Chronic Neck and Shoulder Pain

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Diagnosis and Assessment

• Intrinsic vs. Extrinsic (referred pain)
• Neurological vs. Musculoskeletal
History

• Traumatic?
• Onset sudden or gradual?
• Duration?
• Constant? If not when does it occur? (Time of day, Activity level, Positional/Movements)
• Character (Burning, Aching, Stabbing, Throbbing)
• Weakness or Numbness? Bowel/Bladder?
History

• Previous Occurrence? What helped in past?
• Work up to date?
• Treatment to date?
• Stress? Lifestyle changes?
• Localized? Other areas of body effected?
• Work? Auto? Secondary gain?
Physical Exam

• Inspection
• Palpation
• Range of Motion (Active and Passive)
• Strength
• Sensation (Dermatone vs. Nerve)
• Reflexes
Imaging/Diagnostic Studies

- X-Rays
- CT
- MRI
- EMG
Diagnosis Cervical

• Osteoarthritis (Facet Arthropathy)
• Sprain/Strain
• Myofascial Pain/Fibromyalgia
• Cervical Disc Disease
• Cervical Radiculopathy
• Cervical Stenosis
Diagnosis Shoulder

- Shoulder Impingement (AC/DJD)
- Rotator Cuff Injury
- Labral Injury
- Glenohumeral Instability
- Bicipital Tendonitis
Diagnosis other

- Brachial Plexopathy
- Thoracic Outlet Syndrome
- Polymyalgia Rheumatica
- Fractures
- Pancoast Tumor
Arthritis

• Elderly
• Lower cervical spine and facets
• Morning pain and stiffness
• Loss of ROM (Cervical Extension)
• Previous Injury
• X-Rays
• MRI (Stenosis/Disc Degeneration) with neurological signs/symptoms
Treatment

• Goal to reduce pain and inflammation and improve ROM
• Heat
• NSAIDs
• Soft Collar
• Traction
• ROM Exercises
• Avoid high-impact exercise, repetitive extension and prolonged positioning
Spain/Strain

- Spain-Ligament, Strain-Muscle
- Immediate or up to 24hr. Onset
- Stiffness
- Tenderness
Treatment

• Modalities (Ice then Heat)
• Medicines (NSAIDs, Muscle Relaxants)
• Massage
• Short term use of soft collar
Myofascial Pain/Fibromyalgia

- Clinical Diagnosis
- Skeletal Muscle
- Localized or Diffuse
- Vague/Waxes and Wanes
- Tenderness/Trigger points
- Stressors/Sleep Disturbance
Treatment

- Relax/Eliminate stressors
- Biofeedback, Mediation, Psychological Counseling, Behavioral Changes
- Aerobic exercises
- Modalities
- Medicines (antidepressants, anxiolytics, avoid narcotics)
- Trigger Point Injections
Cervical Disc Disease/Radiculopathy

• Degenerative or Disc Herniation
• Sudden or Gradual Symptoms
• Pain with extension
• Referred pain in the posterior shoulder region or upper extremity
• Motor or sensory deficits at root level
• Positive Spurling’s sign
Treatment

• Goal to reduce inflammation on spinal nerve
• Steroids or NSAIDs
• Cervical Traction
• Cervical Pillow
• Flexion exercises
• Epidural Steroid Injection
• Surgery
Shoulder Impingement

- Older or athlete
- Repetitive Overhead Activities
- Gradual worse with activity
- Lateral superior anterior shoulder
- Hawkins Test (Flexion and Internal Rotation)
- Neer Test (Abduct and Internally Rotate in a Scapular Plane)
- X-Rays (AC Morphology/Arthrosis)
Treatment

• Active Rest
• NSAIDS
• Injection (Steriods/Caines)
• Physical Therapy (ROM, Joint Mobilization, Isometrics, Modalities)
• Surgery
Rotator Cuff Injury

• Supraspinatous (Abducts), Infraspinatous, Teres Minor (Ext Rotates), Subscapularis (Int Rotates)
• Pain and/or weakness with ROM
• Acute=Tear, Gradual Chronic= Tendonitis
• Drop Arm Sign (Max elevation in Scapular plane then slowly lower)
• Empty Can Test (Abduction, Internal Rotation, Resistance)
• MRI
Treatment

• Rest/ Activity Modifications
• NSAIDS
• Injection
• Physical Therapy (Modalities, Neuromuscular Control, Band Exercises/Strengthening)
• Surgery (Significant Tear)
Labral Injury

- Acute or Chronic Degenerative
- Pain with ROM/ Throwing
- O’Brien Test (Downward force in forward flexion, adduction, and internal rotation)
- MRI
Treatment

• Rest/ Activity Modifications
• Physical Therapy (Modalities, Capsular Strengthening)
• Surgery
Glenohumeral Instability

• Acute Trauma, Chronic Repetitive Microtrauma, or Congenital

• Anterior instability most common (tear in anterior/inferior glenohumeral joint capsule or detachment of gleniod labrum from gleniod rim – Bankart Lesion)

• Apprehension Test (Passive external rotation in abduction with patient supine applying forward pressure to posterior humeral head)

• MRI
Treatment

- Rehab/PT – Correct kinetic chain deficits, Scapulothoracic mechanics, and improve shoulder girdle strength, flexibility, and neuromuscular control.
- NSAIDS
- Immobilization (comfort) limiting abduction and external rotation
- Kinesiotaping (improve joint biomechanics and neuromuscular reeducation)
- Surgery
Bicipital Tendonitis

• Long head – originates at glenoid labrum/supraglenoid tubercle, goes oblique over the humeral head then inferior to bicipital groove.

• Elbow flexor and Supinator

• Speed’s Test (Resisted shoulder flexion with elbow extended and supinated)

• Yergason Test (Resisted supination with arm at side and flexed)
Treatment

• Rest
• NSAIDS
• PT for ROM then strengthening of shoulder capsule starting with isometrics
• Steriod Injections (Subacromial or Glenohumeral Joint). Avoid direct injection of biceps tendon!
• No surgery unless rupture
Brachial Plexopathy

- Traumatic or Nontraumatic
- Neurologic Upper Extremity Involvement
- EMG for Diagnosis
- Treat underlying cause
Thoracic Outlet Syndrome

- Compression at Interscalene Triangle (1st rib and scalene muscles), Costoclavicular Space (Clavicle and 1st rib), or Subpectoralis Minor/Subcoracoid Space.
- Involves Subclavian Artery/Vein and Lower Trunk of Brachial Plexus.
- Symptoms – shoulder and intermittent arm pain, paresthesias and fatigue with overhead positioning.
Diagnosis

- Adson Test – Head extended and rotated to affected side and inspiration. Absent or diminished radial pulse with arm extended.
- MRI
- EMG / NCV – Decreased amplitude of Ulnar sensory (normal in radiculopathy) and Median motor. Median sensory normal (upper trunk). APB most affected on EMG.
Treatment

• Patient education, activity modifications, NSAIDS, postural and body mechanics control.

• Exercises - *Scalenes, upper trapezius, levator scapulae, SCM and pectoralis.

• Scalene Injections – Steriod or Botox

• Surgery – Scalene release or cervical/1st rib resection (controversial with inconsistent outcomes)
Polymyalgia Rheumatica (PMR)

- Age 50 or older
- Morning stiffness in neck and shoulder
- Acute onset lasting at least 4 weeks
- Exam – Shoulder tenderness, active and passive ROM or neck and shoulder in limited by pain.
- Lab – Elevated ESR and CRP.
Treatment

• Steriods
• Therapy (ROM)
Fractures

- Trauma history
- Pain increase with ROM
- X-Rays
- Immobilize and/or surgery
Pancoast Tumor

- Pain at rest and night
- Respiratory involvement
- Diagnosis – MRI
- Treatment - Surgery
Summary

• Comprehensive Approach – History, Physical, Imaging and EMG/NCV.
• Distinguish Spinal Pathology from Shoulder Pathology from other etiologies.
• Multifaceted Treatment to optimize functional outcomes.
Thank You