Managing Dyspnea at End of Life: A Case Study

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Abstract

The focus of this case study will be the management of dyspnea in the patient with a life-limiting illness. This case study will present, Mrs. Jones, a 64 year old African American female with a diagnosis of Stage 4 ovarian cancer who was experiencing significant symptom burden related to dyspnea, and to identify barriers to effective symptom management, then discuss evidence based rational treatment.

Introduction

Dyspnea can be frightening, debilitating, and affect the patient’s quality of life (Maison, NHPCO, 16). The symptom of breathlessness can be distressing to the patient, but the family of caregiver as well. Beyond the physical toll, dyspnea often becomes increasingly anxious, thus, “...helping patients understand the connection between their overwhelming anxiety and the dyspnea they are experiencing can be essential if we ever hope to provide them with effective symptom control” (Maison, 17).

Working Definitions

Dyspnea: A subjective awareness of breathlessness. 
Edmonton Symptom Assessment Scale (ESAS). The ESAS Dyspnea Scale is numeric rating scale that asks the patient to self-report a number, with “0” indicating “no dyspnea” and “10” indicating the worst imaginable dyspnea.

Hospice: Comprehensive service for patients who have a life-limiting illness with a six month or less life expectancy. It is a holistic service that addresses physical, mental, emotional and spiritual needs by the use of a multidisciplinary team.

Malignant Ascites: the presence of malignant cells in the peritoneal cavity. It is often associated with symptoms of dyspnea and other symptoms such as ascites.

Background

Mechanics of Breathing

• Involves the exchange of gases
• Chemoreceptors
• Mechanoreceptors
• Mismatch of outgoing signals and incomingafferent information.
• Involves: respiratory center of brain, chest wall, lungs & upper airway, diaphragm.
• Changes lead to dyspnea

Challenges

• No defined or accepted standard to measure dyspnea.
• Dyspnea is often unrecognized by patients, families, and providers.

Assessments

• Past medical history
• Current disease process
• Current diagnoses
• Verbal report from patient of dyspnea
• Vital Signs, Pulse, Oxygenation
• Observation of work of breathing
• General physical assessment

Dyspnea Scales-ESAS

Patient Case Presentation

Mrs. Jones was a 64 year old widowed African-American female. She had two adult daughters who were involved in her care. In April 2013, Mrs. Jones was diagnosed with ovarian cancer. She underwent 2 cycles of chemotherapy. In June 2013, Mrs. Jones was admitted to a local hospital with a diagnosis of right lower extremity cellulitis. Additional medical history included: Deep Venous Thrombus (DVT) Coumadin therapy (discontinued secondary to Coumadin toxicity) Diabetes Mellitus (Sliding Scale Insulin based on glucose level) Renal Failure Lymphedema Anemia (transfused with 2 units of packed cells) Obesity An infectious disease consult occurred and Mrs. Jones was started on Ancel Intravenous (IV). During her hospitalization, Mrs. Jones experienced a rapid rise in abdominal girth accompanied by increasing shortness of breath. She was placed on oxygen therapy at 2L/min. Because of the rapid fluid accumulation in her abdomen, a paracentesis was performed 2 occasions, each resulting in the drainage of a large volume of fluid.

Mrs. Jones was diagnosed with Malignant Ascites secondary to her ovarian cancer.

Her prognosis was very poor. A hospice consult was ordered. After the explanation of hospice services and philosophy of comfort care and symptom management, the patient decided to be discharged home on the following day with hospice care. The next day, the hospice Nurse Practitioner made a follow up visit and discovered:

• Patient had made a rapid decline overnight.
• Patient was in respiratory distress.
• Patient was in a decompensated state with the sensation of not being able to breath.

Evidenced Based Dyspnea Management

Mrs. Jones was experiencing the worse imaginable dyspnea with her symptom out of control and it was not appropriate to proceed with plans to discharge her home. Oxygen therapy via venti-mask was the only intervention ordered to manage her dyspnea. Mrs. Jones and the staff nurse providing care for her were not aware of current evidence based treatment of dyspnea in a patient with a life limiting illness. Mrs. Jones needed these interventions to palliate her dyspnea and the accompanying anxiety.

Evidenced Based Symptom Management:

• Evidence based practice starts with identifying reversible causes and providing appropriate interventions.
• Paracentesis had provided minimal relief, but was no longer effective.
• There were no other treatable reversible causes.
• “As research has borne out, the opiates (such as morphine) are the medications of choice for the symptomatic relief of dyspnea” (Maison, 20).
• The use of anxieties is often needed to treat the anxiety that accompanies the sensation of not being able to breathe.
• Other pharmacologic agents may be indicated include: inhalers, Nebulizer medications or anticholinergic agents with the indication dependent upon the causative factors.
• Oxygen therapy: “beneficial effects on the outcomes of patients...who are hypoxic...”
• “Hypoxia may be a causative factor...that oxygen does not improve clinical measures of dyspnea” (Swetz, K., Carey, E., Bundrick, J. 2012). 
• Nonpharmacological Interventions such as: elevation of the head of the bed; positioning with multiple pillows; cool room; a fan blowing near the face.; or teaching pursed lip breathing

Barriers to Effective Symptom Management

Patients and families often have myths or misconceptions about the use of morphine.

Prescribers and healthcare professionals often have a knowledge deficit regarding evidenced based symptom management for the patient with a life-limiting illness.

Numerous studies have reported opiates as the most effective pharmacological management of dyspnea, but patients may fear addiction, nurses fear respiratory depression or “last dose” effect, and prescribers are not familiar with appropriate dosing to effectively manage this symptom.

Last dose effect is a concern to nurses when they provide medication such as opiates intended for the relief of pain and suffering, and the patient dies shortly after the administration of the medication. Some nurses fear the “last dose” perhaps hastened the death of the patient.

Discussion and Conclusion

Because of the severity of her dyspnea, her oncologist started a Morphine drip at 2mg/hr. continuously to be titrated by 50% every one hour as needed until symptom relief occurred. By the second day, Mrs. Jones was comfortable enough to sit comfortably in order to manage her dyspnea. Ativan 2-2mg IV every 4 hours as needed for anxiety was ordered. Her oxygen therapy was continued with a ventimask at 50%. Education and emotional support was provided to Mrs. Jones and her daughters. Mrs. Jones was able to die comfortably and with dignity. Dyspnea is a common symptom experienced by patients with a life-limiting illness and great unmet quality of life. Before effective symptom management can occur, the patient must be thoroughly assessed, reversible causes identified and managed, fears and concerns must be addressed and evidence based education provided to the patient, family and healthcare professionals. Current evidenced based practices report the most effective pharmacological interventions in the management of dyspnea is the use of opiates. Because dyspnea is often accompanied by anxiety, the symptom of anxiety should also be addressed and managed.

Nursing Implications

Methods to overcome Barriers to Effective Symptom Management:

• Diop Myths by providing facts.
• Identify and address fears.

Education must be provided about tolerance and addiction.

• Nurses need to be educated that “There is no evidence that the appropriate use of morphine hastens death through respiratory depression. In fact, giving morphine appropriately can result in longer survival by reducing the physical and psychological distress and exhaustion” (Brennan, 2011, 135).

• Provide nurses education on symptom management for EOL care.

• Provide Patient Positioning Guidelines from Professional Organizations such as the Hospice and Palliative Nurses Association (HPNA) which report minimal risk when opiates are administered correctly by experienced nurses.

• Prescribers, too, need evidence based guidance for the appropriate use of opiates in symptom management.

• Additional research is needed in the effectiveness of Nonpharmacological interventions.

References


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