

When Strength and Feeling Take Opposite Sides, Only an Attentive Clinician Can Bring Them Together

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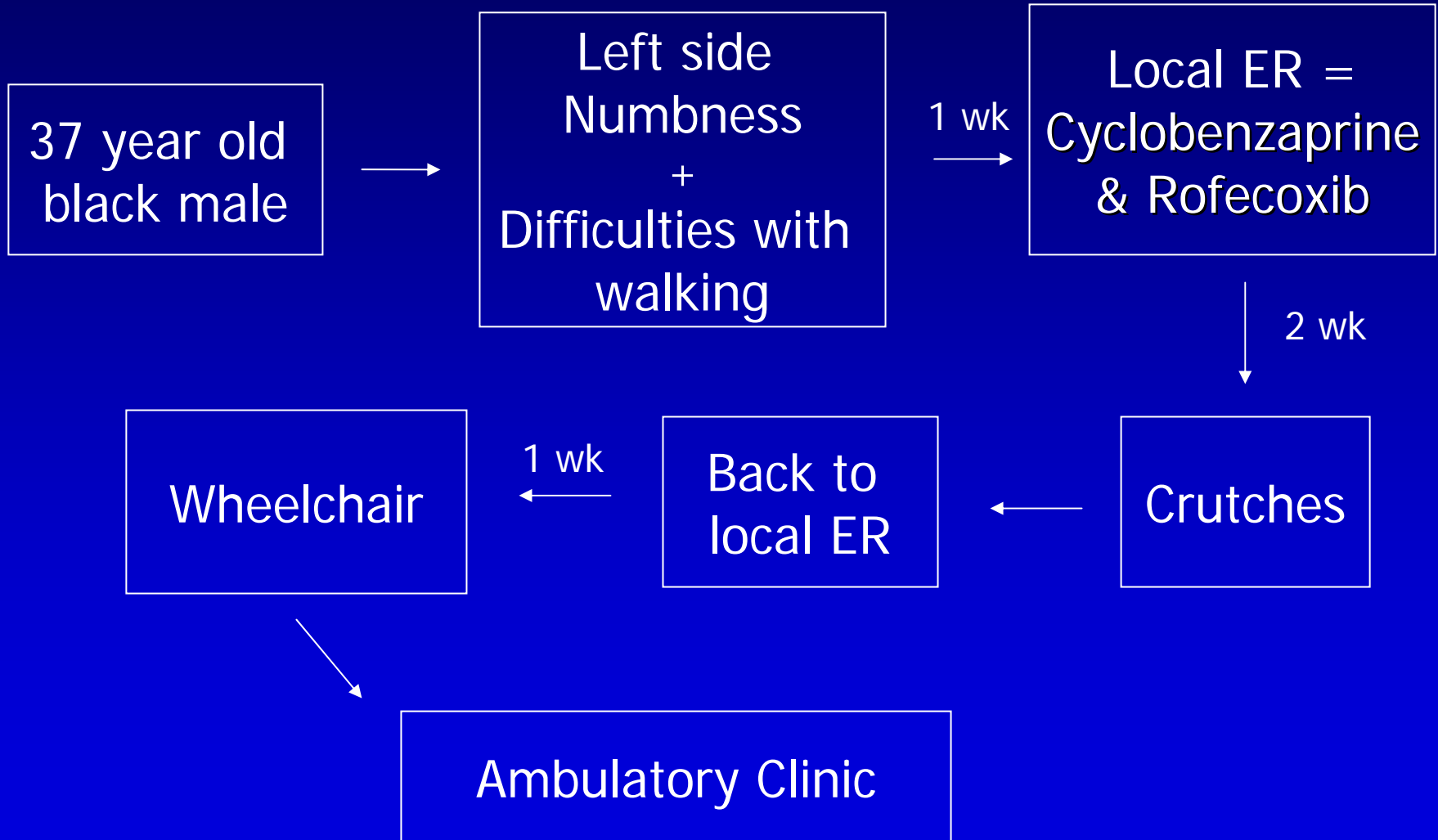
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Division of General Internal Medicine

Learning Objectives

- Brown-Sequard syndrome
 - Recognize physical exam findings
 - Review causes
 - Differentiate from other syndromes

History



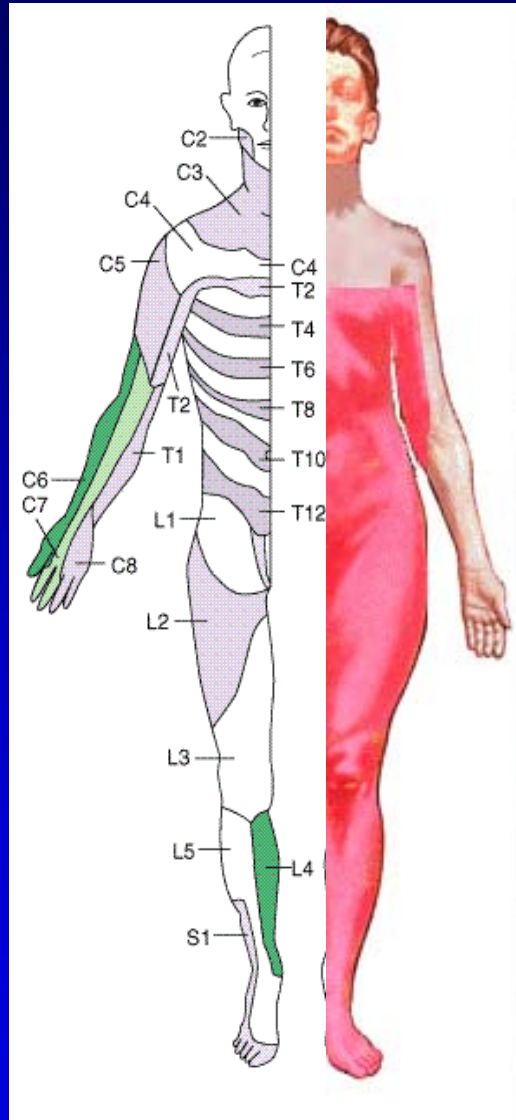
Other Pertinent Information

- ROS: unremarkable
- PMHx: none
- FHx: + CAD (F); DM II (M)
- Soc: construction worker
smoker
marijuana (no IVDU/ cocaine)
- Meds: cyclobenzaprine, rofecoxib

Physical Exam

RIGHT

- Strength: 3/5 from deltoid down (arm / leg)
- DTR's: ↑
- Babinski (+)
- Proprioception: abnormal
- NI pain, temp sensation



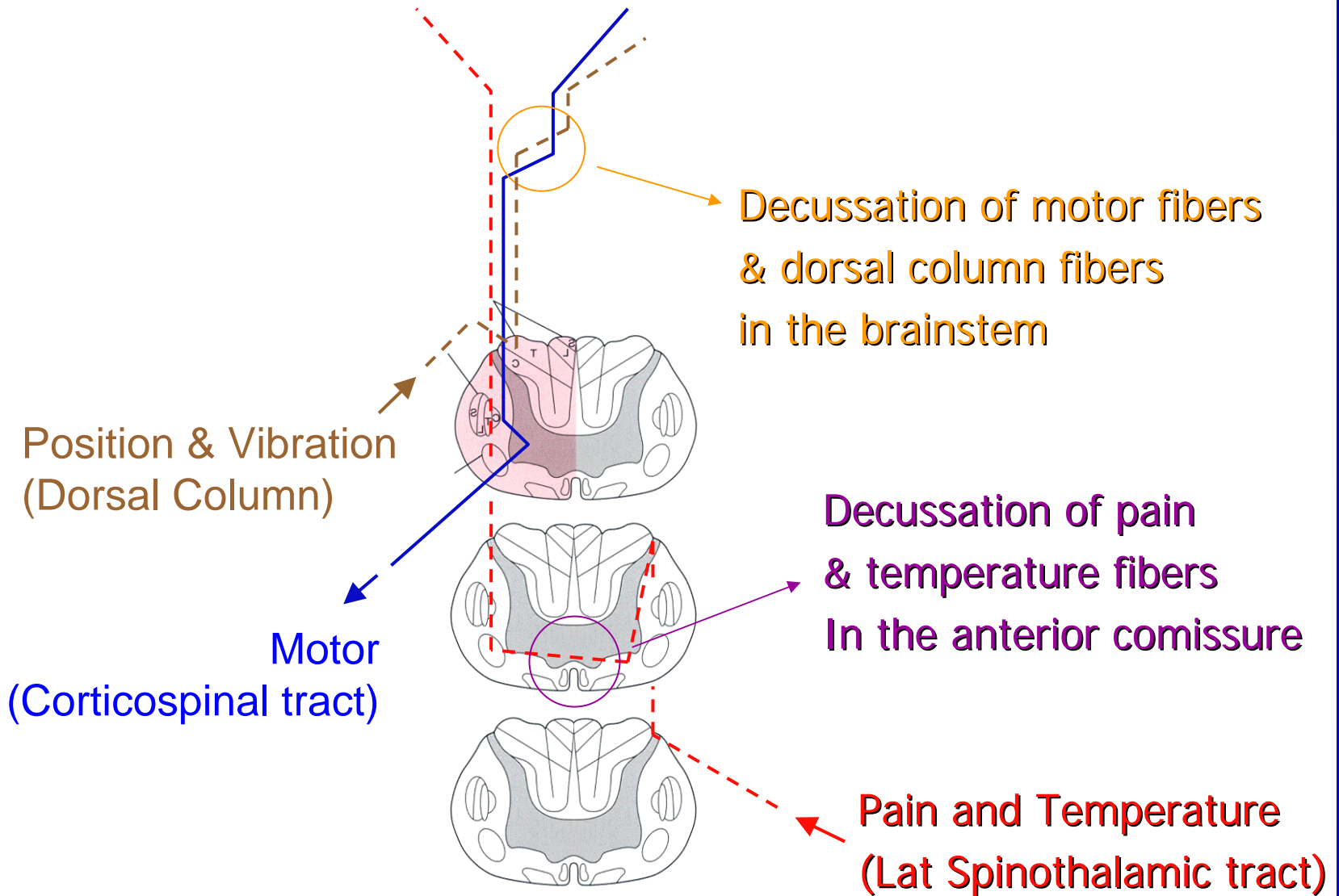
LEFT

- Strength: 5/5
- DTR's: nl
- Babinski (-)
- Proprioception: nl
- Pain, temp sensation 2 cm above nipple: ↓

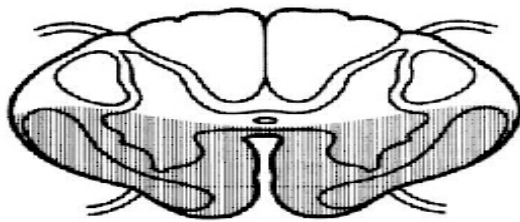
Clinical Diagnosis

Brown-Sequard Syndrome

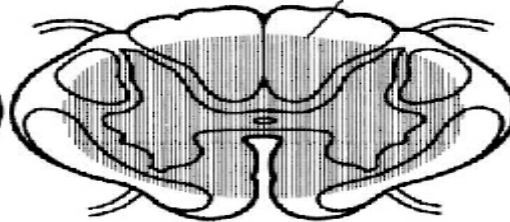
Neuroanatomy



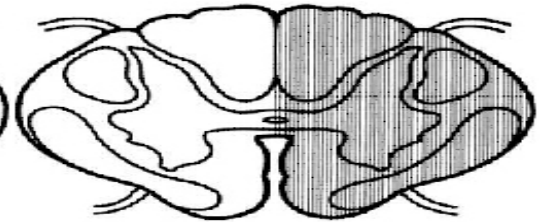
Differential Diagnosis



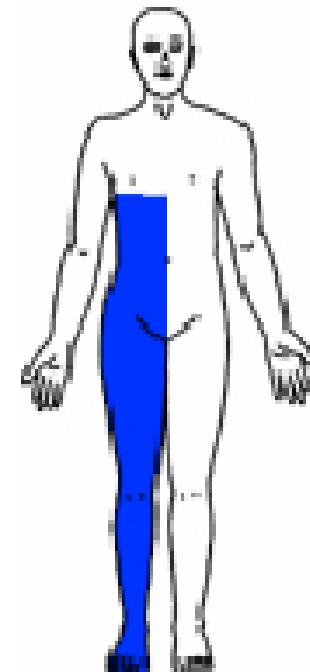
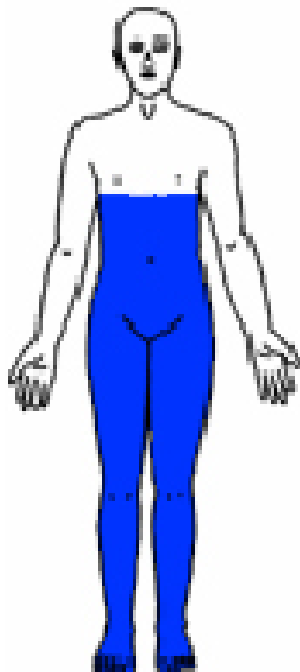
ANTERIOR CORD SYNDROME



CENTRAL CORD SYNDROME



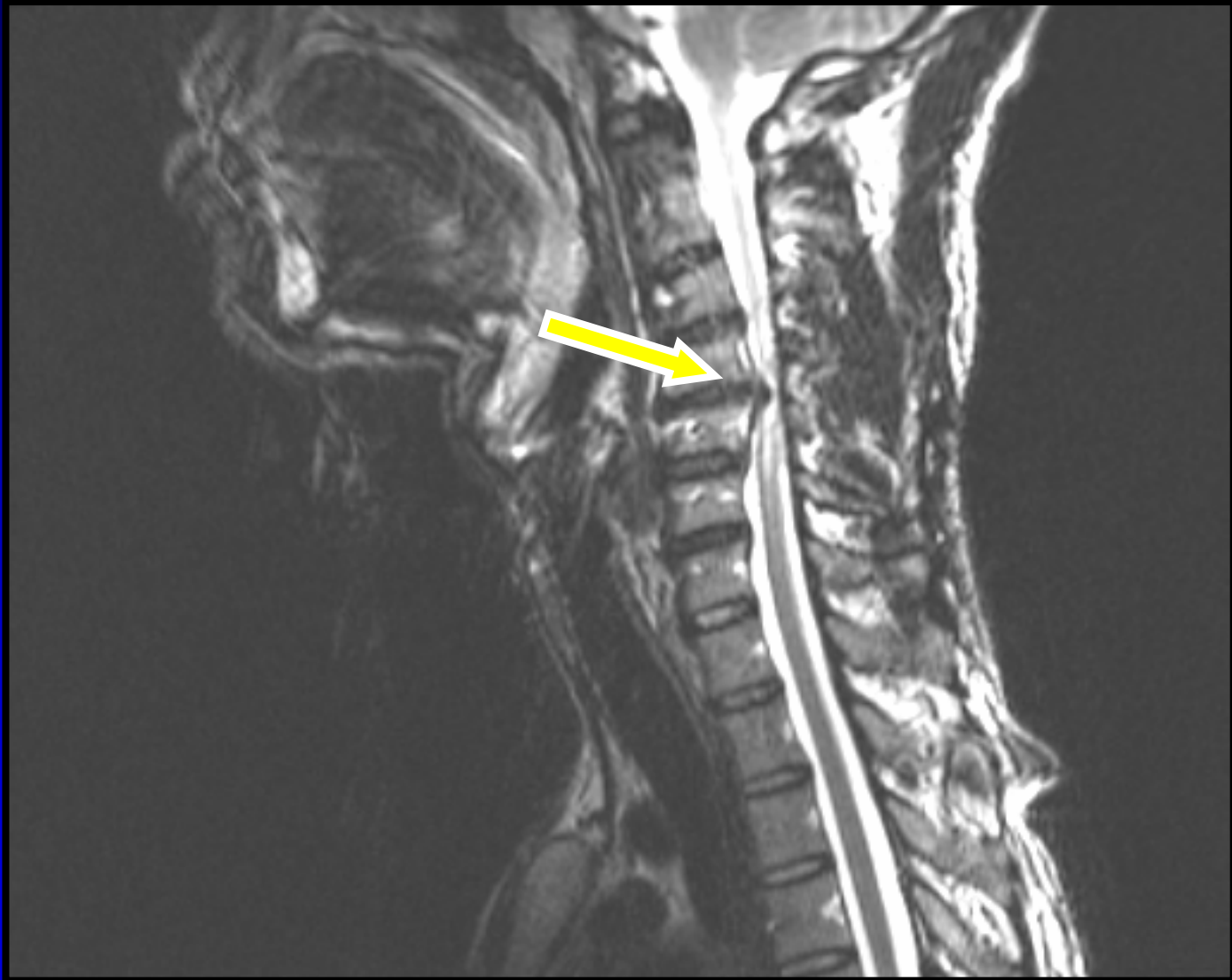
BROWN-SÉQUARD SYNDROME



Causes of Brown-Sequard Syndrome

- Trauma
- Spinal cord tumor
- Infectious, inflammatory causes
- Hemorrhage
- Degenerative disease
- Disk herniation

MRI



Discussion

- Charles-Édouard Brown-Séquard (1800's)
- Disk herniation
 - First reported in 1928 (Stookey)
 - English literature: 19 cases
 - Better prognosis - extradural disk herniation, early surgery

Spine 2004;29:E28-31

Spine J 2003;3:530-3

Take Home Points

Brown-Sequard Syndrome

- Diagnosis suspected by physical exam
 - Ipsilateral – motor + proprioception
 - Contralateral – pain and temperature
- Test: MRI (trauma, disk herniation)
- Treatment: anterior discectomy



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