

A Missed Diagnosis: Problem Handouts



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A Missed Diagnosis

Part 1

Symptoms:

Susan presents herself to her family physician for a routine physical. During the physical examination, Susan explains that she has been having recurring pain and slight muscle spasms (probably secondary to the pain) in her back and down into her left leg.

Patient History:

The following medical history is given to the attending physician:

- Patient is 47 years old, 5 foot 2 inches, 105.5 lbs, and has an unremarkable medical history.
- Patient has a regular exercise routine of running, but recently (due to the pain and spasms) has reduced her exercise to casual walks along the river.
- Blood pressure is within normal range, as is her heart rate.
- Upon further questioning, Susan reports to her physician that she was in a car accident three years ago (her car was hit from the back and totaled the car). However, except for a broken finger on her left hand, she was totally injury free.

Physical Examination:

A preliminary physical exam by the physician provides the following symptoms being experienced by Susan:

- Pronounced pain in the lower back (bilaterally); mild bilateral muscular spasms.
- The pain radiates down along the lateral surface of the hip, and then wraps around the anterior surface of the thigh and terminates on the medial surface of the leg.
- Although the pain is bilateral, it is more pronounced on the right side of the body.
- Reflexes were intact; 5/5 strength in both upper and lower limbs.
- No signs of bladder or bowel incontinence.

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Part 2

Additional Information:

Susan's physician is confused by the symptoms presented by Susan. His initial diagnosis was sciatica, but a lack of response to the prescribed physical therapy and injections prompted a referral to an orthopedic surgeon and a neurologist. Prior to the examination by the specialists Susan was instructed to mark on a diagram all of the locations where pain was experienced, as well as the locations of any muscle spasms she encountered prior to her hospital visit.

Upon examination, Marko (orthopedic surgeon) and Russ (neurologist) noted the following from Susan's drawings:

- The pain originates in the small of the back and moves inferiorly and laterally, superficial to the greater trochanter of the femur. It then proceeds inferiorly and medially in a course similar to that taken by the sartorius muscle. The pain terminates on the medial surface of the leg, at approximately the same level as the start of the tendon for the fibularis longus. The pain reappears superficial to the calcaneal tendon.
- Although the muscle spasms have decreased somewhat, Susan was able to indicate an approximate location for one of the muscles that seems to be giving her the most problem. (Other muscles have been experiencing spasms, but they were harder to locate.) The location on Susan's map indicated to Marko and Russ that the rectus femoris has been experiencing spasms.

Physical Exam:

- As a result of the preliminary physical exam, as well as the physical exams conducted by Russ and Marko, an X-ray of the vertebral column was ordered. Results demonstrated normal disc-space anatomy.
- An attenuation of the reflex at the knee was noted.
- Injection of physiological saline around the L3 and L4 joints was without effect after 30 minutes.
- Injection of a local anesthetic was accompanied by relief of pain.

Utilizing sound anatomical logic, consider the following questions:

1. What would be the diagnosis for this patient? List the specific structures that are involved in this condition, and give a detailed anatomical description of those structures. In addition, give a detailed anatomical discussion of how the pathological condition changes the anatomy of these structures, and how this change in anatomy would cause the symptoms the patient is experiencing?
2. Why does Susan experience pain in the locations indicated? Is her mapping of the pain locations accurate?

3. Why did the physician inject physiological saline prior to the injection of the local anesthetic? How reliable are the results from this injection series?
4. What muscles would be experiencing spasms and why?
5. If Marko or Russ want to surgically treat this patient, which procedure(s) should they consider?
6. How could Susan's condition be treated non-surgically?
7. Which procedure would you recommend Susan undergo (surgical or non-surgical) and why?
8. Utilizing sound anatomical logic, how and why should Susan's family physician have known that the initial diagnosis was incorrect?

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Team and Self Assessment Form

Your name: _____

Please use the rating scale below to describe how you and your team members performed on each of the tasks listed associated with your PBL group's activities. The purpose of the grading is not to divide groups but to reward those making above average effort and to encourage those not giving their fair share to the group overall effort.

5 if Always 4 if Very Often 3 if Sometimes 2 if Rarely 1 if Never

PBL Group Number: _____

Please fill in PBL Group Members' *Last* Names (including your own)

Names _____ _____ _____ _____ _____

Completed assigned tasks _____ _____ _____ _____ _____

Contributed valuable
information to the group _____ _____ _____ _____ _____

Attended group meetings _____ _____ _____ _____ _____

Was honest in reporting
progress about his/her
assigned tasks _____ _____ _____ _____ _____

Participated in writing
final report _____ _____ _____ _____ _____



Now, ***please circle*** the rating below that you feel you would best describe your group's overall performance:

Very good

Good

Barely Acceptable

Poor

Very Poor



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PBL Self Evaluation Form

This evaluation form will not be utilized in assigning any grades. However, it is beneficial to reflect on any progress that you might have made in various areas as a result of participating in a PBL course. Therefore, please evaluate yourself utilizing the following scale.

Scale:

- 5 = Strongly agree
- 4 = Agree
- 3 = Neutral
- 2 = Disagree
- 1 = Strongly disagree

Your name: _____

As a result of my participation in PBL in Human Anatomy I feel that I have improved in the areas of:

1. Effective group participation _____
2. Effective group communication _____
3. Evaluation of myself (self evaluation) _____
4. Evaluation of others (peer evaluation) _____
5. Acquiring information to solve complex problems _____
6. Evaluation of the quality of information needed
to solve complex problems _____
7. Working effectively with others _____



8. Higher-order, critical thinking skills _____

Overall improvement rating of yourself: _____

5 = excellent; 4 = good; 3 = average; 2 = needs work; 1 = poor

