QUESTION 79 LCS
In an 80-year-old woman with low back pain, which of the following is most suggestive of a diagnosis of spinal canal stenosis?
A. Increased pain with prolonged weight bearing.
B. Lower-extremity numbness with prolonged weight bearing.
C. Loss of lumbar lordosis.
D. Advanced degenerative changes seen on plain radiograph.
E. Loss of vibratory sense in the feet.

According to Up to date

Symptoms
- Neurogenic claudication is a hallmark of LCS.
- Usually pain, to be exacerbated with walking, standing, and/or maintaining certain postures, and relieved with sitting or lying
- Relieved with lying, sitting or flexion at the waist
- Other symptoms: discomfort, sensory loss and weakness in the legs
- Most common symptom:
  - PAIN 93%
  - Numbness and tingling 63%
  - Weakness 43%
  - Symptoms bilateral 68%

Investigations
1. Plain radiographs
   - Can lend support for the diagnosis of LCS and may suggest underlying pathology
   - Should be limited to pts with clinical findings suggestive of systemic disease or trauma
   - Guidelines recommend plain radiography for pts with fever, unexplained weight loss, history of cancer, neurologic deficits, alcohol or injection drug abuse, an age of more than 50yrs or trauma
   - Failure of pain to improve after 4-6 weeks should prompt xray

In an 80 yr old, it is possible to find advanced degenerative changes but would not confirm the diagnosis of spinal canal stenosis

2. MRI
   - Modality of choice
   - Defines bony anatomy and visualizes soft tissues and neural structures

3. CT
   - May be preferable to MRI for bony anatomy
   - More sensitive than plain radiography for detection of early spinal infections and cancers
   - When combined with myelography- proveds imaging of neural elements
   - CT myelography is invasive and therefore MRI preferred but good alternative if MRI contraindicated

According to Merritt’s Neurology (Books @ Ovid)

Signs and Symptoms
- Pain aggravated by Valsalva manoeuvres
- Lumbar pain may increase after heavy lifting or twisting of spine
- Relieved by lying down

1 NEJM Primary care: Low back pain (review article) Vol 344(5), 1 Feb 2001 pp 363 - 370
If pain not relieved on lying down or worsened, suggesting of disc disease from intraspinal tumour

**Examination**
- Loss of lumbar lordosis or flattening of lumbar spine
- Splinting and asymmetric prominence of long erector muscles
- Range of motion of LS is reduced by the protective splinting of paraspinal muscles
- Passive straight leg raising is reduced and increases back and leg pain
- Muscle atrophy and weakness
- Parasthesia in the region of the involved root

**Back to the question:**

This question asked for "most suggestive".

A. Increased pain with prolonged weight bearing
   - This is right as pain can be aggravated by Valsalva manoeuvres
   - Pain is the most common symptom

B. Lower extremity numbness with prolonged weight bearing
   - With parasthesia, it is more likely to have nerve root involvement compared to pain.
   - 2nd most common symptom after pain – perhaps for specific to spinal root involvement

C. Loss of lumbar lordosis
   - Can be present with LCS
   - Can occur with lots of other diseases such as osteoporosis

D. Advanced degenerative changes on plain radiograph
   - In an 80 year old man, this could be a cause of the lower back pain but does not confirm LCS

E. Loss of vibratory sense

Answer B.