
- Breathlessness is more than just a symptom of disordered breathing, instead it is a complex interplay between physical, psychological and emotional factors.

How Does It Happen?

- Advanced and/or acute illnesses that prevent airflow such as chronic obstructive pulmonary diseases including asthma, emphysema and pulmonary embolisms.
- Changes in pulmonary compliance &/or capacity that interfere with the workload of breathing such as interstitial fibrosis, congestive heart failure, intrinsic respiratory muscle weakness, ascites, pleural effusions and superior vena cava obstruction.
- Airway obstruction resulting from tumours of the trachea, larynx, thyroid, mediastinum, bronchus as well as traheoesophageal fistulas and pulmonary embolisms.
- Treatment induced conditions including radiation fibrosis of the lung, chemotherapy damage (Bleomycin), infections and anemia.

How Do We Identify It?

History should include:

- Patients self report of breathlessness to measure severity. The use of visual analogue scale (0-10 scale) is essential here.
- The impact of the breathlessness on the person's quality of life.
- Alleviating and exacerbating factors.
- The meaning person attaches to the breathlessness (ie. "I'm dying").

Resources

A.

"The experience of breathlessness in lung cancer" (1999)

B.

"Dyspnea: Pathophysiology and Assessment" (1997)

C.

"The experience of dyspnea in late-stage cancer" (1993)

D.

"Dyspnea in the Advanced Cancer Patient" (1998)

How Do We Identify It? con't

Physical exam should include:

- Assessment of the rate, depth, pattern of respirations
- Use of accessory muscles for breathing
- Lung sounds—presence or absence of wheezes, crackles, rales or absent breath sounds
- Cardiac function should also be assessed (i.e. edema, hr., presence of arrhythmias)

How Do We Treat It?

- The most appropriate treatment of breathlessness is determined following a thorough history, physical exam and diagnostic tests. Interventions are aimed at treating the underlying causes with consideration of the patient's life expectancy, weighing relative burdens and benefits.

Nursing Options

- Teach breathing techniques such as diaphragmatic and pursed lip breathing.
- Encourage use of relaxation methods such as visualization, meditation, distraction techniques, prayer, therapeutic touch, use of music.
- Provide reassurance. Further explore what meaning the patient attaches to the breathlessness and try to help the patient find a less frightening significance for the symptom (Handbook pg. 240).
- Help patient to find a comfortable position (this is usually sitting or semi-sitting). Provide patient with teaching pamphlet to learn other positions while at home.
- Ensure that the room is well ventilated. The use of a fan blowing a breeze over the patient's face is often helpful.

Medical Options

Medical interventions are often inconsistent. Listed below are some of the common medications and interventions

- Morphine sulphate is effective in alleviating the symptoms of breathlessness (and in doing so, decrease anxiety), decreasing the ventilatory response to hypoxia and hypercapnea, decreasing oxygen consumption at rest and exercise and decreasing the respiratory drive and rate. Opiates also produce an antitussive benefit. (con't)

Resources

E.

Breath Sounds
www.wilkes.med.ucla.edu/lungintro.htm

F.

"Ethical care at the end of life"
Latimer (1998)

G.

Progressive Muscle Relaxation
Script

H.

BCCA Dyspnea Pamphlet
<http://www.bccancer.bc.ca/PPI/PSMPC/Dyspnea/SelfCare/default.htm>

I.

"Behavioral Interventions
for Lung Cancer-Related
Breathlessness"
(2000)

J.

"Cancer nursing practice
development: understanding
breathlessness"

Medical Options con't

- Many health care providers oppose the use of opiates for dyspnea. This opposition comes from a lack of knowledge of the effectiveness of opioids for dyspnea, lack of clinical experience using opioids to treat dyspnea and a reflexive avoidance of any drug that potentially depresses respirations. When morphine is used for dyspnea it should be titrated to that symptom.
- Corticosteroid medications can decrease exercise-induced shortness of breath, shortness of breath due to airway obstruction, lymphangitic carcinomatosis, superior vena cava obstruction, chronic pulmonary disease and radiation pneumonitis.
- Bronchodilators and expectorants can be used to treat “asthma-like” symptoms and to increase the patient’s ability to expectorate tenacious sputum.
- Anxiolytic agents such as benzodiazepines can be used to treat anxiety which exacerbates breathlessness—*caution as some patients experience these medications as increasing anxiety, not decreasing it. Midazolam is a powerful anxiolytic usually reserved for end stage dyspnea.
- Diuretics can be considered if an underlying cause is associated with increasing volumes.
- Anticholinergics such as scopolamine or atropine can be used to decrease secretions but only if death is imminent.
- Oxygen—a recent system review of the use of oxygen for dyspnea has proven this therapy to be of no physiologic benefit. However, family members and SO may find some psychological comfort with the use of O2, but O2 is an expensive therapy so should not be encouraged when futile.
- RT, chemo and antibiotics when appropriate.

How Do We Know That We Are Making A Difference?

- Patient reports feeling less breathless.
- Patients should report a greater sense of control or less anxiety.
- Redo VAS score (0-10) should indicate decreased severity.
- Physical assessment should indicate reduced work of breathing eg: less rapid rate, less use of accessory muscles.
- Patients performing breathing exercises as taught.

Resources

K.

“Management of dyspnea in advanced cancer patients” (1999)

L.

“Use of oxygen in patients with advanced cancer” (2003)

M.

“Dyspnea” Kuebler, K. (2002)

Just in Time Training - Bibliography

These articles, chapters or documents may be obtained through the BC Cancer Agency.

Please contact Jodi Graham at:

jgraham@bccancer.bc.ca

250-519-5573

- A.** O'Driscoll M, Corner J, Bailey C. The experience of breathlessness in lung cancer. *Eur J Cancer Care (Engl)* 1999;8(1):37-43.
- B.** Ripamonti C, Bruera E. Dyspnea: pathophysiology and assessment. *J Pain Symptom Manage* 1997;13(4):220-32.
- C.** Roberts DK, Thorne SE, Pearson C. The experience of dyspnea in late-stage cancer. Patients' and nurses' perspectives. *Cancer Nurs* 1993;16(4):310-20.
- D.** Dudgeon DJ, Lertzman M. Dyspnea in the advanced cancer patient. *J Pain Symptom Manage* 1998;16(4):212-9.
- E.** Breath Sounds www.wilkes.med.ucla.edu/ungintro.htm
- F.** Latimer EJ. Ethical care at the end of life. *CMAJ* 1998;158(13):1741-7.
- G.** McCaffery M, Beebe A. Progressive relaxation script. In: *Pain : clinical manual for nursing practice*. St. Louis, MO: C.V. Mosby Co.; 1989. p. 194, 204-205.
- H.** BCCA Dyspnea Pamphlet
<http://www.bccancer.bc.ca/PPI/PSMPCDyspnea/SelfCare/default.htm>
- I.** Gallo-Silver L, Pollack B. Behavioral interventions for lung cancer-related breathlessness. *Cancer Pract* 2000;8(6):268-73.
- J.** Krishnasamy M, Corner J, Bredin M, Plant H, Bailey C. Cancer nursing practice development: understanding breathlessness. *J Clin Nurs* 2001;10(1):103-8.
- K.** Ripamonti C. Management of dyspnea in advanced cancer patients. *Support Care Cancer* 1999;7(4):233-43.
- L.** Gallagher R, Roberts D. Use of oxygen in patients with advanced disease. Clinical practice guidelines project : the Learning Centre for Palliative Care. unpublished observations 2003.
- M.** Spencer P. Dyspnea. In: Kuebler KK, Esper P, editors. *Palliative practices from A-Z for the bedside clinician*. Pittsburgh PA: Oncology Nursing Society; 2002. p. 97-99.

Additional Resources:

Iwamoto R. Lung cancer. In: Nevidjon BM, Sowers KW, editors. *Nurse's guide to cancer care*. Philadelphia: Lippincott; 2000. p. 55-56.

Waller A, Caroline NL. Dyspnea. In: *Handbook of palliative care in cancer*. 2nd ed. Boston: Butterworth-Heinemann; 2000. p. 239-244.