

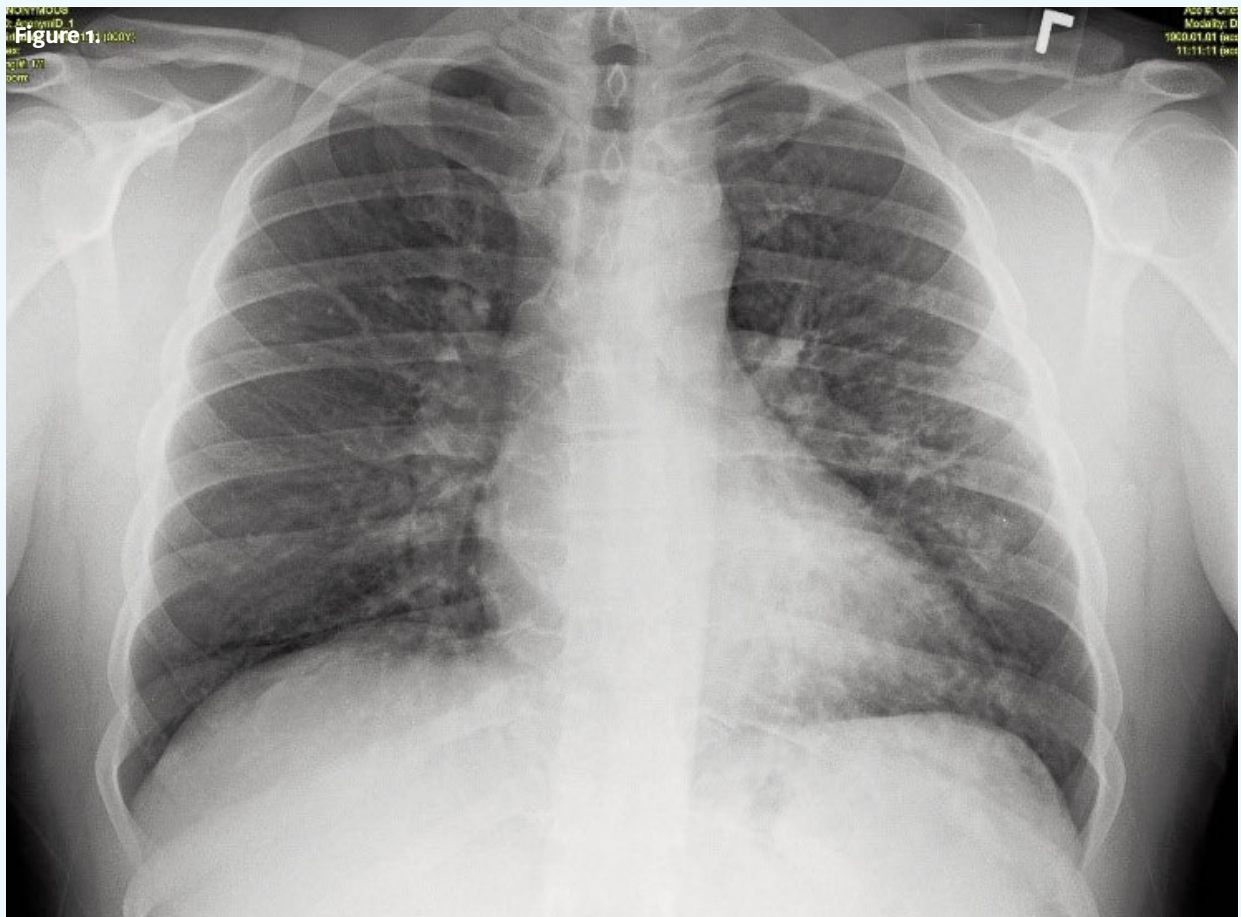


In each issue, *JUCM* will challenge your diagnostic acumen with a glimpse of x-rays, electrocardiograms, and photographs of conditions that real urgent care patients have presented with.

If you would like to submit a case for consideration, please email the relevant materials and presenting information to editor@jucm.com.

Dry Cough in a 19-Year-Old Male

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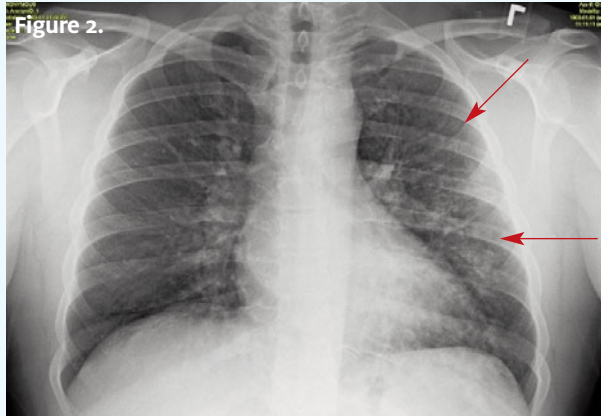
Case

A 19-year-old man presents to urgent care with a 5-day history of a dry cough. He says he has “felt warm” but didn’t think to check his temperature. He also complains that he has been weak, with a decreased appetite. He notes that his girlfriend had an upper respiratory infection a couple of weeks ago, but other than that he’s had no exposure to anyone who’s been sick. He has not traveled anywhere recently, and he has no recent history of weight loss or medication use.

View the image taken (**Figure 1**) and consider what your diagnosis would be.

Resolution of the case is described on the next page.

THE RESOLUTION

**Differential Diagnosis**

- Lobar pneumonia from pneumococcus
- Pneumocystis pneumonia
- Lung cancer with metastatic disease
- Mycoplasma infection
- Cardiomegaly secondary to heart failure

Physical Examination

Examination reveals the following:

Vitals: Afebrile, pulse 102, respirations 20, BP 122/78

General: Alert and oriented, no acute distress

Lungs: Clear to auscultation on the right but a slight wheeze is heard on the left with expiration

Cardio: Regular rate and rhythm without murmur, rub or gallop

Abdomen: Soft and nontender without rigidity, rebound or guarding. No bruising or distention

The general appearance of the patient will also help with assessing for pneumonia—eg, respiratory distress may be manifested by nasal flaring, use of accessory muscles, diaphoresis, or position.

Be vigilant for signs of dehydration (eg, poor skin turgor, dry mucous membranes, low urine output).

Lung exam may be normal or reveal rales (crackles), rhonchi, wheezing, bronchial breath sounds, whispered pectoriloquy (ie, hearing a patient whispering when auscultating over an area of lung consolidation), or egophony (when auscultating over an area of lung consolidation the sound of a spoken vowel—eg, an “eee” sound will be changed to a short “e”).

Diagnosis

X-ray shows faint, fluffy appearing small nodular opacities in the lower left lung, with associated thickening of interstitial and bronchial markings. Mild central peribronchial thickening is present bilaterally. There is no consolidation or effusion. Heart and mediastinum are normal. This, combined with physical exam

findings, leads to a diagnosis of mycoplasma pneumoniae.

The antibiotic of choice would be a macrolide antibiotic, though a second-generation tetracycline (eg, doxycycline) may be used. Follow-up should be with primary care or by a return to the urgent care if symptoms persist, or with a more severe illness. Note that symptoms may persist for weeks.

Learnings

Mycoplasma pneumoniae is one of the most commonly identified pneumonias in young adults, particularly in the summer months. It is caused by a bacterium, mycoplasma pneumoniae, that lacks a cell wall.

Symptoms of pneumonia may include fever, chills, cough, shortness of breath, myalgias, chest pain and fatigue. Risk factors include being elderly, a smoker, immunocompromised status. It is important to inquire about recent hospitalizations, as a facility-acquired pneumonia will require a different approach to management than a community-acquired pneumonia.

Ask specifically about comorbidities such as alcoholism, IV drug use, cystic fibrosis, history of bronchiectasis, and exposures to ill persons.

Testing initially involves a plain x-ray series. Mycoplasma will often appear as a patchy infiltrate, either unilateral or bilateral. Lobar consolidation is rare. Assess for other serious causes, including pneumothorax, mass, mediastinal air, rib fractures, or parapneumonic effusion. Laboratory testing is rarely indicated in the young, healthy patient.

What to Look For

Differential diagnostic considerations for cough and shortness of breath are broad, including etiologies as diverse as acute coronary syndrome, pulmonary embolism, malignancy, cardiac tamponade, and pneumothorax; however, the most common causes are infectious, ranging from acute viral bronchitis to bacterial pneumonia.

Indications for transfer include the following:

- Respiratory distress
 - Tachypnea
 - Retractions
 - Associated diaphoresis
 - Drooling or stridor
- Altered level of consciousness
- Oxygen saturation less than 90%
- Concern for a pathogen with increased virulence such as methicillin-resistant staph aureus (MRSA) or an atypical pneumonia, such as pneumocystis pneumonia
- Concern about compliance or proper care at home
- Toxic appearing or with underlying medical conditions that predispose to complications ■