Common Cervical Spine Disorders - Diagnosis and Treatment

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Bones and Spine
Cervical Radiculopathy  Vs.  Myelopathy
Clinical Presentation

- **Radiculopathy**
  - Shooting pain down the arm with numbness, tangling
  - +/- weakness
  - +/- interscapula pain
  - Better with arm abducted

- **Myelopathy**
  - Gait changes/falling
  - Bowel(18%) or bladder(15%) dysfunction
  - Change hand writing
  - Diffuse hyperreflexia/spastic
  - 20% no neck or arm pain
  - Electric shock with movement of neck
Physical Exam
C5 Radiculopathy

- C4-5 level
  - 3rd most common
- Weak deltoid, shoulder external rotators
  - perhaps biceps
- Biceps reflex
- Pain & Sensory loss
  - lateral shoulder
  - lateral brachium
Physical Exam
C6 Radiculopathy

- C5-6 level
- Weak biceps & wrist extension
- Brachioradialis reflex
- Pain & sensory loss
  - radial hand
  - lateral brachium
Physical Exam
C7 Radiculopathy

- C6-7 level
- Weak triceps, wrist flexion, finger ext
- Triceps reflex
- Pain & sensory loss
  - middle finger
  - posterolateral arm
Physical Exam

Spurling Test

- Extending the neck
- Rotating head
- Downward pressure on head
- Positive if pain radiates to side patient’s head is pointed
  - Positive Spurling in 71% football players with recent burner

(Levitz et al AM J Sp Med 1997)
Physical Exam
Manual Cervical Distraction

- Supine patient
- Gentle manual axial distraction
  - Up to ~30lbs
- Positive response reduction neck and limb symptoms
Hoffman’s Reflex Myelopathy

- Suddenly extend middle finger DIP
- Reflex finger flexion
- When asymmetric indicative spinal cord impingement
Physical Exam

L’hermitte’s Sign - myelopathy

- Neck flexion
- Electric-like sensation radiating down spine and/or extremities
  - Cervical spondylosis
  - Multiple sclerosis
  - Tumor
Non-Operative Treatment

- NSAID
- Oral steroid
- Soft cervical collar
- Cervical traction
- Epidural steroid injection
ANT. CORPECTOMY & POST FORAMINOTOMY

- 59 yo businessman with severe R. arm pain.
Cervical artificial disc
2 Level cervical artificial disc
Cervical Laminoplasty

- 81 year old with quadriplegia, loss of function, worse with BUE than BLE.
Cervical laminoplasty
Conclusion

Patient selection and Making the correct diagnosis is the key to success.
Thank You