IN THE NAME OF GOD
Low Back Pain

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Job Risk Factors Associated with LBP

- Heavy Physical Work
- Static Work Postures
- Frequent Bending & Twisting
- Lifting, Pushing & Pulling
- Repetitive Work
- Vibration
- Psychological & Psychosocial Stress
- Smoking
The "Red Flags" of LBP

- Cauda Equina Syndrome
- Fracture
- Tumor
- Infection
Cauda Equina Syndrome

- Saddle Numbness
- Urinary Retention, Incontinence
- Severe (Progressive) Neurologic Deficit in Leg
Possible Fracture

- Major Trauma
- Minor Trauma in Patients >50 years
- Chronic Steroid Use
- Osteoporosis
- >70 years
Possible Tumor

- >50 years
- <20 years
- Hx of Cancer
- Unexplained Weight Loss
- Nocturnal Pain
Possible Infection

- Recent Fever or Chills
- Recent Bacterial Infection
- IV Drug Use
- Immune Suppression
- Constitutional Symptoms
Criteria for Lumbar Radiographs in Patients with Acute LBP

- Possible Fracture
- Possible Tumor
- Possible Infection
Prevention of LBP

- Job Design
- Job Placement
- Training & Education
Lumbar Disc Herniation
Lumbar disc herniation
Definition of disc herniation

Abnormal rupture of the soft gelatinous central portion of the disc (nucleus pulposus) through the surrounding outer ring (annulus fibrosus).

In about 95% of all disc herniation cases, the L4-L5 or L5-S1 disc levels are involved.
Causes of lumbar disc herniation

1. Trauma or injury to the disc
2. Disc degeneration
3. Congenital predisposition
Types of disc herniation

There are three types of disc herniation:

1. Protrusion / bulge
2. Disc herniation
3. Sequestration (disc rupture)
Typical locations of disc herniation

Central

- It is rare condition, it will affect multiple nerve roots, patient will have back pain more than leg pain and it may cause incontinence of the bladder and bowel. **Urgent** surgical treatment is necessary if patient presents with neurological deficits.
Typical locations of disc herniation

Posterolateral

- Usually it is the most common location, it involve one nerve root (the lower one).

Foraminal

- It occurs in about 8-10% of all cases. It involves the exiting nerve.
Clinical manifestations of disc herniation

- If the herniated disc is:
  - Not pressing on a nerve, you may have an ache in the low back or no symptoms at all.
  - Pressing on a nerve, you may have pain, numbness, or weakness in the area of your body to which the nerve travels.
Clinical manifestations of disc herniation

- **Leg pain caused by a herniated disc**
- Usually occurs in only one leg.
- May start suddenly or gradually.
- May be constant or may come and go (intermittent).
- May get worse ("shooting pain") when sneezing, coughing, or straining to pass stools.
Leg pain caused by a herniated disc (cont...)

- May be **aggravated** by sitting, prolonged standing, and bending or twisting movements.

- May be **relieved** by walking, lying down, and other positions that relax the spine and decrease pressure on the damaged disc.
Clinical manifestations of disc herniation

- Nerve-related symptoms caused by a herniated disc include:
  - Tingling ("pins-and-needles" sensation) or numbness in one leg that can begin in the buttock or behind the knee and extend to the thigh, ankle, or foot.
  - Weakness in certain muscles in one or both legs.
  - Pain in the front of the thigh.
  - cauda equina syndrome
Diagnostic studies

- MRI is the test of choice for evaluation of disc disease. Its multiplanar capabilities make it suitable for visualizing far lateral disc herniation as well as the paravertebral structures.
Management of disc herniation

- The medical management traditionally involves:
  - **Bed** rest and analgesics and anti-inflammatory drugs.
  - **Muscle** relaxants help in some. Transcutaneous electrical nerve stimulation (TENS) helps in about 20% of patients.
  - **Physical** therapy such as (exercise, relaxation, massage, and hot compressors).
Management of disc herniation

- **Surgical management:**

  Indications for surgery include failure of acceptable pain control by nonoperative measures, progressive neurological deficit. The traditional approach to lumbar discectomy *(laminectomy)* usually under general anesthesia.
Nursing intervention

Reducing pain

- Bed rest
- Comfortable position such as semi-fowler's with moderate hip and knee flexion or side lying position.
- Progressive ambulation

Patient's education

- Exercise
- Proper position
- Avoid lifting
Thanks for your attention