

FAST FACTS AND CONCEPTS #27 DYSPNEA AT END-OF-LIFE

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Introduction Dyspnea is defined as a subjective sensation of difficulty breathing. This *Fast Fact* reviews key elements in the assessment and treatment of dyspnea near the end-of-life.

Etiology The causes of dyspnea include a wide spectrum of serious lung or heart conditions, anemia, anxiety, chest wall pathology, electrolyte disturbances or even urinary retention or constipation.

Assessment Looking for simple problems is always warranted: is the Oxygen turned on? Is the tubing kinked? Is there fluid overload from IV fluids or TPN? Is dyspnea part of an acute anxiety episode, severe pain, constipation or urinary retention? Is there a new pneumothorax or worsening pleural effusion? Understanding 1) where patients are at in the dying trajectory, and 2) their identified goals of care, is essential to guide the extent of workup to discover reversible causes. If the patient is clearly dying (see *Fast Fact* #3), and the goals of care are comfort, then pulse oximetry, arterial blood gases, EKG, or imaging are not indicated.

Treatment

- **General measures** Positioning (sitting up), increasing air movement via a fan or open window, and use of bedside relaxation techniques are all helpful. In the imminently dying patient, discontinuing parenteral fluids is appropriate.
- **Treatment with opioids** Opioids are the drugs of choice for dyspnea at the end-of-life as well as dyspnea refractory to the treatment of the underlying cause. In the opioid naïve patient, low doses of oral (5-10 mg) or parenteral morphine (2-4 mg) will provide relief for most patients; higher doses will be needed for patients on chronic opioids. When dyspnea is acute and severe, parenteral is the route of choice: 1-3 mg IV every 1-2 hours, or more aggressively if needed, until relief in the opioid naïve patient. In the inpatient setting, a continuous opioid infusion, with a PCA dose that patients, nurses or families can administer, will provide the timeliest relief (see *Fast Facts* #28, 54). Nebulized morphine has been reported to provide benefit in uncontrolled case reports, however a controlled trial demonstrated no greater efficacy or lower rate of side effects compared to subcutaneous morphine.
- **Treatment with oxygen** Oxygen is often, but not universally, helpful. When in doubt, a therapeutic trial, based on symptom relief, not pulse oximetry, is indicated in dying patients. A well-designed randomized, controlled trial of oxygen vs ambient air, delivered by nasal cannula, in normoxic patients with advanced illness and dyspnea showed no benefit of oxygen over ambient air delivered by nasal cannula. Patients generally prefer nasal cannula administration than a mask, especially in setting of imminent death when agitation from the mask is commonly seen. There is little reason to go beyond 4-6 L/min of oxygen via nasal cannula in the actively dying patient. Request a face-tent for patients who are claustrophobic from a mask.
- **Treatment with other drugs** Anti-tussives can help with cough (see *Fast Fact* #200), anti-cholinergics (e.g. scopolamine) will help reduce secretions, anxiolytics (e.g. lorazepam) can reduce the anxiety component of dyspnea. Other agents that may have specific disease modifying effects include diuretics, bronchodilators, and corticosteroids.

Family/Team Discussions While there is no evidence that proper symptom management for terminal dyspnea hastens death, the course and management of terminal dyspnea, especially when opioids are used, should be fully discussed with family members, nurses and others

participating in care to avoid confusion about symptom relief vs. fears of euthanasia or assisted suicide (see *Fast Fact* #8).

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