Conus Medullaris Syndrome

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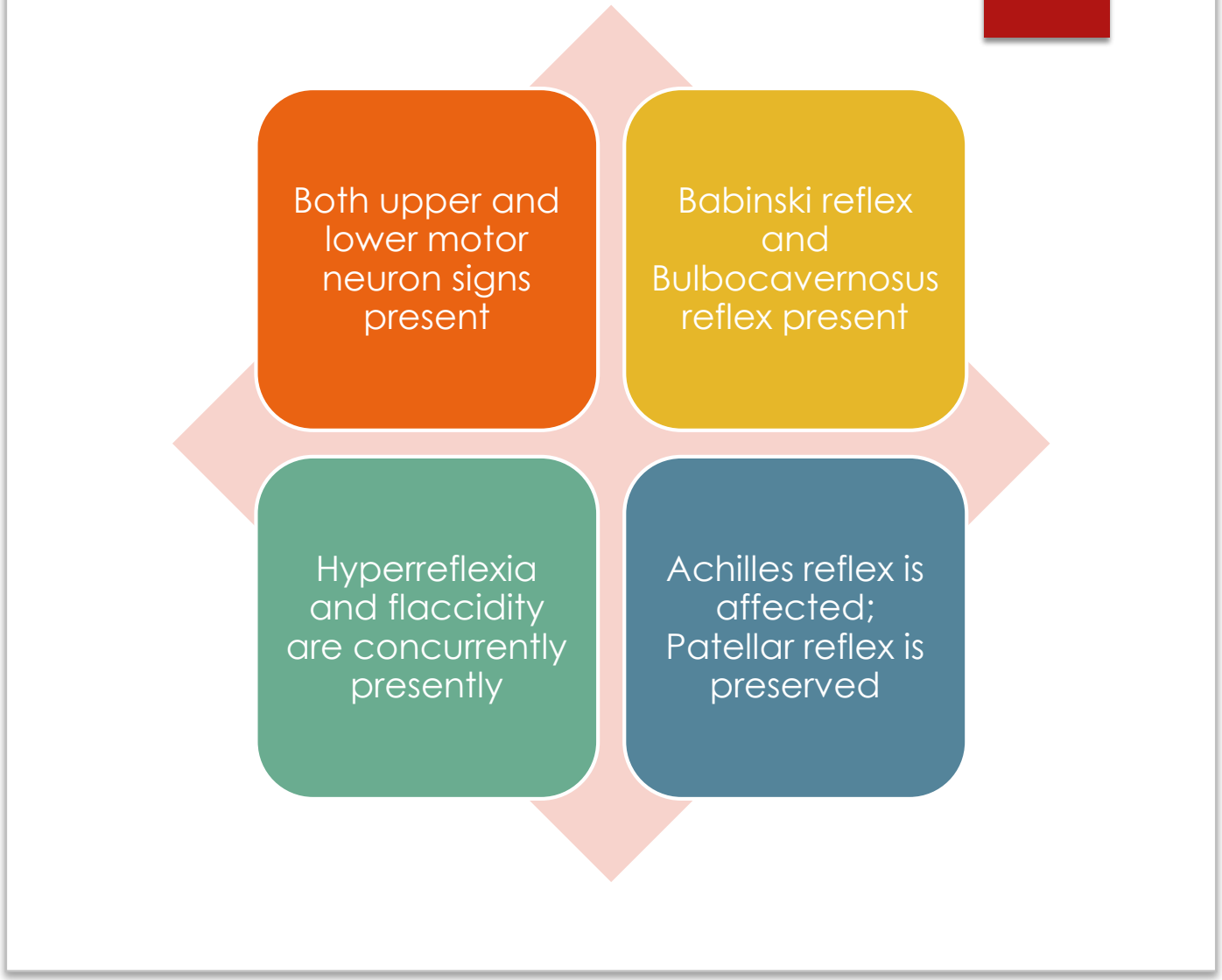
Presentation

1. Acute back pain radiating to bilateral lower limbs
2. Urinary retention
3. Stool retention
4. Perianal Numbness
5. Numbness and tingling sensation in bilateral lower limbs
6. Sexual Dysfunction (Impotence in men)

Signs


Both upper and lower motor neuron signs present
Babinski reflex and Bulbocavernosus reflex present
Hyperreflexia and flaccidity are concurrently presently
Achilles reflex is affected; Patellar reflex is preserved

Pathophysiology and Risk factors

- Conus medullaris is the end part of spinal cord.
- In most adults it is as L-2 levels with some variations from T-12 to L-2 levels.
- Compression of spinal cord at this level is conus medullaris syndrome.
- Most common cause is trauma.
- Other causes include Infections (Tb, HSV, Meningitis, CMV) and malignancy(Primary and metastasis).

Diagnosis

- Thorough history is important to look for recent trauma or chiropractic manipulation, history of malignancy, intravenous drug use and constitutional symptoms like fever/chills.
- Detailed physical examination is important to differentiate from other spinal compression causes.
- Look for presence of UMN and LMN signs, Palpable bladder showing urinary retention, Absent or decreased rectal tone/ Bulbocavernosus reflex.
- Gold standard for diagnosis is Urgent MRI Ideally within 1 hour of presentation for favorable prognosis.

Differential Diagnosis

- Cauda Equina Syndrome
- Spinal Cord Infarct
- Multiple Sclerosis
- Infections
    i. HIV-related Myelopathy
    ii. Transverse Myelitis

Management

- Surgical Decompression (Laminectomy) is the main treatment option
- If cause is cancer, radiation therapy (Brachytherapy) maybe required
- Physical therapy is essential to regain function.

Prognosis

Prognosis is favorable with early recognition and treatment.

Ideally treatment within 48 hours of presentation is much better.