JANUARY 2024 VIRTUAL MEETING

CERVICAL SPINE MEDICAL OVERVIEW (Dr. K. Radcliff)

Anatomy/Treatment/Compensability

I. Basic Anatomy

Orthopedic and neurologic

Bones

Discs

Bulge
Protrusion
Herniation
Extrusion

Neurologic considerations

Radiculitis
Radiculopathy
Myelopathy
Spinal cord v. nerve root compressions
Stabilizing soft tissues [muscles, ligaments, tendons]
Alignment [retrolisthesis/anterolisthesis]

Degenerative conditions

Osteoarthritis/Stenosis
Disc desiccation
Spondylosis
Spondylolisthesis

Adjacent disc disorders

Pain generators.

Pseudoarthrosis [testing to confirm/options for treatment].

Chronic Versus Acute Considerations

II. Treatment Protocols

Relevant Diagnostics (and clinical indications for same)

X-rays
CT Scan (contrast/non-contrast)
MRI [contrast, non-contrast
EMG, discography
Myelogram
Post-myelogram CT

Clinical Evaluation

Significant clinical testing maneuvers

- Most common causes of low back pain post-trauma [i.e. the part(s) of the spine which is/are actually injured causing a pain presentation].

- Most common non-surgical treatment protocol for low back pain following trauma.

- Most common differential and/or multiple diagnostics post-traumatic low back pain.

- Most common physical therapy [length] for trauma related low back pain of a presumptive non-surgical nature.

- Main factors influencing surgery versus non-surgery treatment options.

- Goals of non-surgical treatment.

- Miscellaneous factors influencing surgical versus the non-surgical conditions: – Age, patient's activity level, smoking status, obesity, important other health considerations negating either efficacy and/or eligibility for spinal surgical intervention; radicular v. non-radicular presentation, true clinical radiculopathy, single v. bilateral radiculopathy, spinal/joint stability/alignment, pre-existing spinal conditions, prophylactic surgical considerations; vertebral fractures, vertebral instability, pseudo arthrosis.

- Criteria for injection modalities and type of injections.

- Long-term prescription medications, including muscle relaxants, opiates, and neurologic medication.

Surgical Options Criteria

- Single v. multilevel microdiscectomy –

- Laminectomy/foraminotomy, instrumented fusion [single v. multilevel]. [Anterior and posterior approach.]

- Artificial disc replacement [single level, multiple level], relative efficacy [artificial disc v. instrumented conventional fusion].

- Cost consideration regarding instrumented fusion vs. artificial disc replacement.
    - Vertebral instability/fracture issues

- "Minimally invasive" surgical procedures [risk/benefits].

- Common physical therapy protocols post cervical spinal surgery.

- Criteria for "pain management" post-surgery/most frequent options.

- Significance of Functional Capacity Evaluation as an "objective" test regarding treatment protocol and/or return to work.

- Role of chiropractic medicine in acute injury management and/or health maintenance.

- Spinal cord stimulator/criteria for most-efficacious results.

- Prediction of surgical outcome.

III. Etiologies of Need for Treatment

- Types of acute trauma causing original injury.

- Acute trauma causing aggravation acceleration and/or exacerbation of pre-existing condition[s].

- Types of relevant repetitive stress exposure/ergonomics.

Biomechanics of pathology

- Deflexion, rotation, lateral/torquing forces, flexion/extension; hyperflexion, hyperextension, blunt trauma

- Ergonomic/postural considerations.

IV. Miscellaneous Considerations

- Most frequent "red flags" regarding treatment considerations/options.

- Additional relevant considerations