NWOOA 2020 Zoom Conference

Everyday Manual Medicine for Every DO
Building on & from 2020

Review and what was requested and had been missed based on Last year's experience
Many people asked about the same or similar things

Quickly review "Meat & Potatoes" Regional Mobilization of Thoracic, Cervical and Lumbar Spine –

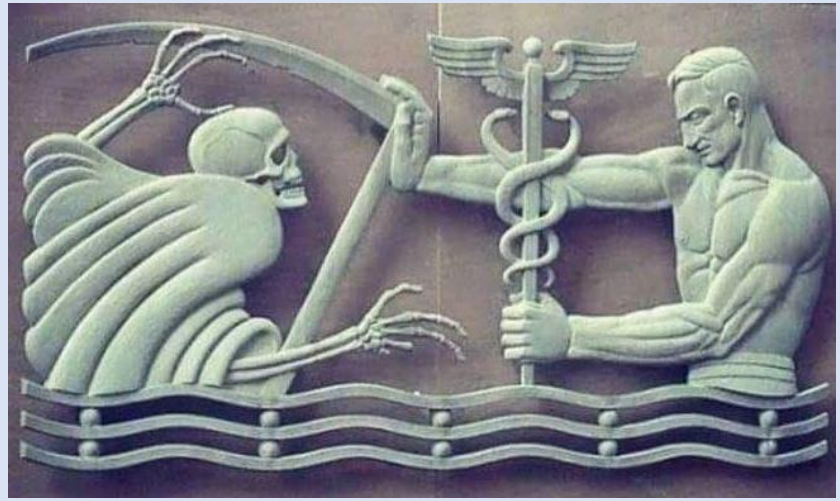
Take a step back from all the complexity and detail that frustrated so many of us

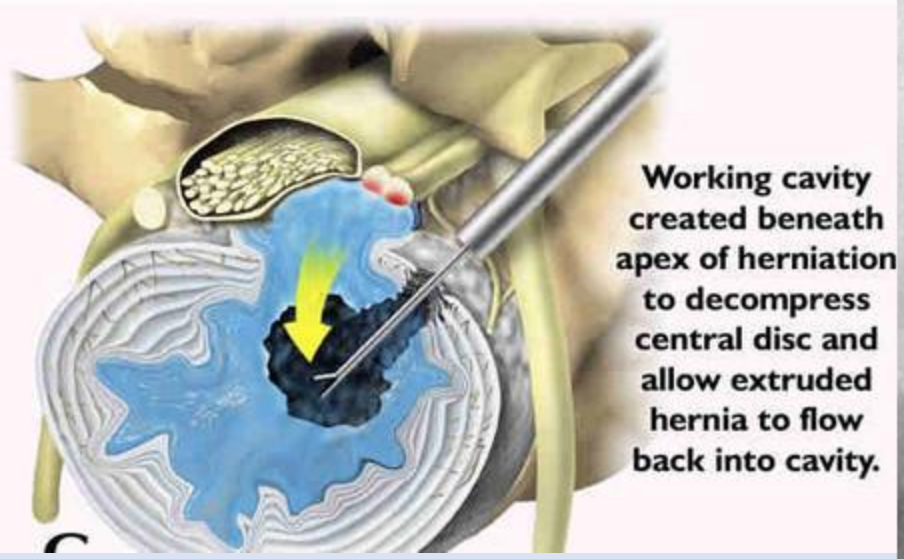
Intended Format for Today - Sadly no hands-on lab

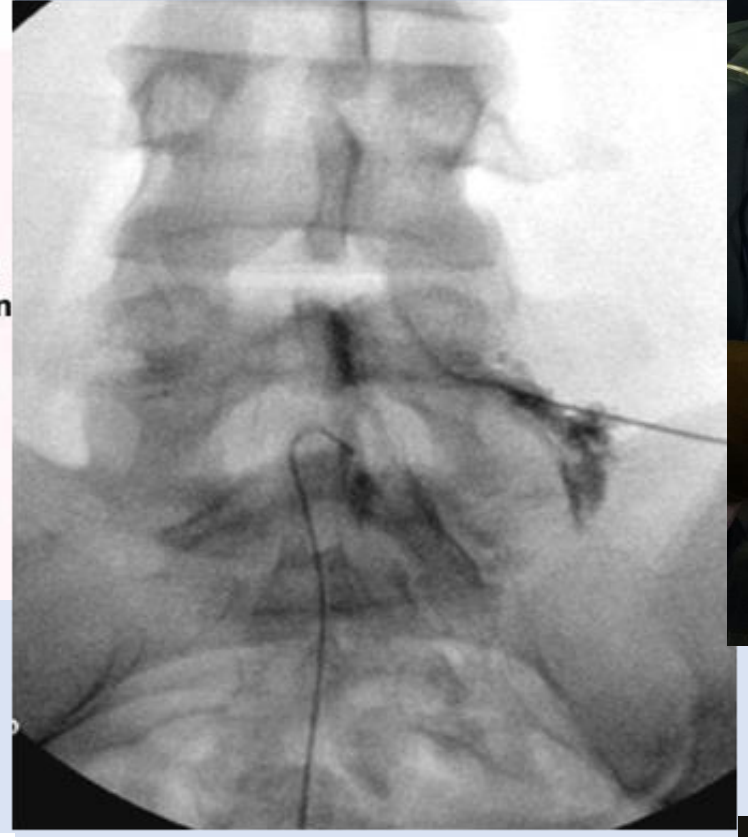
* The Basics and Adjunctive - simplify.
* History and Exam in more detail neuro MSK
* History and Exam Red Flags

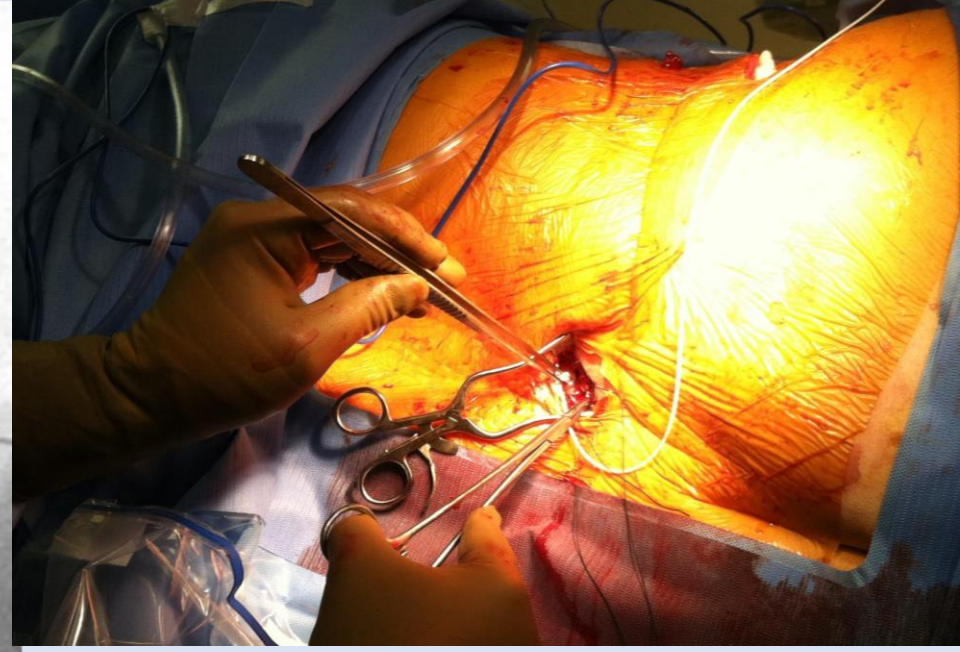
This year we are adding Sacral/ Peripheral Joint an some Cranial

Few slides for each Hope we can get a video at end



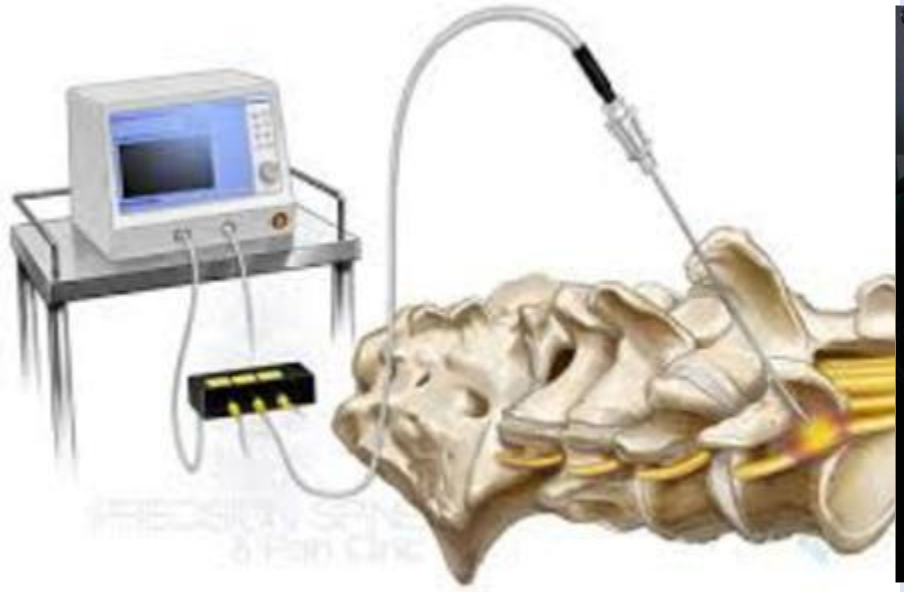


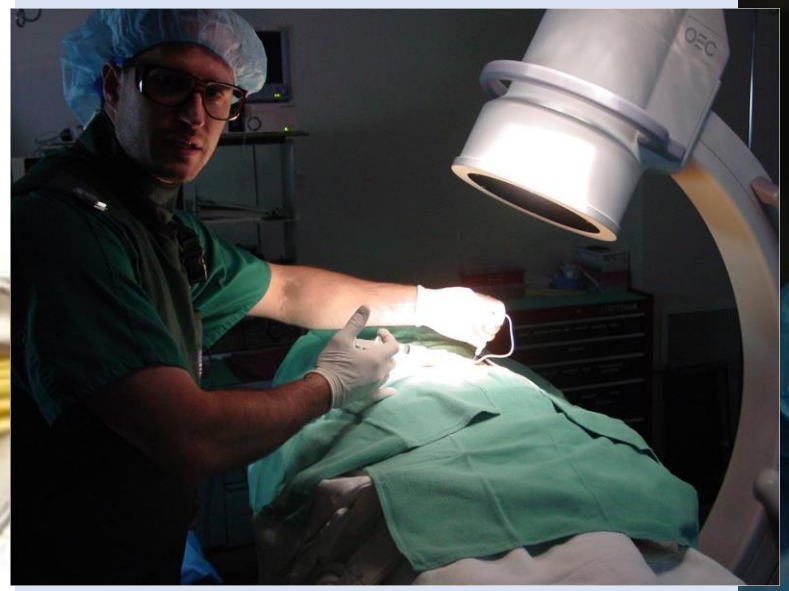




"Laser" Endoscopic Discectomy – MediCaid Pain Pumps, Spinal Cord Stims, they still all get OMT before and after

Facet Fusion, Kyphoplasty, Vert Bone Bx Lysis of Epidural adhesions, RF, Facet Blocks





- PM&R has Much in common with a Neurologists, Orthopedics, Psychiatrists

Academic & Proud Author but not here today as such purely empiric/clinical

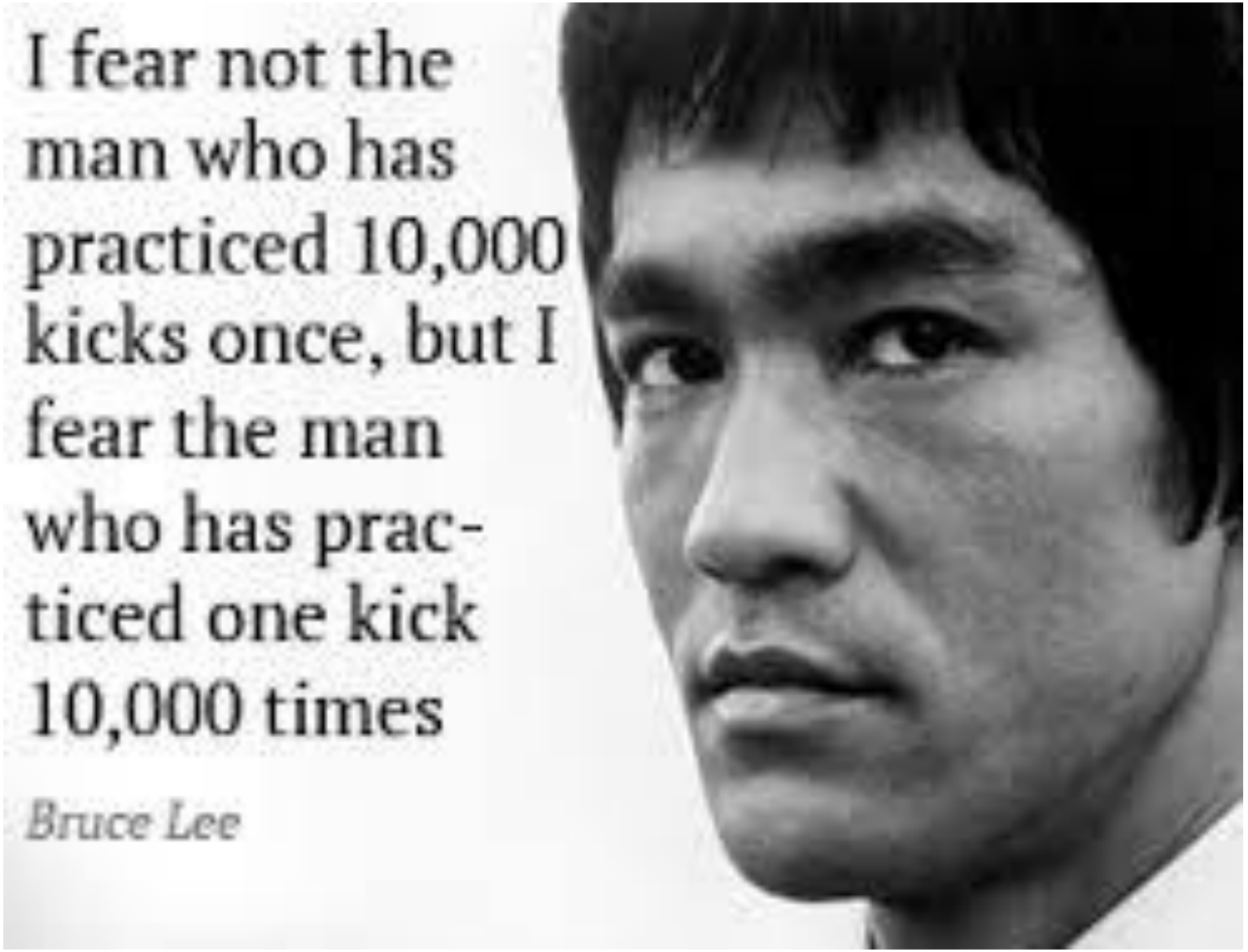
In the most basic terms to show what I use and what works every day in a Spine-Dominant Musculoskeletal Spine & Pain Center and large multi specialty orthopedic group OIO Lima, OH

My perspective today may be frowned on in strict academic circles.

Student's Be Aware- OSMs - Do not take this as Board Material/Board Review or what your school should be teaching, in fact it may hurt your boards or institutional exams.

MOC project is OMT following Fluoroscopic-Guided Contrast-Confirmed facet/ Medial Branch Injection. 150K manip billed

Michael F Stretanski, DO
PCOM 97'



"An Expert is the man/woman person who knows the basics the best"

- Steven J. Blood, DO
Past President Cranial Academy

What about the DO who has practiced 5 things 2000 times? Basic mobilization of the C,T,R,L S

Specific techniques will be based on what works for you and what you make yours. Learn and teach.

FIPP Moto - *Docendo Discimus*

Dicitur haeresis, quo dogmate non vexillum est gratum

Two Distilled thoughts

All OMT is best done within the context of other MSK care – TP's, PT/OT, passive modalities, heat, Ultrasound, HEP, lidocaine>Marcaine, complex polypharmacy, imaging, advanced interventional pain procedures, and motor point blocks just to name a few, and is often smoothly transitioned from exam to treatment exam treatment.

The modern DO must adapt treatment osteopathic philosophy and osteopathic techniques to fit within, benefit from and enhance state-of-the-art care, imaging and treatment protocols for their given field of medicine. Osteopathic manual medicine by itself standing alone in isolation is like a suture fragment left behind on an OR floor, both unaware of and not relevant to, nor able to take credit for or responsible for the clinical outcome.

Pearls after teaching OMT
"What I know now that I wish I knew then"

- **Asymmetric human mammalian anatomy is the norm not the *exception – We are all hand, eye and foot dominant.* Don't misinterpret that and try to force symmetry. High Trapezius**

Asymmetry is not automatically osteopathic dysfunction

Imaging still has limited, if any, utility in OMT- other than contraindication (critical stenosis, instability, malignancy)

- **Restriction does not mean or REQUIRE malalignment nor vice versa "things can be stuck in Neutral"**

Precision diagnosis is not a mandatory requirement in initial regional treatment.

It's ok to ask "Well does it just feel like it just needs to 'pop'?" as long as its not the ONLY thing you are going by or documenting

- Your hands are telling you things whether you are deliberately palpating or not- don’t ignore and don’t need to fully comprehend.
- Hence, exam is often smoothly transitioned to treatment and back.
- All Osteopathic Dysfunctions are Bilateral (anterior/posterior innom) Left Right Facet/Ribs
- CHF/Asthma/Lymphatics/ICU – underused esp Peds

- All OMT is an interaction between physician/patient
- and environment – what I DON’T say when teaching a first time IV start

If you re not sure if something is in a state of dysfunction – it is OK to gently range it and nudge – worst case nothing happens or you did an indirect then direct LAR (order irrelevant)

If something is not releasing in one direction, you can simply take it in the opposite direction, yes, take it further INTO dysfunction (but gently). Like when a door is stuck on the floor and you can’t open it, push it towards being shut, then pull back again. I cannot emphasize how accurate this analogy is!

Sometimes things just get stuck in neutral.

-There is no rotational or side-bending component.

-It becomes a simple matter of clinically mobilizing facet/SIJ/Pubic symp and getting it “unstuck”

Direct and Indirect release

Does the synovial joint of a facet develop a vacuum?
Is there reduced synovial fluid?

$N_2/CO_2 \uparrow$ dissolved in tissues?

- Not every Dr can do every technique on every patient. Pt or Dr Height, Weight, the Table, staff (4 hand tech) arm length, strength, viewpoints and this the norm for healthcare

- There is no DO-Patient interaction where there is zero potential for manual medicine to have some sort if positive impact, but few patients can be helped purely OMT

- Manual med techniques are like music genres - exist along a spectrum - same # opinions (Thrust- lig artic, ME , FPR, Counterstain/Cranial) Not everyone agrees on definitions and terminology. Some academic purists may take counterpoint

- OMT can be exhausting - Mind your own fatigue and your own health. Gain mechanical advantage – stool(s) – reschedule, PLAN certain patients for when you are ready

- Protect your hands/wrists/shoulders – paraffin, superglue, epicondylar bands
Bio freeze, Therapeutic Ultrasound as part of myofascial technique – empty glass local anesthetic bottle – Get treated yourself – Treat your colleagues – touch with intent.

Preliminary Evaluation / History and Exam

- Stand up for me – arms?
- Heel Strike, midstance Toe-off
- Heel stand- Toe Stand – Knee Bend
- H, L, Abd, CN's
- -pleuritic rub/wheeze (K-ville - Lymph)
- -pericardial rub
- Manual Motor Testing
- MSR's AKA -DTR's
- ASIA points -standardization
- ROS
- Fever, Chills, Weight Loss
- Focal weakness, Painless Weakness -
- Loss of Bowel and/or Bladder
- Sensory changes
- Numbness
- + and – sensory "pins & needles"vs no sensation
- MS – ROS Arnold-Chiari symptoms – ROS

Reumatologia. 2018; 56(1): 55–58.
Published online 2018 Feb 28. doi: 10.5114/reum.2018.74752
PMCID: PMC5911659
PMID: 29686444

Septic arthritis of the sacroiliac joint

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Abstract

Go to:

Septic arthritis is an inflammation of a joint caused directly by various microorganisms. It is often characterized by many unspecific symptoms. Bacteria is the most often etiological factor.

We present a case report of a 76-years old woman with a unilateral septic arthritis of the sacroiliac joint. Bacterial sacroiliitis should be taken into account in patients with sacroiliitis and fever onset.

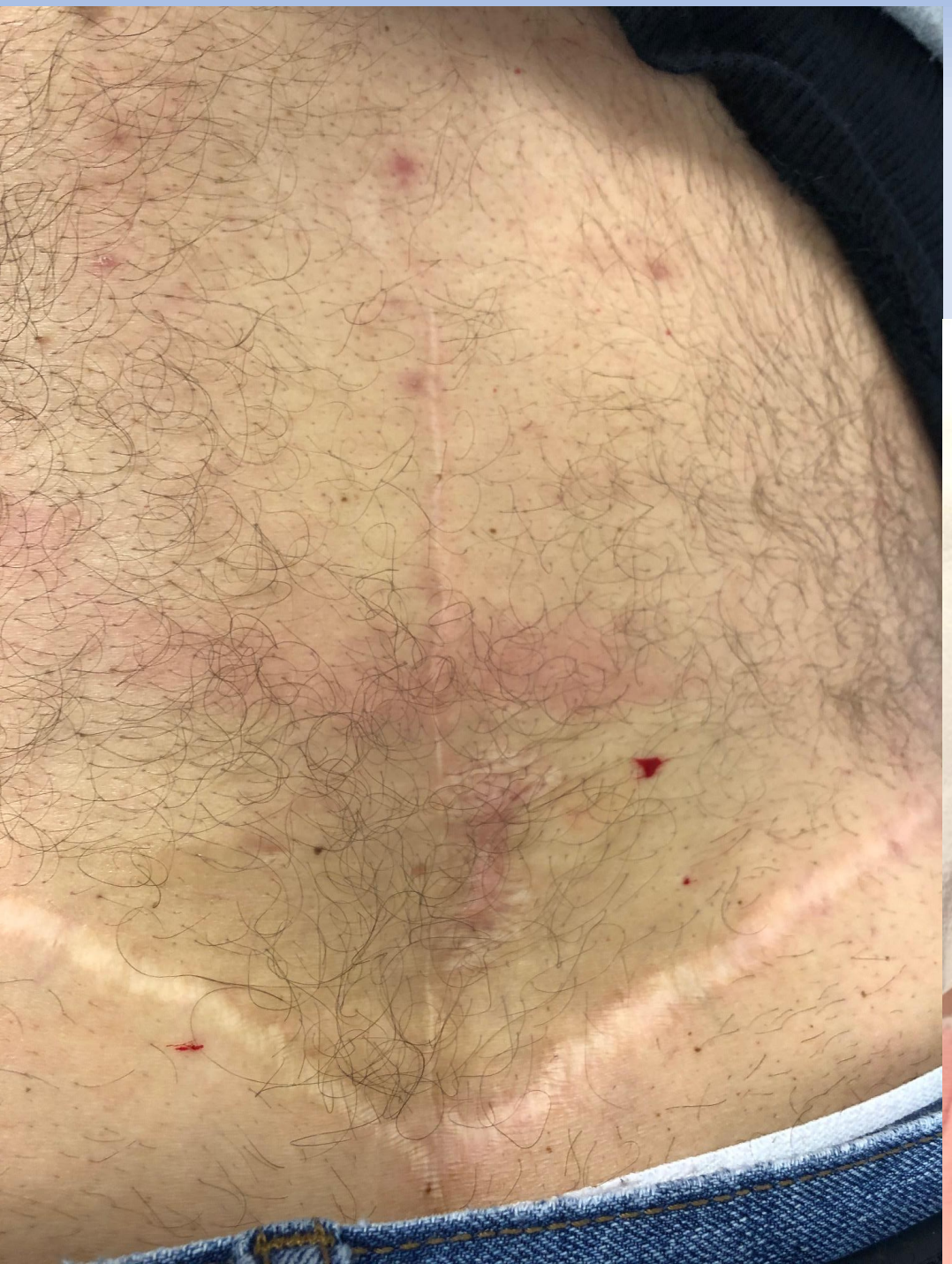
Proper diagnosis can be very often difficult and delayed but fast implementation of antibiotic therapy is extremely important in the treatment process. Diagnostic imaging is crucial to the diagnosis and monitoring of septic arthritis. Magnetic resonance imaging is the most relevant tool for the detection of sacroiliitis, allowing the institution of therapeutic strategies to impede the progression of the disease.

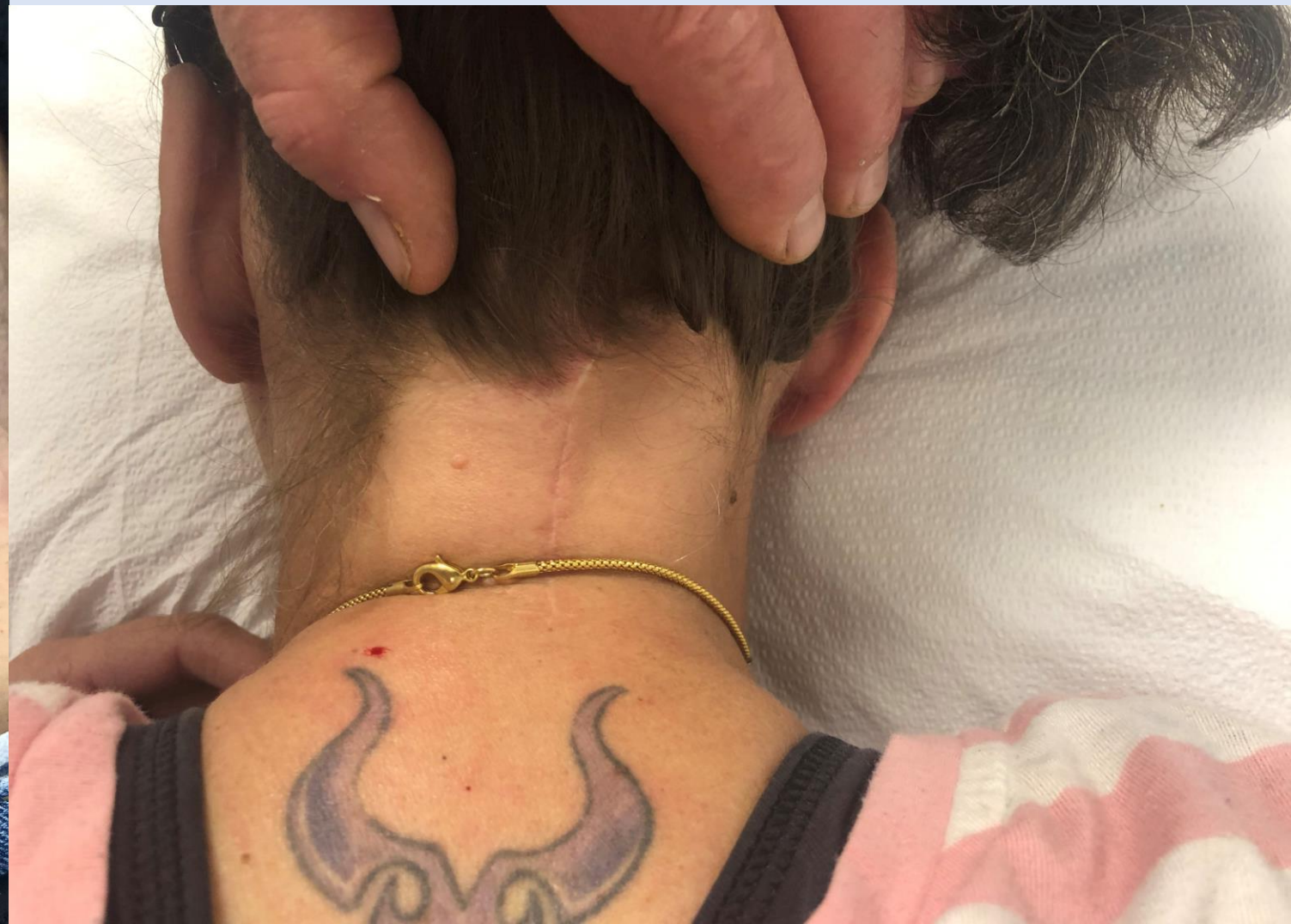
Not necessarily a Third World Problem

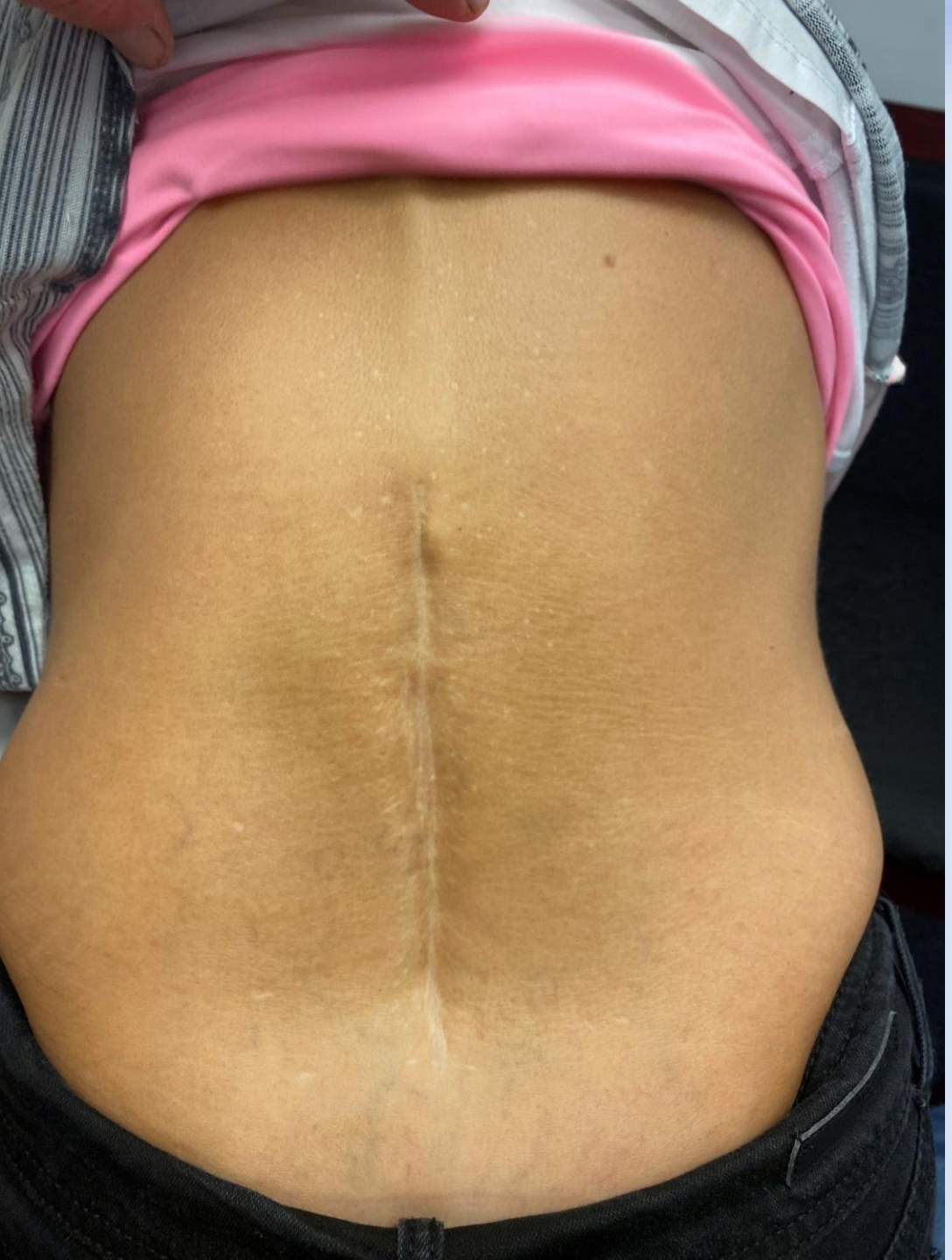
Physical Exam before OMT - continued

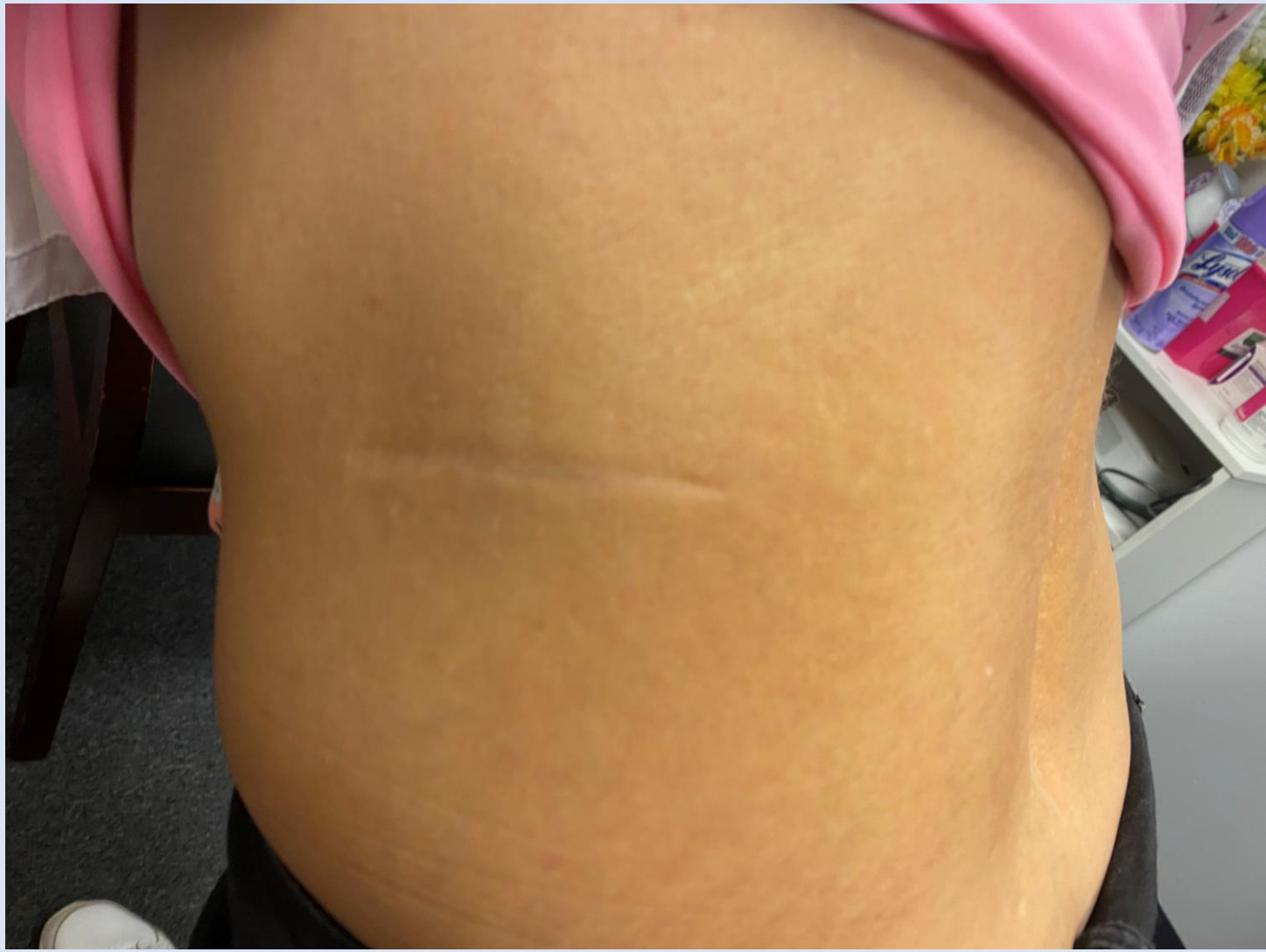
- ACDF or Posterior C, T or L scars
- Prior Diskitis/Osteomyelitis/IVDA – precise Hx
- Skin Herpetic Rash or other Rash, Burns
- Anterior Abd Approach to Lumbar-S spine/Fusion
- Newer SIJ Fusions techniques
- MYOPATHY getting up from chair/peds
- Focal Weakness vs Pain inhibitory Weakness
-
- Often Misunderstood Role of EMG/NCS

L Laminectomy with Rods/Screws
S/P Chiari Malformation Decompression





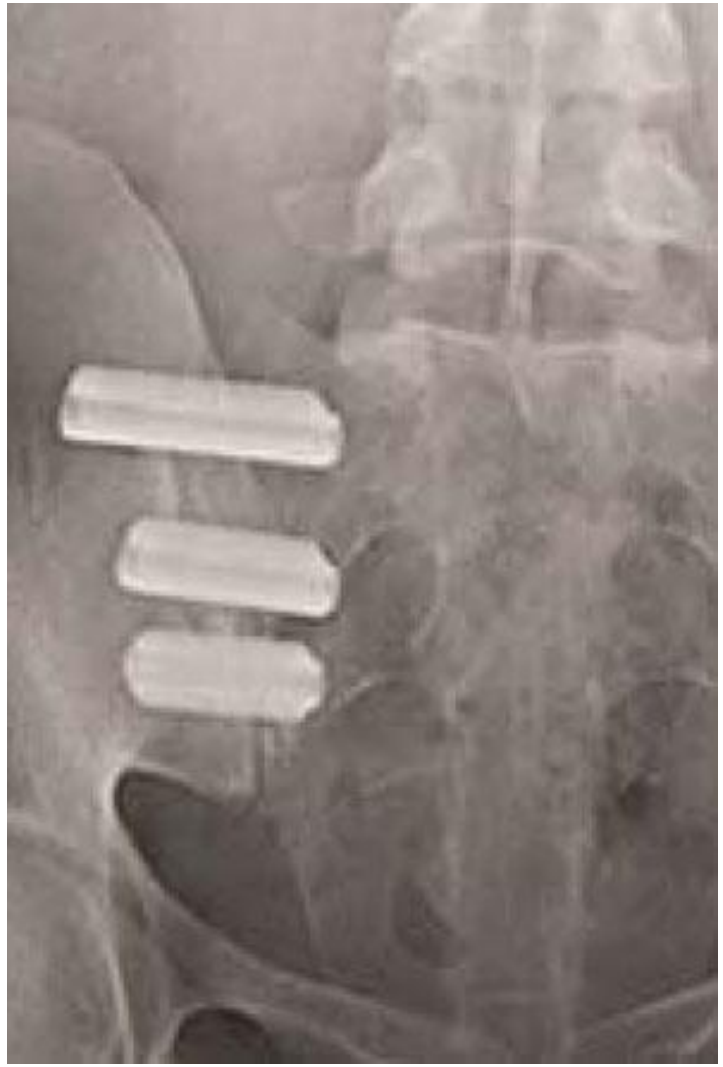




Six Previous Spine Surgeries. Posterior & Lateral Approaches

Newer Percutaneous SIJ Fusion Techniques

Done for Chronic SIJ pain under the assumption that mobility or hyper mobility is responsible for pain.



Patient Name _____

Examiner Name _____ Date/Time of Exam _____

INTERNATIONAL STANDARDS FOR NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY

ASIA American Spinal Injury Association

ISCOS

MOTOR

KEY MUSCLES (scoring on reverse side)

	R	L	
C5			Elbow flexors
C6			Wrist extensors
C7			Elbow extensors
C8			Finger flexors (distal phalanx of middle finger)
T1			Finger abductors (little finger)

UPPER LIMB TOTAL (MAXIMUM) ☐ + ☐ = ☐ (25) (25) (50)

Comments:

a DO doing day to day OMT does not need to fill this all out.
OSM will do at least 1-2 minus rectal

L2			Hip flexors
L3			Knee extensors
L4			Ankle dorsiflexors
L5			Long toe extensors
S1			Ankle plantar flexors

(VAC) Voluntary anal contraction (Yes/No) ☐

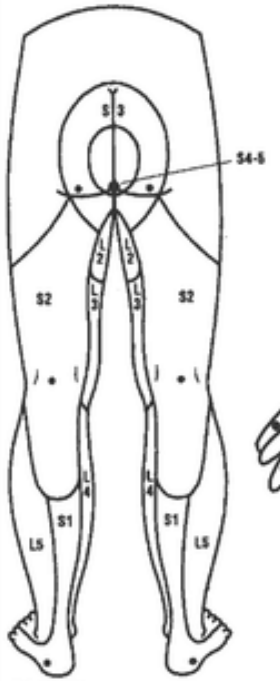
LOWER LIMB TOTAL (MAXIMUM) ☐ + ☐ = ☐ (25) (25) (50)

SENSORY

KEY SENSORY POINTS

	LIGHT TOUCH R	LIGHT TOUCH L	PIN PRICK R	PIN PRICK L
C2				
C3				
C4				
C5				
C6				
C7				
C8				
T1				
T2				
T3				
T4				
T5				
T6				
T7				
T8				
T9				
T10				
T11				
T12				
L1				
L2				
L3				
L4				
L5				
S1				
S2				
S3				
S4-5				
TOTALS (MAXIMUM)	☐ + ☐ (56) (56)		☐ + ☐ (56) (56)	=

0 = absent
1 = impaired
2 = normal
NT = not testable



• Key Sensory Points

(DAP) Deep anal pressure (yes/No) ☐

PIN PRICK SCORE (max: 112) ☐

LIGHT TOUCH SCORE (max: 112) ☐

NEUROLOGICAL LEVEL The most caudal segment with normal function — SENSORY R ☐ L ☐ / MOTOR R ☐ L ☐

SINGLE NEUROLOGICAL LEVEL ☐

COMPLETE OR INCOMPLETE? Incomplete = Any sensory or motor function in S4-S5 ☐

ASIA IMPAIRMENT SCALE (AIS) ☐

(In complete injuries only) **ZONE OF PARTIAL PRESERVATION** Most caudal level with any innervation — SENSORY R ☐ L ☐ / MOTOR R ☐ L ☐

REV 04/11

Borrowed form SCI Medicine

-Standardization

-Do not need to do Complete vs Incomplete as in SCI

-Pin Prick is most important

-Ease of Documentation

"Neurosensory examination is intact for pinprick, light touch and 128Hz vibratory to the major ASIA points to the upper and lower extremities"

"Neurosensory examination is absent pinprick to Left L4 and L5 ASIA points with 3/5 MRC scale Left L5"
(AKA – partial foot drop)

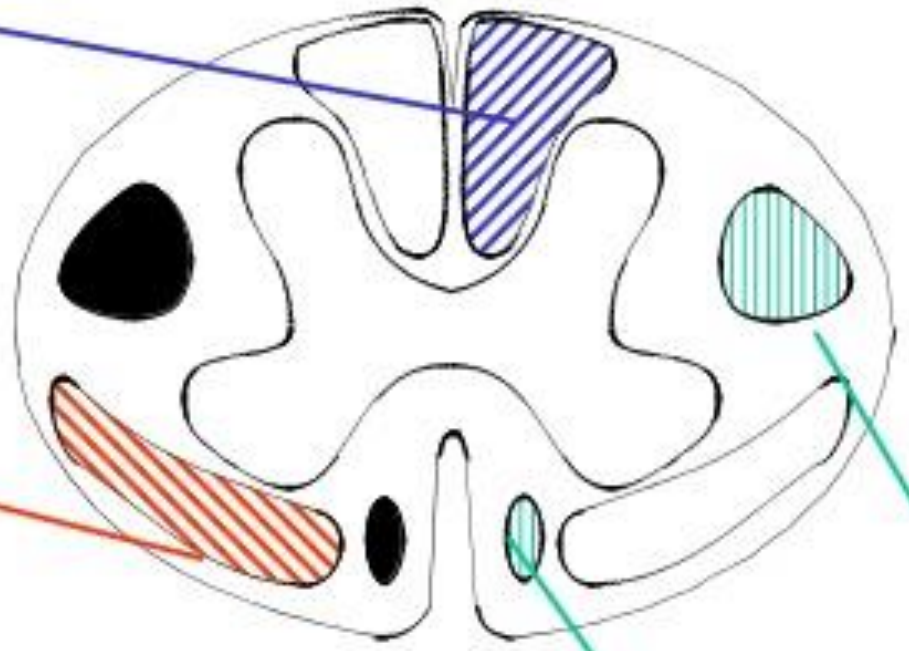
Often Misunderstood Role of EMG/NCS

EDX is an extension of the Neuro MSK Ortho Exam.

- Normal EDX examination does not rule out sensory irritative radicular or peripheral nerve pain and does not have diagnostic value in terms of discogenic or posterior element/facet pain. This simply means there is no ongoing denervation, severe damage or motor unit reorganization.
- Normal NCS does not rule out small fiber neuropathy or severe radiculopathy (with exception)
- Central/Myelopathic weakness and poor effort are not discernable/diagnoseable with needle EMG and NCS will be normal (except in some cranial NCS)
- EMG in isolated Osteopathic Dysfunction will be WNL, unless

Spinal cord section

- Posterior (dorsal) column ipsilateral (crosses at medulla)
  - proprioception
  - vibration
- Spinothalamic tract contralateral (crosses at spinal level)
  - pain **PINPRICK**
  - light touch
  - temperature



- Motor supply
  - Anterior corticospinal
  - Lateral corticospinal

Why does it all come down to pinprick?

Why is the anterior horn cell so much more important?

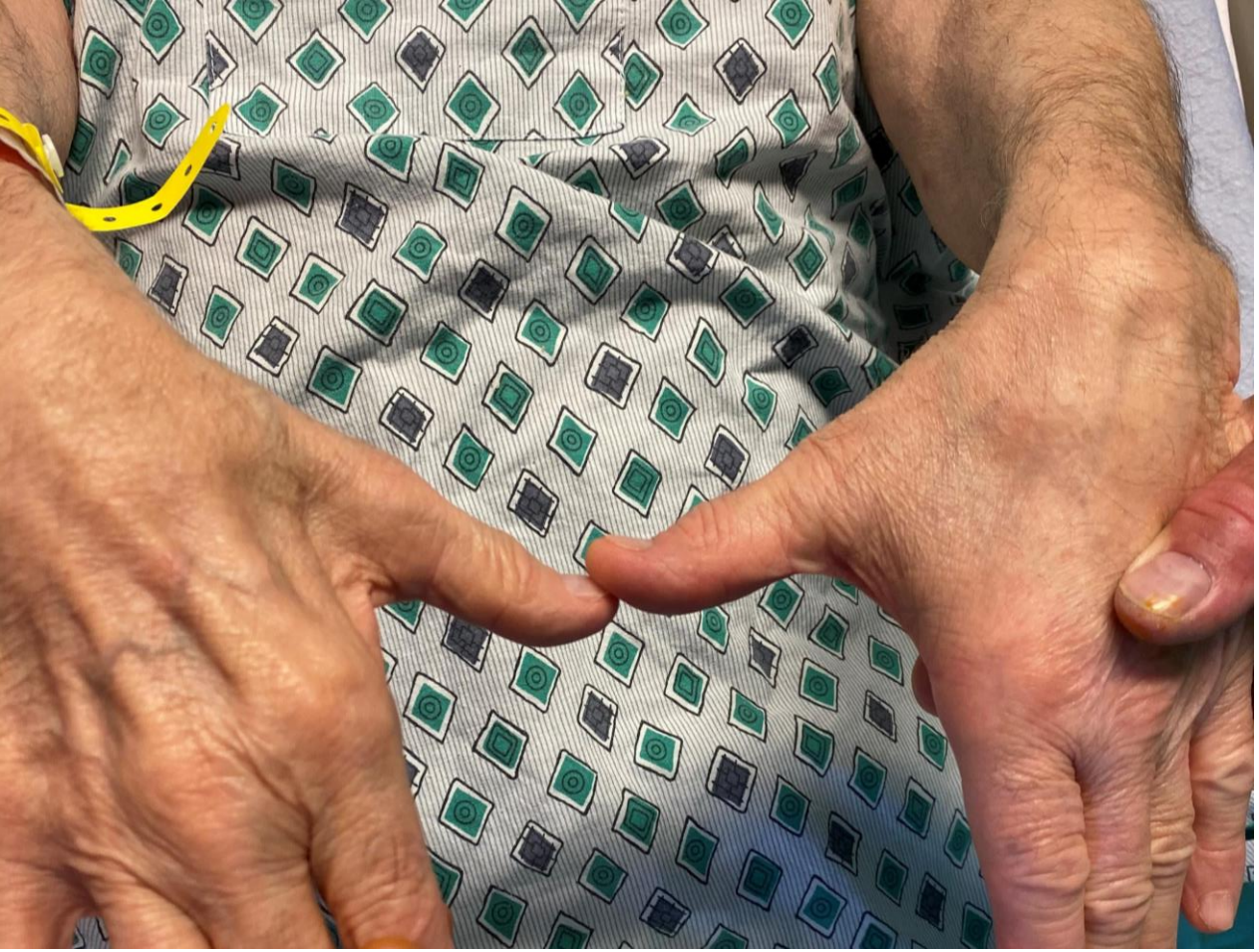
If you had to surrender a section of the cord on a coronal slice, what would you give up?

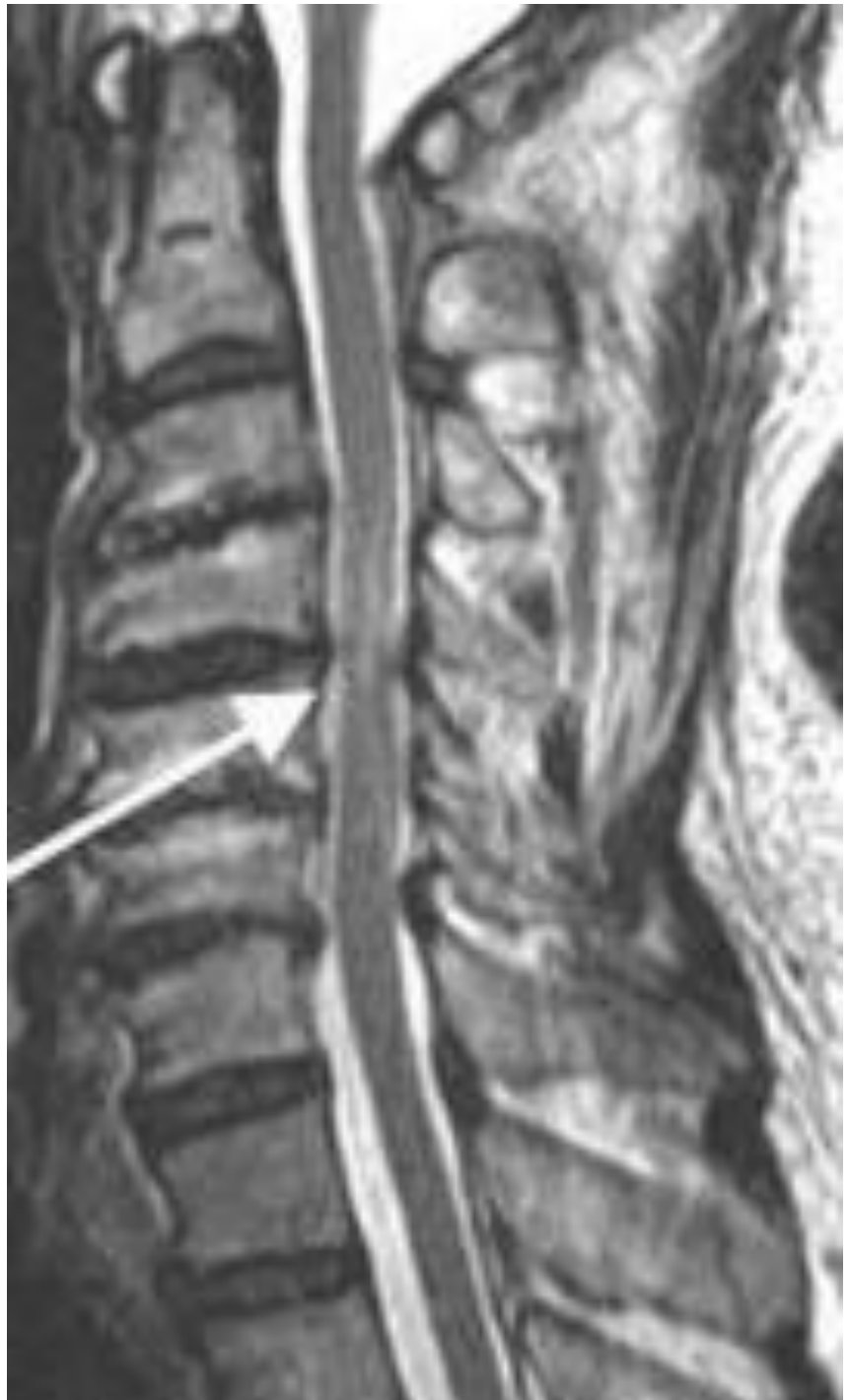
4 cars and the phone pole …

Upper motor Neuron Findings

- Upper Extremities
- Lower Extremities
- Known etiology
- New Onset?
- Progressive?
- Advanced Imaging and/or Referral

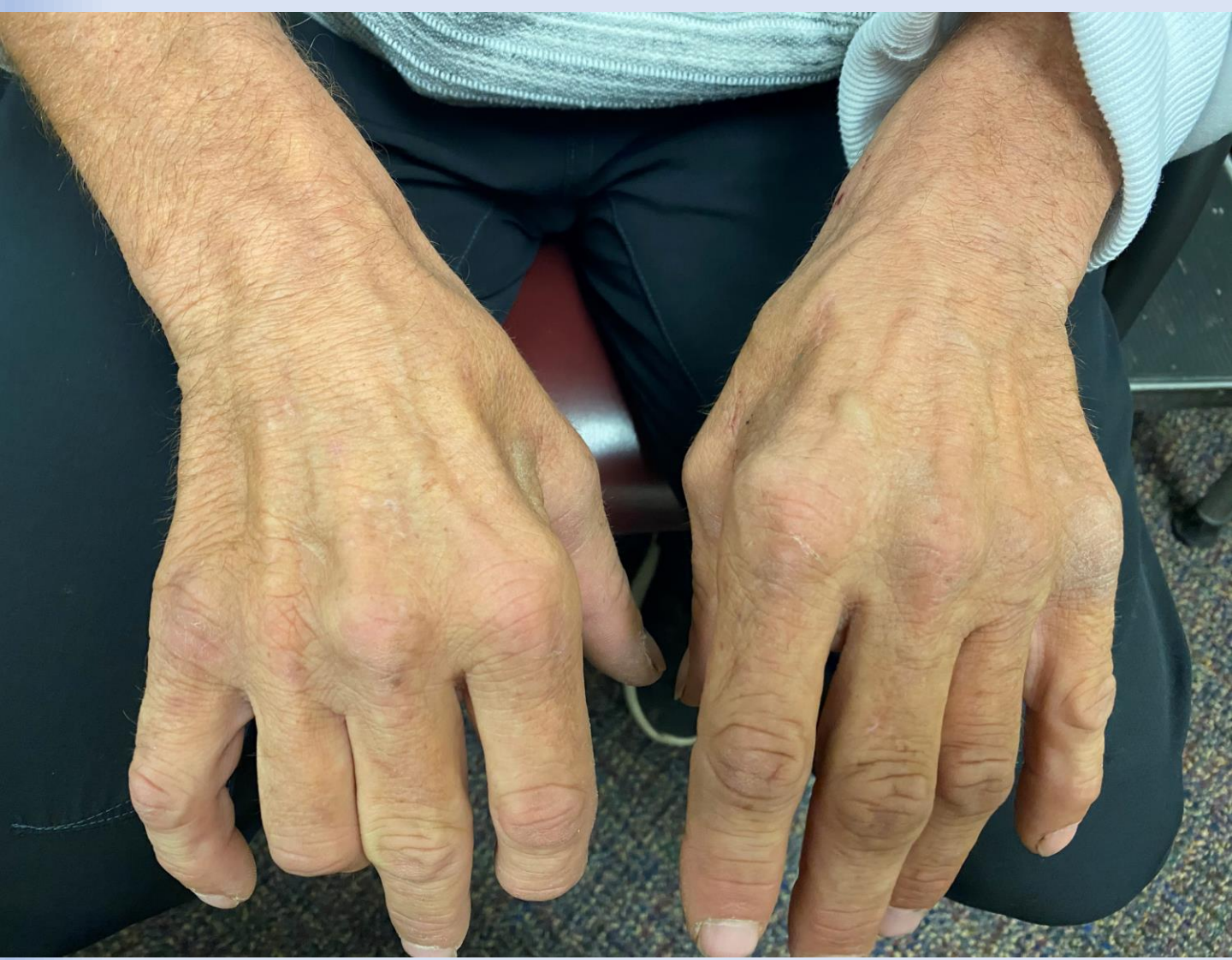
- Crossed Adductor Exam
- Clonus Upper
- Clonus to ADF
- Werding-Hoffman
- Babinski
- Caddock sign (lat malleolus)
- Moniz sign (opposite of ADF)
- Oppenheim sign
- Synkinesis
- Co-contraction - Spasticity



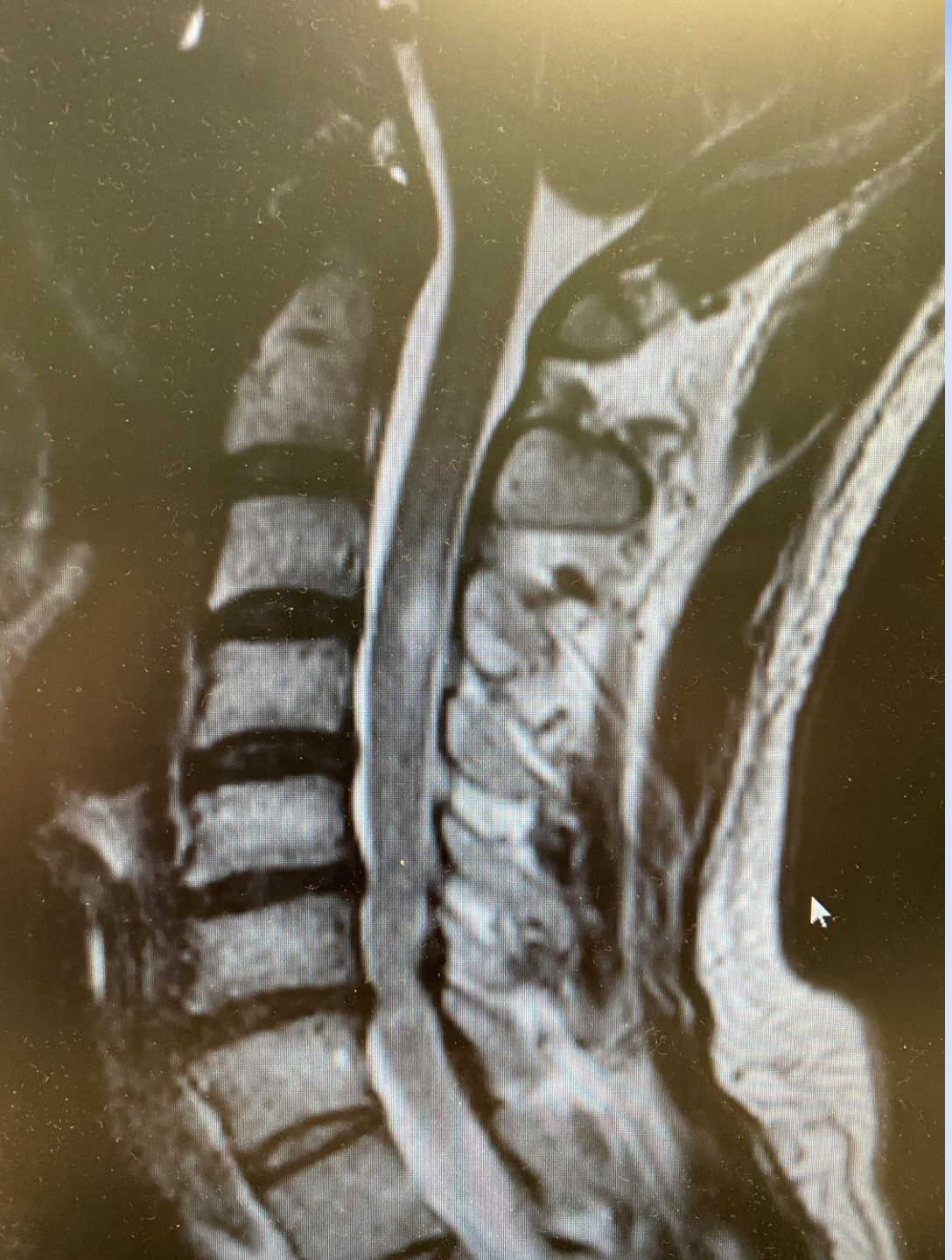


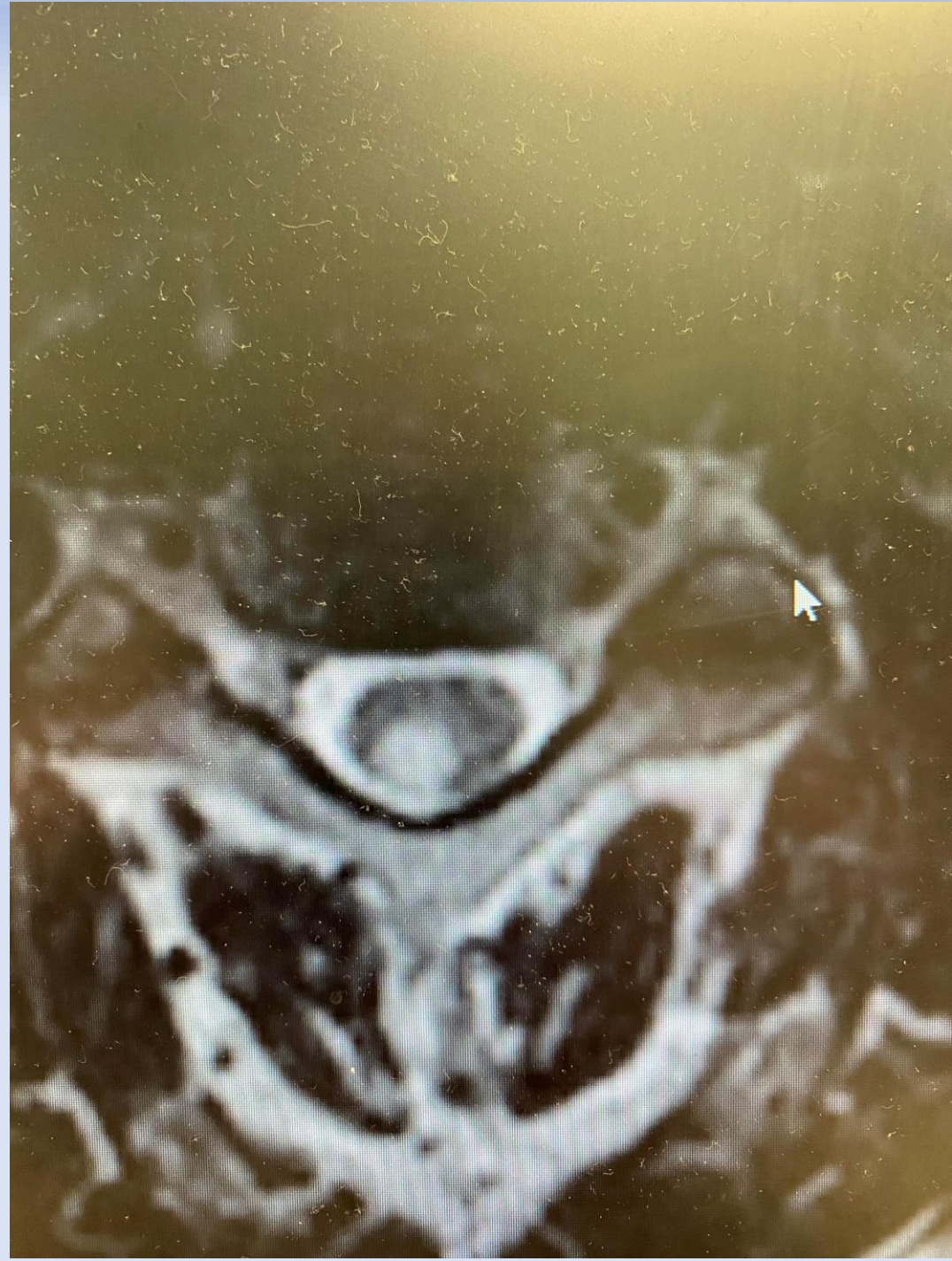
LMN Atrophy, C Myelomalacia (H2O, T2, Water-White, W2)

46 y/o RHD male 210 lbs 72” no Med Hx, but no real care
2 ppd smoker with cough and weight loss, VSS, afebrile
Right upper extremity pain and weakness
Referred by RNP to an Ortho group for shoulder pain/ EMG possible carpal tunnel. 2 gal sweet tea/day construction
EDX as part of EMG includes PE which was concerning
“When I gotta go I gotta go but only a little comes out”
“Here hold my hands like a walker and Stand on your toes for me”. “Doc, I can’t do that s---t anymore”



While awaiting MRI, 6 day f/u he upset on follow up. Went to Dollar Tree store, dropping change and couldn't handle bags and coins. "I kept trying and fumbling, this girl behind the register came around the counter to come over to help me and she stuffed the change in my pocket. Just then I looked down and I 'pis—ed myself' "





Template Exam-OMT dysfnx: PHYSICAL EXAM SECTION OF NOTE – justification for treatment

Multiple areas of intersegmental dysfunction are noted - Thoracic and Assoc rib. Approximating T1-4 flexion and 4-6 extension. C4,5,6 RrSl, T1/2 restricted with Assoc 1st rib restriction. Taut banding and trigger areas with tissue asymmetry along thoracodorsal fascial and well up into C spine. Unilateral posterior innominate with contralateral anterior with Assoc pubic symphyseal restriction. Minimal Up slip on posterior innom side, not on contralateral. L5/S1 rotated towards posterior innom and secondary sacral torsion with axis on contralateral side, with additional rostral lumbar dysfunction. No flexion or extension sacral dysfunction is appreciated. L restriction L1-4 is noted with tissue asymmetry and involuntary guarding.

TEMPLATE for OMT Sub-Occiput

Sub-occipital release techniques in a supine position were performed with use of type II muscle energy for rotation and nutation/counter-nutation appreciating the tight sub-occipital side on examination. Direct stretching without Type III muscle energy, V-spread techniques and OA /AA stretching with rocking and nudging but without high-velocity OA AA techniques were employed. Type II muscle energy is used for AA rotation in the direction of the restricted side.

TEMPLATE Lumbar Stabilization

Reviewed basic isometric abdominal stabilization program and core strengthening. Gave tactile and verbal feedback during pelvic tilt. Advised to hold for 10-20 seconds and rest for 10-20 seconds and 5-10 cycles in the evening such as during TV show, doing them during commercials etc. Explained how is it not quite a sit-up but similar, and they can progress to sit-ups. Advised to avoid Lumbar sacral extension, and focus on tightening their abdomen.

TEMPLATE Corner Stretches

Demonstrated “corner-stretches” as a home modality/exercise program for anterior chest stretching for 15-30 seconds and leaning in slowly, not jerking, as part of the myofascial home exercise/stretching program. Using a 90 degree corner and placing hands at or slightly below level of shoulder/GH region. Reviewed then alternating with the posterior rhomboid isotonic contractions with elbows at 90 and shoulder ABDucted, done in-between the corner stretches holding for 10-15 seconds and the corner stretches in between, and a TheraBand or other resistance can also be used. Reviewed that this is approaching myofascial pain as a type of relative deconditioning and is the early portion of a home exercise program.

Paraffin Bath. Deep Heat. Skin and MSK. TV. Raise Hands. Multiple Dips/Wrap.
Physician Wellness is Important (critical)/Underestimated