

**GENERAL INTERNAL MEDICINE & HEALTH SERVICES RESEARCH CASE  
CONFERENCE TEACHING MODULE**

**Low Back Pain  
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Reviewed 8/2009 by Ed Hui, MD**

**Case 1**

You are on phone call for your group when you receive a phone call from the emergency department. Bill Jones, a 20 year-old college student is in the emergency room requesting an MRI of the lumbosacral spine. You ask to speak to Mr. Jones. When he comes to the phone he explains he has been in terrible pain for two days after “wrenching” his back moving a couch. His father is a Harvard neurology professor who encouraged his to obtain an MRI as soon as possible, so he went to the ER.

**What further questions will you ask Mr. Jones?**

Mr. Jones states he has never had low back pain before, which is the reason he is sure this is a serious problem. He reports that he is currently suffering from band like pain across his lower back radiating down to outside of his leg, as well as intermittent tingling in his right foot. He has had no change in his bowel or bladder function, and is able to walk, although with pain. He has had no fevers. He has no past medical history, and takes no medications. He has never had surgery.

**It is 7 p.m. on Sunday evening. Will you advise Mr. Jones to stay and be seen and evaluated in the ER? Based on the information you already have, what treatment would you recommend?**

You explain to Mr. Jones the nature of his condition, and offer him a prescription to be called to his pharmacy and an appointment the next day in clinic for further evaluation. He agrees. 20 minutes later the answering service calls you. Professor Jones, his father, is calling from Phoenix, AZ and would like to speak with you.

**When you return Professor Jones’ call, he expresses his concern that his son has never had this type of pain before, and has radicular symptoms. He asks when you will be scheduling the MRI. What do you tell him?**

**Reluctantly, Professor Jones agrees to defer the MRI, but asks you what treatment you will recommend. What has treatment has been shown to help patients?**

**Case 2**

Mrs. Lopez is a 45 year-old woman who presents to clinic with a 6-week history of back pain and pain and numbness radiating down the outside of her left leg.

**What further information do you want to know?**

She has no past medical history and takes no medications. She has no history of trauma. When her pain initially occurred, she saw a physician in her neighborhood, who prescribed naproxyn and had the patient return to usual activities, including walking, as soon as possible. Although she is no longer incapacitated, as she was initially, she is still quite limited in her activities, and has been unable to return to her usual activities, including jogging. On exam, there is numbness along the lateral aspect of the lower left leg. Straight leg raising causes an increase in numbness, as well as a shooting pain along the outside of the left thigh and lower leg. Squatting, heel, and toe walking are intact. Her motor strength is intact.

**What will you do now? What options are available for further evaluation of this patient?**

### **Case 3**

Ms. Lee is a 50-year-old woman who presents to the clinic with complaints of low back pain for one month. She states she has been in constant pain both day and night, and cannot find a comfortable position. She denies radiation of the pain or numbness, tingling, or weakness of her legs. She has no history of trauma to the back.

**What are potentially serious causes of low back pain? What historical points can help distinguish them?**

Ms. Lee has a history of T2N1M0 breast cancer diagnosed 5 years ago. She was premenopausal, and received lumpectomy, radiation, and 9 cycles of CMF. She has been free of cancer since that time. She reports no fever or weight loss. She has no active medical problems or recent infection. She takes no medication.

**What would be the important portions of the physical examination?**

On physical examination, there is no palpable muscle spasm, and the spine and back are nontender. Straight leg raise does not cause radicular symptoms, and lower extremity neurologic function is intact. There is no palpable bladder. Rectal tone is normal. The patient demonstrates the L2 vertebra as the site of the pain, but it is nontender to palpation.

**How will you proceed?**