

An Approach to Neck Pain

CIPC April 2021 - Gaurav
Gupta

Disclosures

- None

Learning Objectives

After the presentation you will be able

1. Demonstrate a physical examination to ascertain potential causes of patients with neck and low back
2. Articulate how the information from the examination can guide injection selection

General Approach- What you exam won't help with

You need to consider

- Cardiovascular disease
- Visceral/Thoraco-abdominal conditions
- Malignancy
- Central Nervous System disorders (excluding myelopathy)
- Infection

Assumptions for today

1. You know how to do the tests
2. You are able to guide workup
3. There is a focus on injections for this forum, but treatment options are multifactorial

General Approach – My Real World Approach

Possible Inflammatory Disorder	<ul style="list-style-type: none">● Ankylosing Spondylitis● DISH*
Central versus peripheral nervous system disorders	<ul style="list-style-type: none">● Myelopathy● Radiculopathy/Plexopathy● Mononeuropathy
Distinguishing a region for pain	<ul style="list-style-type: none">● Neck vs Shoulder● Low back vs Hip
Selecting a region for	<ul style="list-style-type: none">● Injection● Investigation

Specificity/Sensitivity is generally fair to poor

Cervical Spine - Range of Motion Abnormalities

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Options</u>
Not Fixed	Pain/Centralization/Malingering	Continue exam
Fixed Chest expansion Schober Wall Occiput Distance Side Bending	Ankylosing Spondylitis DISH	Workup (bloodwork) and rheumatology referral if other consistent findings and history



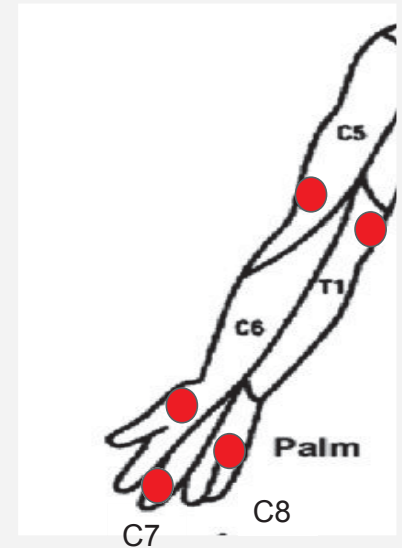
Cervical Spine - Upper Motor Neuron Findings

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Options</u>
L'Hermitte's Hyperreflexia Spasticity Hoffman's Babinski Clonus	Myelopathy	MRI Cervical Spine
Cranial Neuropathy Lateralizing	Brainstem or Brain Lesion/Condition	MRI Brain, vascular studies, cardiac risk factors etc



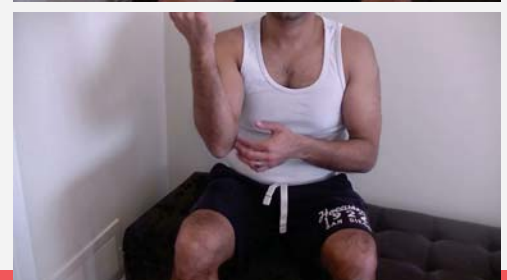
Myotomes/Dermatomes

C5 & C6	Deltoid (axillary n) Biceps (musculocutaneous n.) Extensor Carpi Radialis (radial n.)	Shoulder abduction Elbow flexion Wrist Extension
C7	Triceps (radial n) Flexor Carpi radialis (median n)	Elbow Extension Radial Wrist Flexion
C8 & T1	Abductor Pollicis Brevis (median n.) First Dorsal Interosseus (ulnar n)	Thumb Abduction Abduction 1st digit



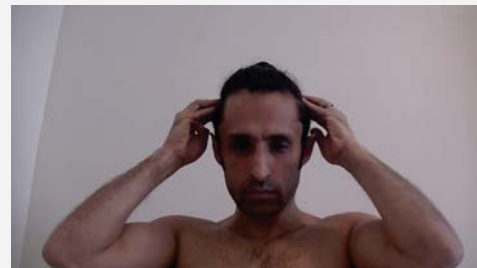
Cervical Spine - Peripheral Nervous System

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Options</u>
Concordant Weakness, Reflex, & Sensory Loss	Radiculopathy Plexopathy	Manage symptoms (physio, meds, injections) - workup (MRI and/or EMG/NCS) and refer if no resolution
Compression Tests	Mononeuropathy	Bracing, physio, injections, surgery - EMG/NCS



Cervical Spine- Palpatory Exam

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Options</u>
TMJ/Sinus	TMJ syndrome Sinusitis	Refer to oral/facial pain specialist Manage accordingly
Scalp tenderness	GCA	ESR, biopsy, etc
Occiput	Occipital Neuralgia	GON Injection
Lateral Columns	Facet Joint Pain	Facet joint procedures
Cervical Soft Tissues	Myofascial Pain	Trigger Point Injections



Injection Considerations

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Injection Options</u>
Mechanical Neck Pain	Myofascial Pain Facet Joint Pain	Trigger Points Facet Procedures Epidural
Radiculopathy	Nerve Root compression	Epidural Nerve Block
Plexus	TOS CRPS	Scalene Injections Plexus Injections Sympathetic Block
Mononeuropathy	CTS GON	Carpal Tunnel Injection Greater Occipital Nerve

Need to a Shoulder Exam too

<u>Finding</u>	<u>Diagnostic Consideration</u>	<u>Injection Options</u>
ROM loss	Adhesive capsulitis	Arthodistention
ROM pain and loss/Crepitus	GH or AC joint arthropathy	Intra-articular injection
Rotator Cuff Syndrome	Tendinopathy +/- calcification	Subacromial steroids* Fenestration Lavage
Unclear/Non Specific		Suprascapular nerve block