

Madigan Army Medical Center

Referral Guidelines

Dyspnea

Definition

Dyspnea is defined by the American Thoracic Society as a “subjective experience of breathing discomfort that consists of a qualitatively distinct sensation that varies with intensity.” It can be associated with a variety of diseases and is broadly categorized as either acute or chronic.

Approximately 2/3 of patients with dyspnea have a cardiopulmonary etiology to their symptoms.

- **Acute dyspnea:** Arises over the course of minutes to hours due to a relatively limited number of conditions.
 - Consider acute myocardial infarction, heart failure, cardiac tamponade, upper airway obstruction (aspiration, anaphylaxis), pulmonary embolism, pneumothorax, bronchospasm and pulmonary infection. Typically these diagnoses are associated with signs and symptoms that suggest a diagnosis. (i.e. chest pain, fever, cough)
- **Chronic dyspnea:** Defined as dyspnea lasting greater than one month. The majority of patients with chronic dyspnea of unknown etiology will have either asthma, COPD, interstitial lung disease or myocardial dysfunction. In cases where the cause of dyspnea is unclear further evaluation is necessary.
 - Etiologies include airways disease, lung parenchymal disease, pneumonia, pulmonary vascular disease, pleural process, chest wall abnormality, anemia, deconditioning, cardiac disease, thyroid disease or neuromuscular process.
 - If patient is active but symptoms of dyspnea always occur without exertion, the etiology is much less likely to be from organic disease. This symptom complex can be approached with more reassurance and primary care follow-up.

Work-up

History: Obtain a thorough history with clarifying features to include timing, place and position at onset, relationship to physical activity, aggravating or precipitating factors, ameliorating factors, presence of related conditions, changes in overall health status, tobacco use, hemoptysis, drug exposure and occupational and travel history.

Physical exam: Assess respiratory rate, technique of breathing (i.e., pursed lip, accessory muscle use), lung auscultation with forced exhalation (localized, decreased or absent breathing), cardiac exam, clubbing, and signs of peripheral edema. Cyanosis is an insensitive sign.

Laboratory: Complete blood count and metabolic panel, thyroid function tests

Diagnostic studies: Chest radiograph (compare to prior images if possible), pulmonary function testing (including baseline spirometry, pulse oximetry at rest and with ambulation), ECG

- *Chest CT* is not indicated in the initial evaluation of dyspnea
- *Echocardiography* – obtain if cardiomegaly is seen on chest radiograph or if chronic thrombotic disease, pulmonary hypertension, left ventricular or diastolic dysfunction is being considered

- *Cardiopulmonary exercise testing* – indicated for unclear etiology of dyspnea despite the above work-up or if symptoms seem out of proportion to the severity of the patient's known cardiopulmonary disease.

Ongoing Management and Objectives

Persisting dyspnea associated with organic lung disease can be troublesome to treat. Treatment of the underlying process (i.e. beta agonists and controller medication for asthma, diuresis and after load reduction for CHF, oxygen for the patient with COPD and significant desaturation) does not always alleviate dyspnea. Consider specialty care referral for the below indications.

Indications for Specialty Care Referral

1. When the underlying cause of dyspnea cannot be definitively established after thorough evaluation
2. When symptoms are disproportionate to the apparent severity of disease
3. When a specific diagnostic procedure is needed to establish a diagnosis (bronchoscopy, lung biopsy, laryngoscopy, cardiopulmonary exercise test)
4. Patients not responsive to initial therapy or have worsening disease (i.e. severe asthma, interstitial lung disease)

Prior to Referral:

1. Obtain pulmonary function tests
2. Obtain chest radiographs and if available prior radiographs for comparison

Criteria for Return to Primary Care

1. Resolution of the illness
2. Stable treatment plan for Dyspnea

References:

Dyspnea. Mechanisms, assessment, and management: a consensus statement. American Thoracic Society. *Am J Respir Crit Care Med.* 1999;159(1):321.

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Referral Guidelines require review every three years

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