

A 12-year-old male is brought to your office by his mother because of a several month history of back pain. He also experienced bed wetting recently. His past medical history is insignificant. He tried acetaminophen for pain relief. He does not smoke or consume alcohol. His temperature is 36.7° C (98° F), blood pressure is 110/65 mmHg, pulse is 80/min, and respirations are 16/min. Physical examination reveals a palpable "step-off" at the lumbosacral area. Straight-leg raising test is negative on both sides. Perianal sensation tested by pinprick test is decreased, but anal reflex is normal. What is the most probable diagnosis in this patient?

- ☐ A. Multiple myeloma
- ☐ B. Ankylosing spondylitis
- ☐ C. Compression fracture of the vertebrae
- ☐ D. Lumbosacral strain
- ☐ E. Herniated disk
- ☐ F. Metastatic or primary tumor
- ☐ G. Increased lumbar lordosis
- ☐ H. Spondylolisthesis
- ☐ I. Epidural abscess
- ☐ J. Osteoporosis



A 12-year-old male is brought to your office by his mother because of a several month history of back pain. He also experienced bed wetting recently. His past medical history is insignificant. He tried acetaminophen for pain relief. He does not smoke or consume alcohol. His temperature is 36.7° C (98° F), blood pressure is 110/65 mmHg, pulse is 80/min, and respirations are 16/min. Physical examination reveals a palpable "step-off" at the lumbosacral area. Straight-leg raising test is negative on both sides. Perianal sensation tested by pinprick test is decreased, but anal reflex is normal. What is the most probable diagnosis in this patient?

- ☐ A. Multiple myeloma [1%]
- ☐ B. Ankylosing spondylitis [8%]
- ☐ C. Compression fracture of the vertebrae [6%]
- ☐ D. Lumbosacral strain [2%]
- ☐ E. Herniated disk [9%]
- ☐ F. Metastatic or primary tumor [11%]
- ☐ G. Increased lumbar lordosis [6%]
- ☒ H. Spondylolisthesis [53%]
- ☐ I. Epidural abscess [3%]
- ☐ J. Osteoporosis [0%]

[Proceed to Next Item](#)**Explanation:**User Id: XXXXXXXXXX

Although in adults back pain is very common and usually benign in nature, in children it requires a careful search into the cause because back pain in children is frequently due



- ☐ E. Herniated disk [9%]
- ☐ F. Metastatic or primary tumor [11%]
- ☐ G. Increased lumbar lordosis [6%]
- ☒ H. Spondylolisthesis [53%]
- ☐ I. Epidural abscess [3%]
- ☐ J. Osteoporosis [0%]

[Proceed to Next Item](#)**Explanation:**User Id: 

Although in adults back pain is very common and usually benign in nature, in children it requires a careful search into the cause because back pain in children is frequently due to organic causes. This patient presents with slowly developing back pain and neurologic dysfunction. Such clinical manifestations in combination with a palpable "step-off" at the lumbosacral area are typical for high-grade spondylolisthesis. Spondylolisthesis is a developmental disorder characterized by a forward slip of vertebrae (usually L5 over S1). Such a displacement results in chronic back pain and in neurologic dysfunction, if significant. The area of vertebral displacement (a palpable "step-off") is detected on physical examination if the problem is severe.

Other causes of back pain should be considered in this patient. Mechanical causes like lumbosacral strain (**Choice D**) and herniated disk (**Choice E**), also very common in adults, are uncommon in children. Ankylosing spondylitis (**Choice B**) has slow onset, but neurologic dysfunction argues against this condition. Epidural abscess (**Choice I**) is usually accompanied by fever, and the source of infection is frequently present. Metastatic or primary tumor (**Choice F**) is a possibility in this patient, but slow development of the pain and a palpable "step-off" favors spondylolisthesis as the most probable diagnosis.

**Educational Objective:**

Spondylolisthesis is a developmental disorder characterized by a forward slip of vertebrae (usually L5 over S1) that usually manifests in preadolescent children. In the typical clinical scenario, back pain, neurologic dysfunction (e.g., urinary incontinence), and a palpable "step-off" at the lumbosacral area are present if the disease is severe.

Time Spent: 8 seconds

Copyright © UWorld

Last updated: [09/13/2016]