**Family Medicine Preceptorship**

**Discussion Cases**

**Cough**

**Learning Objectives:**

* Discuss the differential diagnosis of cough
* Define appropriate use of diagnostic tools such as chest x-ray in patients presenting with cough
* Discuss appropriate treatment regimens for patients presenting with cough

**Suggested Readings:**

ACCP Evidence-Based Practice Guidelines, “Diagnosis and Management of Cough Executive Summary”: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3345522/>

Kinkade, S. & Long, N.A. “Acute bronchitis.” *Am Fam Physician*, 2016 Oct 1;94(7):560-565. <http://www.aafp.org/afp/2016/1001/p560.html>

Benich III, J. J. & Carek, P. J. “Evaluation of patient with Chronic Cough.” *Am Fam Physician*, 2011 Oct 15;84(8):887-892. <http://www.aafp.org/afp/2011/1015/p887.html>

**Case 1:**

Cyndi is a 30-year-old female who presents to your clinic for evaluation of cough and fever. She developed a productive cough about 7 days ago, and she reports symptoms are worsening. She reports fever for the last 3 days, as well as fatigue and poor appetite. She has some dyspnea on exertion. Vital signs show a tired-appearing female, temperature is 38.3 C, respiratory rate is 20, SpO2 is 98% on room air, cardiac exam is unremarkable, lung auscultation reveals diminished breath sounds and rales over posterior left lower lung field. She has missed the last 2 days of work due to overall unwell feeling.

Question 1: What is the differential diagnosis of cough? What additional aspects of the history are important to consider when evaluating a patient with a cough?

Question 2: What aspects of the physical examination are important in evaluation of cough?

Question 3: What additional testing is needed, if any, in evaluation of patients with cough?

Question 4: What is likely the cause of Cyndi’s cough?

**Case 2:**

Oliver is a 3-year-old healthy male child with a cough present for the last week. Cough is non-productive, and is accompanied by rhinorrhea and sore throat. He had a fever a few days ago, but this has resolved. He attends daycare with 15 other children. Oliver’s mother tells you that he is overall acting normally, but he is coughing a lot during the day and night. He is fully immunized. Oliver is playful and appears well on exam, and is in no respiratory distress. Lung auscultation is unremarkable, vital signs are all within normal limits. He has an occasional barky cough.

Question 1: What is the likely diagnosis?

Question 2: What is the best treatment for this patient’s cough?

Question 3: How would management change if Oliver’s cough persisted without improvement for 3 weeks and he developed paroxysmal coughing with post-tussive emesis?

**Case 3:**

John is a 40-year-old man with history of hypertension, allergic rhinitis, and obesity, who presents with a cough that has been present for about 6 months, and has worsened over the last two weeks. John is a non-smoker. He has taken lisinopril 10 mg daily for hypertension for the last 9 months. He reports no known personal or family history of asthma. He denies wheezing or productive cough. He does not report any heartburn symptoms. He has no pets at home. He reports taking diphenhydramine (Benadryl) as needed some days when he feels very congested, but denies daily antihistamine use. Lung auscultation reveals no abnormal breath sounds or wheezes, and HEENT exam reveals edematous nasal mucosa and “cobblestone” appearance of the oropharynx.

Question 1: What is the differential diagnosis for John’s cough?

Question 2: What testing is needed for this patient?

Question 3: What is the best treatment for John’s cough?

**Case 4:**

Mary is a 64-year-old woman with history of obesity, HTN, type 2 diabetes, and COPD, who presents with a worsening cough and dyspnea for the last 8 weeks. Mary has smoked 1 pack per day of tobacco cigarettes for the last 45 years. She has some mild dyspnea at baseline, but thinks her symptoms are worse during the last 8 weeks. She reports that she is coughing up whitish sputum, which is occasionally blood tinged. She has some wheezing. She reports that she has had new hoarse voice for the last 6 weeks. She has been having some low grade fevers at home, lightheadedness, and reports feeling fatigued for a couple of months. Lung exam reveals diminished breath sounds and scattered wheezes.

Question 1: What is the differential diagnosis for Mary’s cough?

Question 2: What testing is needed for this patient?