

General Approach to Patients with Respiratory Disorders



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INTRODUCTION

Effective assessment of a patient who may have pulmonary disease requires a detailed history and review of symptoms. Patients with lung disorders often complain of one or more of the following symptoms: dyspnea, fatigue, exercise intolerance, chest tightness, cough, sputum production, and chest pain. Although individually these symptoms are not diagnostic, a combination of symptoms in an individual may point to a specific diagnosis.

Common symptoms of respiratory disease, such as dyspnea and cough, frequently occur with diseases of other organ systems (Table 14-1). For example, dyspnea is a cardinal symptom of heart disease, and cough may be caused by gastroesophageal reflux or chronic sinusitis. An organized approach to the patient, starting with a careful history and a detailed physical examination, further focuses the investigation to determine the cause of the symptom.

For a deeper discussion on this topic, please see Chapter 83, "Approach to the Patient with Respiratory Disease," in Goldman-Cecil Medicine, 25th Edition.

CLINICAL PRESENTATION

Dyspnea (i.e., shortness of breath) is a common complaint of patients with pulmonary disease (Table 14-2). Timing and acuity of onset, exacerbating and alleviating factors, and degree of functional impairment are key elements of the history. Associated symptoms such as cough, hemoptysis, chest pain, wheezing, orthopnea, and paroxysmal nocturnal dyspnea and the environmental triggers are helpful in developing a differential diagnosis. If dyspnea is recent, of sudden onset, and accompanied by chest pain, pneumothorax, pulmonary embolism, and pulmonary edema should be considered. If the dyspnea is slowly progressive, chronic conditions such as chronic obstructive pulmonary disease (COPD), pulmonary fibrosis, pulmonary arterial hypertension, and neuromuscular disorders are in the differential diagnosis.

TABLE 14-1 MAJOR SYMPTOMS OF RESPIRATORY DISEASE

Cough	Chest pain
Sputum	Fever
Hemoptysis	Hoarseness
Dyspnea (acute, progressive, or paroxysmal)	Night sweats
Wheezing	

The progression of chronic dyspnea may be insidious. Asking specific questions to quantify changes in functional status over time is important. Dyspnea may occur during exertion or at rest and may be episodic or continuous. Episodic dyspnea associated with exertion suggests parenchymal lung disease or cardiac dysfunction. Dyspnea that is seasonal or triggered by

TABLE 14-2 CAUSES OF DYSPNEA

CAUSE	EXAMPLES
Airways disease	Chronic obstructive lung diseases Laryngeal disorders Epiglottitis, bronchiolitis, and croup in children Tracheal obstruction or stenosis Tracheomalacia
Parenchymal lung disease	Pneumonia Interstitial lung diseases Obliterative bronchiolitis Pulmonary edema due to increased vascular permeability (acute respiratory distress syndrome)
Pulmonary circulation disorders	Infiltrative and metastatic malignancies Pulmonary thromboembolism Pulmonary arterial hypertension Pulmonary arteriovenous malformation
Chest wall and pleural disorders	Pneumothorax Pleural effusion or massive ascites Pleural tumor Fractured ribs, flail chest Chest wall deformities Neuromuscular diseases
Cardiac disorders	Bilateral diaphragmatic paresis Pulmonary edema due to left heart failure Myocardial infarction Pericardial effusion or constrictive pericarditis Intracardiac shunt
Hematologic disorders	Anemia, hemolysis, methemoglobinemia, carbon monoxide poisoning
Noncardiorespiratory disorders	Psychogenic diseases Midbrain lesion
Metabolic or endocrine disorders	Metabolic acidosis (diabetic ketoacidosis, sepsis, severe dehydration, inborn errors of metabolism) Hyperthyroidism Hypothyroidism Hyperammonemia Hypocalcemia (laryngospasm) Anaphylaxis Smoke inhalation Chemical agent exposures (phosgene, chlorine, cyanide)
Other causes	Biologic and chemical weapons (anthrax, tularemia, phosgene, nitrogen mustard, nerve agents, ricin) Submersion injury (near-drowning) Acute chest syndrome (sickle cell disease)