

## **Bates' Guide to Physical Examination and History Taking, 11th Edition**

### **Chapter 2: Clinical Reasoning, Assessment, and Recording Your Findings**

#### **Multiple Choice**

1. A patient presents for evaluation of a sharp, aching chest pain which increases with breathing. Which anatomic area would you localize the symptom to?

- A) Musculoskeletal
- B) Reproductive
- C) Urinary
- D) Endocrine

Ans: A

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Feedback: Chest pain may be due to a musculoskeletal condition, such as costochondritis or intercostal muscle cramp. This would be worsened by motion of the chest wall. Pleuritic chest pain is also a sharp chest pain which increases with a deep breath. This type of pain can occur with inflammation of the pleura from pneumonia or other conditions and pulmonary embolus.

2. A patient comes to the emergency room for evaluation of shortness of breath. To which anatomic region would you assign the symptom?

- A) Reproductive
- B) Urinary
- C) Cardiac
- D) Hematologic

Ans: C

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Feedback: Cardiac disorders such as congestive heart failure are the most likely on this list to result in shortness of breath. There are cases within the other categories which may also result in shortness of breath, such as anemia in the hematologic category, pregnancy in the reproductive category, or sepsis with UTI in the urinary category. This demonstrates the “tension” in clinical reasoning between making sure all possibilities are covered, while still being able to pick the

most likely cause.

3. A patient presents for evaluation of a cough. Which of the following anatomic regions can be responsible for a cough?

- A) Ophthalmologic
- B) Auditory
- C) Cardiac
- D) Endocrine

Ans: C

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Feedback: The cardiac system can cause a cough if the patient has congestive heart failure. This results in fluid buildup in the lungs, which in turn can cause a cough that produces pink, frothy sputum. A foreign body in the ear may also cause a cough by stimulating Arnold's branch of the vagus nerve, but this is less likely to be seen clinically than heart failure.

4. A 22-year-old advertising copywriter presents for evaluation of joint pain. The pain is new, located in the wrists and fingers bilaterally, with some subjective fever. The patient denies a rash; she also denies recent travel or camping activities. She has a family history significant for rheumatoid arthritis. Based on this information, which of the following pathologic processes would be the most correct?

- A) Infectious
- B) Inflammatory
- C) Hematologic
- D) Traumatic

Ans: B

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Feedback: The description is most consistent with an inflammatory process, although all the other etiologies should be considered. Lyme disease is an infection which commonly causes arthritis, hemophilia is a hematologic condition which can cause bleeding in the joints, and trauma can obviously cause joint pain. Your clinical reasoning skills are important for sorting through all of the data to arrive at the most likely conclusion.

5. A 47-year-old contractor presents for evaluation of neck pain, which has been intermittent for

several years. He normally takes over-the-counter medications to ease the pain, but this time they haven't worked as well and he still has discomfort. He recently wallpapered the entire second floor in his house, which caused him great discomfort. The pain resolved with rest. He denies fever, chills, rash, upper respiratory symptoms, trauma, or injury to the neck. Based on this description, what is the most likely pathologic process?

- A) Infectious
- B) Neoplastic
- C) Degenerative
- D) Traumatic

Ans: C

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Feedback: The description is most consistent with degenerative arthritis in the neck. The patient has had intermittent symptoms and the questions asked to elicit pertinent negative and positive findings are negative for infectious, traumatic, or neoplastic disease.

6. A 15-year-old high school sophomore comes to the clinic for evaluation of a 3-week history of sneezing; itchy, watery eyes; clear nasal discharge; ear pain; and nonproductive cough. Which is the most likely pathologic process?

- A) Infection
- B) Inflammation
- C) Allergic
- D) Vascular

Ans: C

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Feedback: This description is most consistent with allergic rhinitis.

7. A 19-year old-college student presents to the emergency room with fever, headache, and neck pain/stiffness. She is concerned about the possibility of meningococcal meningitis. Several of her dorm mates have been vaccinated, but she hasn't been. Which of the following physical examination descriptions is most consistent with meningitis?

- A) Head is normocephalic and atraumatic, fundi with sharp discs, neck supple with full range of motion
- B) Head is normocephalic and atraumatic, fundi with sharp discs, neck with paraspinal muscle spasm and limited range of motion to the right
- C) Head is normocephalic and atraumatic, fundi with blurred disc margins, neck tender to palpation, unable to perform range of motion

D) Head is normocephalic and atraumatic, fundi with blurred disc margins, neck supple with full range of motion

Ans: C

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Feedback: Blurred disc margins are consistent with papilledema, and neck tenderness and lack of range of motion are consistent with neck stiffness, which in this scenario is likely to be caused by meningeal inflammation. Later, you will learn about Kernig's and Brudzinski's signs, which are helpful in testing for meningeal irritation on examination.

8. A 37-year-old nurse comes for evaluation of colicky right upper quadrant abdominal pain. The pain is associated with nausea and vomiting and occurs 1 to 2 hours after eating greasy foods. Which one of the following physical examination descriptions would be most consistent with the diagnosis of cholecystitis?

- A) Abdomen is soft, nontender, and nondistended, without hepatosplenomegaly or masses.
- B) Abdomen is soft and tender to palpation in the right lower quadrant, without rebound or guarding.
- C) Abdomen is soft and tender to palpation in the right upper quadrant with inspiration, to the point of stopping inspiration, and there is no rebound or guarding.
- D) Abdomen is soft and tender to palpation in the mid-epigastric area, without rebound or guarding.

Ans: C

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Feedback: In cholecystitis, the pain, which originates from the gallbladder, is located in the right upper quadrant. Severity of pain with inspiration that is sufficient to stop further inhalation is also known as Murphy's sign, which, if present, is further indicative of inflammation of the gallbladder.

9. A 55-year-old data entry operator comes to the clinic to establish care. She has the following symptoms: headache, neck pain, sinus congestion, sore throat, ringing in ears, sharp brief chest pains at rest, burning abdominal pain with spicy foods, constipation, urinary frequency that is worse with coughing and sneezing, and swelling in legs. This cluster of symptoms is explained by:

- A) One disease process
- B) More than one disease process

Ans: B

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Feedback: The patient appears to have several possible conditions: allergic rhinitis, arthritis, conductive hearing loss, pleuritic chest pains, heartburn, stress urinary incontinence, and venous stasis, among other conditions. Although we always try, it is very difficult to assign all of these symptoms to one cohesive diagnosis.

10. A 62-year-old teacher presents to the clinic for evaluation of the following symptoms: fever, headache, sinus congestion, sore throat, green nasal discharge, and cough. This cluster of symptoms is best explained by:

- A) One disease process
- B) More than one disease process

Ans: A

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Feedback: This cluster of symptoms is most consistent with sinusitis. The chance that all of these symptoms are caused by multiple synchronous conditions in the same patient is much less than the possibility of having one problem which accounts for all of them.

11. Steve has just seen a 5-year-old girl who wheezes when exposed to cats. The patient's family history is positive for asthma. You think the child most likely has asthma. What have you just accomplished?

- A) You have tested your hypothesis.
- B) You have developed a plan.
- C) You have established a working diagnosis.
- D) You have created a hypothesis.

Ans: D

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Feedback: As you go through a history and examination, you will start to generate ideas to explain the patient's symptoms. It is best to keep an open mind and make as many hypotheses as you can, to avoid missing a possibility. A common mistake is to latch onto one idea too early. Once you have committed your mind to a diagnosis, it is difficult to change to another. To think about looking for wheezes on examination would be an example of testing your new hypothesis. Starting a patient on an inhaled medicine would be a plan. It is too early to commit to a working diagnosis, given the amount of information you have gathered.

12. Ms. Washington is a 67-year-old who had a heart attack last month. Now she complains of shortness of breath and not being able to sleep in a flat position (orthopnea). On examination you note increased jugular venous pressure, an S<sub>3</sub> gallop, crackles low in the lung fields, and swollen ankles (edema). This is an example of a:

- A) Pathophysiologic problem
- B) Psychopathologic problem

Ans: A

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Feedback: This is an example of a pathophysiologic problem because Ms. Washington's symptoms are consistent with a pathophysiologic process. The heart attack reduced the ability of her heart to handle her volume status and subsequently produced the many features of congestive heart failure.

13. On the way to see your next patient, you glance at the calendar and make a mental note to buy a Mother's Day card. Your patient is Ms. Hernandez, a 76-year-old widow who lost her husband in May, two years ago. She comes in today with a headaches, abdominal pain, and general malaise. This happened once before, about a year ago, according to your detailed office notes. You have done a thorough evaluation but are unable to arrive at a consistent picture to tie these symptoms together. This is an example of a:

- A) Pathophysiologic problem
- B) Psychopathologic problem

Ans: B

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Feedback: It is not uncommon for patients to experience psychopathologic symptoms around the anniversary of a traumatic event. The time of year and the lack of an obvious connection between Ms. Hernandez's symptoms would make you consider this as a possibility. You will note that although this might have been an early consideration in your hypothesis generation, it is key to convince yourself that there is not a physiologic explanation for these symptoms, by performing a careful history and examination.

14. Mr. Larson is a 42-year-old widowed father of two children, ages 4 and 11. He works in a sales office to support his family. Recently he has injured his back and you are thinking he would benefit from physical therapy, three times a week, for an hour per session. What would be your next step?

- A) Write the physical therapy prescription.
- B) Have your office staff explain directions to the physical therapy center.
- C) Discuss the plan with Mr. Larson.
- D) Tell Mr. Larson that he will be going to physical therapy three times a week.

Ans: C

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Page and Header: 30, Develop a Plan Agreeable to the Patient

Feedback: You should discuss your proposed plan with the patient before implementing it. In this case, you and Mr. Larson will need to weigh the benefit of physical therapy against the ability to provide for his family. You may need to consider other ways of helping the patient, perhaps through prescribed back exercises he can do at home. It is a common mistake to implement a plan without coming to an agreement with the patient first.

15. You are seeing an elderly man with multiple complaints. He has chronic arthritis, pain from an old war injury, and headaches. Today he complains of these pains, as well as dull chest pain under his sternum. What would the order of priority be for your problem list?

- A) Arthritis, war injury pain, headaches, chest pain
- B) War injury pain, arthritis, headaches, chest pain
- C) Headaches, arthritis, war injury pain, chest pain
- D) Chest pain, headaches, arthritis, war injury pain

Ans: D

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Page and Header: 37, Generating the Problem List

Feedback: The problem list should have the most active and serious problem first. This new complaint of chest pain is almost certainly a higher priority than his other, more chronic problems.

16. You are excited about a positive test finding you have just noticed on physical examination of your patient. You go on to do more examination, laboratory work, and diagnostic tests, only to find that there is no sign of the disease you thought would correlate with the finding. This same experience happens several times. What should you conclude?

- A) Consider not doing this test routinely.
- B) Use this test when you have a higher suspicion for a certain correlating condition.
- C) Continue using the test, perhaps doing less laboratory work and diagnostics.
- D) Omit this test from future examinations.

Ans: C

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Feedback: This is an example of a sensitive physical finding that lacks specificity. This does not make this a useless test, because the purpose of a screening physical is to find disease. This finding made you consider the associated condition as one of your hypotheses, and this in itself has value. Other possibilities are that you may be doing the maneuver incorrectly or using it on the wrong population. It is important to ask for hands-on help from your instructor when you have a question about a maneuver. Make sure that your information about the maneuver comes from a reliable source as well. All of this information also applies to history questions.

17. You are growing fatigued of performing a maneuver on examination because you have never found a positive and are usually pressed for time. How should you next approach this maneuver?

- A) Use this test when you have a higher suspicion for a certain correlating condition.
- B) Omit this test from future examinations.
- C) Continue doing the test, but rely more heavily on laboratory work and diagnostics.
- D) Continue performing it on all future examinations.

Ans: A

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Feedback: This is an example of a specific test that lacks sensitivity. With this scenario, when you finally find a positive, you might be very certain that a given condition is present. We generally develop our examinations to fit our clinical experiences. Sensitive tests are performed routinely on the screening examination, while specific tests are usually saved for the detailed or “branched” examinations. Branched examinations are further maneuvers we can perform to investigate positive findings on our screening examinations. Save this type of maneuver to confirm your hypothesis. All of this information also applies to history questions.

18. You have recently returned from a medical missions trip to sub-Saharan Africa, where you learned a great deal about malaria. You decide to use some of the same questions and maneuvers in your “routine” when examining patients in the midwestern United States. You are disappointed to find that despite getting some positive answers and findings, on further workup, none of your patients has malaria except one, who recently emigrated from Ghana. How should you next approach these questions and maneuvers?

- A) Continue asking these questions in a more selective way.
- B) Stop asking these questions, because they are low yield.
- C) Question the validity of the questions.
- D) Ask these questions of all your patients.

Ans: A



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Feedback: The predictive value of a positive finding depends upon the prevalence of a given disease in a population. The prevalence of malaria in the Midwest is almost zero, except in people immigrating from areas of high prevalence. You will waste time and resources applying these questions and maneuvers to all patients. It would be wise to continue applying what you learned to those who are from areas of high prevalence of a given disease. Likewise, physicians from Ghana should not ask about signs or symptoms of multiple sclerosis, as it is found almost exclusively in northern latitudes. You will learn to tailor your examination to the population you are serving.