

SPINAL CORD COMPRESSION involves tumor invasion or extension into the epidural space or pathologically collapsed vertebral bone fragments impinging on the spinal cord.

### CAUTION!

Early detection and treatment is essential to prevent progression of symptoms.



### RISK FACTORS

- Patients with solid organ malignancies with high incidence for vertebral metastasis
- Patients with lung cancer, prostate cancer, breast cancer, or multiple myeloma

### EARLY SIGNS & SYMPTOMS



- Back pain that generally worsens in the supine position and improves upon sitting or standing
- Pain that can be aggravated by activities that increase intra-abdominal or intra-thoracic pressure, such as coughing, sneezing, or straining

### CAUSES/PATHOPHYSIOLOGY



- Hematogenous spread of malignant cancer cells into the dural sac, causing spinal cord compression or collapse
- Direct tumor extension into vertebral column



### LATER SIGNS & SYMPTOMS

- Motor weakness that may present as limb heaviness and clumsiness
- Sensory loss that presents as numbness of the fingers or toes, paresthasias, or loss of proprioception, which leads to loss of sensation of touch, pain and temperature
- Autonomic dysfunction resulting in difficulty starting and stopping urination and bowel incontinence
- Possible medical emergent hypertension, depending on location of compression
- Irreversible paralysis

### EMERGENCY INTERVENTIONS



- Corticosteroids and pain management agents
- Spinal decompression with radiation therapy and/or surgery

### DIAGNOSTIC ASSESSMENT



- Perform complete medical assessment with neurologic examination.
- Magnetic resonance imaging (MRI) has very high sensitivity and specificity for spinal cord compression.
- Computed tomography scan is acceptable if patient is not able to tolerate MRI.



### NURSING CONSIDERATIONS

- Pain management
- Mobility and safety issues
- Skin care
- Bowel and bladder function

### ADDITIONAL RESOURCES

Kaplan, M. (Ed.). (2018). *Understanding and managing oncologic emergencies: A resource for nurses* (3rd ed.). Oncology Nursing Society.

Lawrie, I. (2010). Back pain in malignant disease—Metastatic spinal cord compression? *Reviews in Pain*, 4(2), 14–17. <https://doi.org/10.1177/204946371000400204>