

# ORTHO OSCE

## Back pain History

TASK	Done (1)	Partly (0.5)	N/D (0)
<b>Introduction (our name , ask for permission to obtain info)</b>			
<b>Personal info (Name, age, nationality)</b>			
<b>Chief complaint (Socrates)</b>			
<b>Site?</b>			
<b>Onset : since when and does it came sudden or gradual? (Acute: infection – fracture, Chronic: tumors)</b>			
<b>Character: electrical ( sciatica ) or sharp or burning ? is it continuous or intermittent ?</b>			
<b>Radiation: above knee (hip ) or below (radiculopathy ) ?</b>			
<b>Associated symptoms</b>			
<b>Timing: come at night ( malignancy ) ? at morning (RA)?</b>			
<b>Exacerbating \ reliving: with bending forward (Disk herniation) ? with extension ? goes with over counter medication if tried ?</b>			
<b>Severity: from 0-10 how bad is it ? has it gotten any worse or better ?</b>			
<b>Red flags</b>			
<b>Neuro : numbness – weakness – loss of any function?</b>			
<b>Weight – fever – night sweating</b>			
<b>Urinary or stool incontinence \ retention</b>			
<b>Hx of trauma – lifting heavy wt?</b>			
<b>Past medical hx</b>			
<b>Have you experienced this before?</b>			
<b>Any MSK problem: fractures, osteoporosis –arthritis ?</b>			
<b>Hx of malignancy</b>			
<b>Chronic diseases (HTN, DM..)</b>			
<b>Past surgery in this place? or any other place?</b>			
<b>Pelvic disease – peptic ulcer – UTI or pyelonephritis</b>			
<b>Medication: Steroids therapy – Any other Drugs ?</b>			
<b>Social hx</b>			
<b>Occupation – level of activity – type of diet – smoking – IV drug use- Alcohol – travel ?</b>			
<b>Contact with TB</b>			
<b>Unpasteurized milk</b>			
<b>Family hx : osteoporosis – malignancy .</b>			

## DD for back pain :

Muscle spasm – athlete

Disk herniation - hx of lifting heavy object

vertebral fracture ( osteoporosis inside ) – Hx of trauma .

osteomyelitis

rheumatoid arthritis (rare)

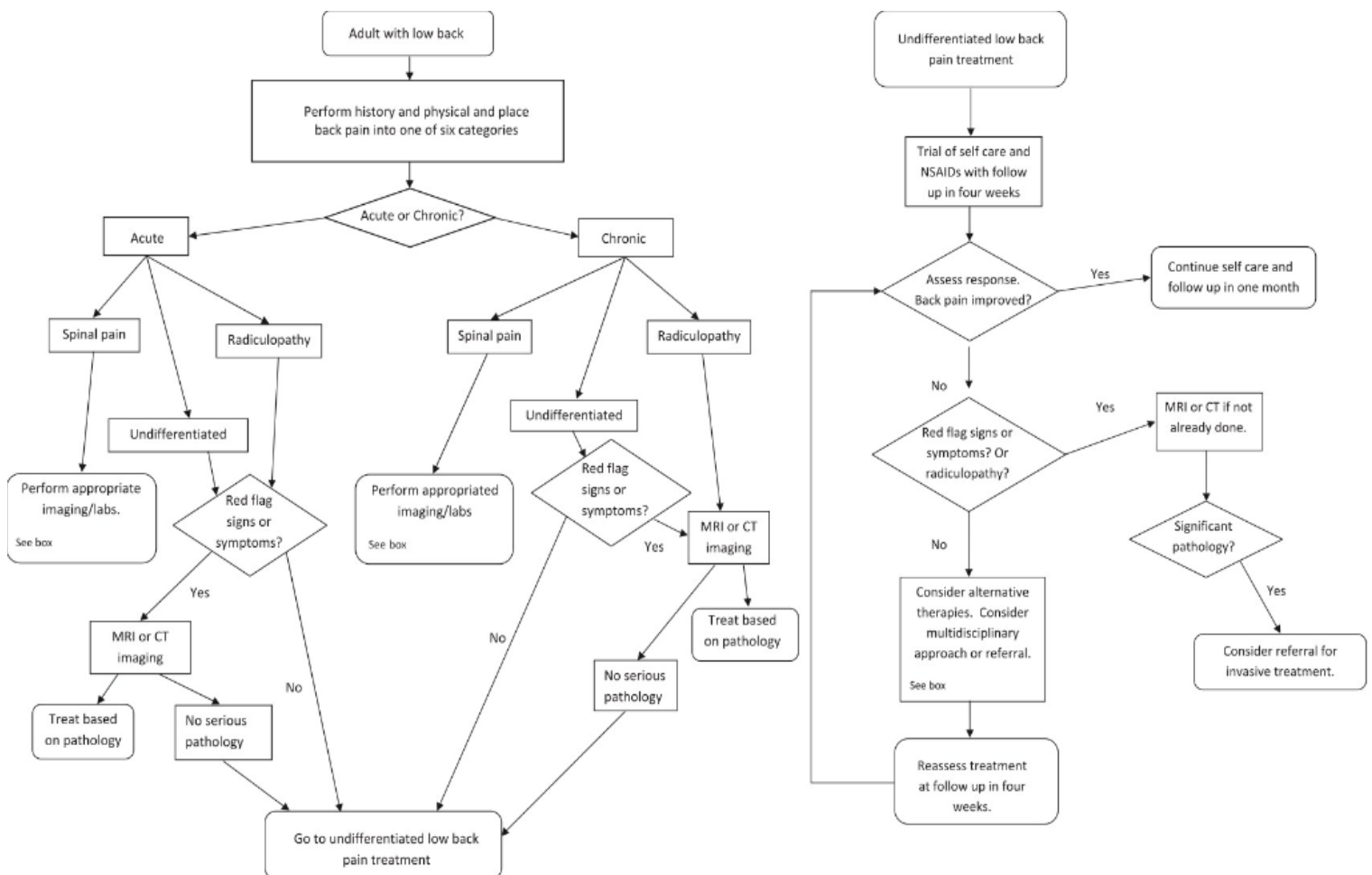
ankylosing spondylitis

spinal stenosis

malignancy ( mostly metastatic disease ) – red flags above and age more than 50.

cauda Eq : sever back pain – saddle Anastasia –UR \bowel incontinence – bilateral Lower limb weakness )

infection – Hx of travel or open fracture etc .



## Diagnostic \management :

In short : No imaging is indicated if no red flag since LBP is mostly common and not serious - till 4 weeks of conservative treatment if fail – imaging and further workup is needed.

Mostly conservative **unless red flags**: Nonsteroidal – Ice 48 hours than switch to heat – physical therapy –reduce wt , change posture.

Not succeed for 2 months or causing pressure symptom : surgery ( Decompress or infusion )

## Myelopathy vs radiculopathy :

In myelo is nerve pinch when its in the spinal cord (stenosis ) , radiculopathy when its connect to spinal cord ( herniation )

**myelopathy** : weakness, clumsiness and altered tone of the muscle; along with irregularities in bowel and bladder, sexual dysfunction etc. ( upper such as hyperreflexia etc )

**radiculopathy** : lower and its vary depends on location .. ex :backache with pain radiating to the leg. pain in radiculopathy increases while sneezing, coughing or while lifting heavy weights.

## Sciatica Symptoms:

Constant pain in only one side of the buttock or leg, but rarely in both sides

Pain that originates in the low back or buttock and continues along the path of the sciatic nerve—down the back of the thigh and into the lower leg and foot

Pain that feels better when patients lie down or are walking, but worsens when standing or sitting

Pain typically described as sharp or searing, rather than dull

A "pins-and-needles" sensation, numbness or weakness, or a prickling sensation down the leg in some cases

Weakness or numbness when moving the leg or foot

Severe or shooting pain in one leg, making it difficult to stand up or walk

Pain and other symptoms in the toes, depending on where the sciatic nerve is affected

Lower back pain that, if experienced at all, is not as severe as leg pain

## Knee History

<b>TASK</b>	<b>Done (1)</b>	<b>Partly done (0.5)</b>	<b>Not done (0)</b>
<b>WIPE</b>			
<b>Standing/Walking position</b>			
<i>Look</i>			
Expose both lower limbs from mid-thigh down			
Examine for knee alignment (varus or valgus, physiological or pathological)			
Gait.(Antalgic, waddling, trendelenburg).			
Look for abnormal motion of the knees while walking			
Look for ankle and foot alignment and position			

<b>TASK</b>	<b>Done (1)</b>	<b>Partly done (0.5)</b>	<b>Not done (0)</b>
<b>WIPE</b>			
<b>Supine position</b>			
<i>Look</i>			
Expose to mid-thigh			
Alignment ( physiological valgus, abnormal valgus, varus)			
Skin changes			

Varicose veins			
Swelling			
Muscle wasting (quadriceps)			
Inspect the back of the knee			
<i>Feel</i>			
Check and compare temperature			
Feel for any lumps or bumps in the soft tissue or bone around the knee – comment if present.			
Identify bony landmarks (femoral and tibial condyles, tuberosity, proximal fibula, patella and comment if tender			
Identify course of collateral ligaments and comment if tender			
Identify joint line in flexion of 80-90 degrees and comment if tender			
<i>Move</i>			
Active R.O.M and compare, normally from -5 to calf touching thigh			
Passive ROM if abnormal			
Be able to approximately describe ROM in degrees			
Comment on pain or crepitus with movement			
<i>Special tests</i>			
Anterior Drawer at 90 degrees and Lachman at 30 degrees for ACL			
Posterior Drawer at 90 degrees for PCL			
Valgus stress at 30 degrees for MCL			

Varus stress at 30 degrees for LCL,			
Milking test			
Patellar tap			
Apprehension test for patellar instability:			
Joint above and joint below			
Hip			
Ankle			
Neurovascular examination			
Palpate distal pulses			
Quick screening that ankle and toes are moving up and down			
Quick screening for sensation in the foot			
Comment if abnormal and compare to opposite side if abnormal			
Cover the patient and thank them			

## Peripheral nerves examination

<b>TASK</b>	<b>Done (1)</b>	<b>Partly done (0.5)</b>	<b>Not done (0)</b>
<b>Upper limb</b>			
<i>Median nerve:</i>			
Inspection: Thenar muscle wasting.			
Motor: Thumb abduction or opposition			
Sensory: fine touch over volar aspect of index finger			
<i>Ulnar nerve</i>			
Inspection: hypothenar muscle wasting, claw hand			
Motor: finger abduction, Froment's sign			
Sensory: fine touch over volar aspect of little finger			
<i>Radial nerve</i>			
Inspection: drop wrist			
Motor: wrist extension			
Sensory: fine touch over dorsal aspect of first web-space			
<b>Lower limb</b>			
<i>Femoral nerve</i>			
Inspection: Quadriceps wasting			
Motor: knee extension			
Sensory: medial aspect of leg and foot (saphenous nerve)			
<i>Common peroneal</i>			
Inspection: drop foot, anterior leg muscle wasting			
Motor: ankle dorsiflexion			

Sensory: dorsal aspect of foot			
<i>Tibial</i>			
Inspection: calf muscle wasting			
Motor: ankle plantar flexion			
Sensory: plantar aspect of foot			
<b>Vascular exam</b>			
<i>Look: Thin, shiny, hairless skin. Ulcers. Pallor.</i>			
<i>Feel: temperature</i>			
<i>Special tests:</i>			
Capillary refill (normal is <2 seconds).			
Pulses			



## History of Developmental Dysplasia of Hip

**Case : Newborn (4 wks old) came to hospital with her mother, complaining of one leg taller than the other.**

History (DDH)	Done	Partially done	Not done
1. Name.			
2. Age.			
3. Present illness.			
4. Prenatal → Breech , oligohydramnios , primigravida , twins (Torticollis, metatarsus adductus).			
5. Postnatal → Swaddling, strapping			
6. Other causes: First child			
7. Positive family history: <ol style="list-style-type: none"> <li>1. Parents are relatives</li> <li>2. Other kid with same disease 10X</li> <li>3. A baby girl: 4-6 X</li> </ol>			
Torticollis: CDH in 10-20% of cases <ul style="list-style-type: none"> <li>• Short neck</li> </ul>			
Most likely diagnosis : Developmental Dysplasia of Hip			
DDX: mention 3 DDH, Intoeing, SCFE, Perths, Rickets, Blount disease.			

<p><b>Complications:</b> mention two</p> <ul style="list-style-type: none"> <li>· Severe hip and/or back pain.</li> <li>· Early hip arthritis</li> <li>· Leg Length Discrepancy (LLD)</li> <li>· Pelvic inequality</li> <li>· Early Lumbar spine degeneration</li> <li>· Secondary scoliosis</li> </ul>			
<p><b>Investigations:</b></p> <ul style="list-style-type: none"> <li>● QU/S → after 21 days.</li> <li>● Pelvic X-Ray → &gt; 3 mo or &gt; 5-6 mo (more reliable).</li> </ul>			
<p><b>Management:</b></p> <ul style="list-style-type: none"> <li>● Conservative: <ul style="list-style-type: none"> <li>○ Pavlik harness</li> <li>○ Spica cast</li> <li>○ Broom-srick cast</li> </ul> </li> <li>● Minimally invasive: <ul style="list-style-type: none"> <li>○ Arthrogram guided closed reduction</li> </ul> </li> <li>● Operative: <ul style="list-style-type: none"> <li>○ Open reduction</li> <li>○ Acetabuloplasty</li> <li>○ Femoral shortening</li> <li>○ Salvage pelvic osteotomy</li> </ul> </li> </ul>			

## Back examination

TASK	Done (1)	Partly done (0.5)	Not done (0)
<b>WIPE</b>			
<b>Standing/Walking position</b>			
<i>Look</i>			
Examine front and back for deformities, swellings, skin changes (scars, hairy tuft, “café au lait” spots).			
Shoulders & pelvis level.			
Gait.(Antalgic, waddling, trendelenburg).			
Tip toe and heel walking.			
<i>Feel</i>			
Palpate spinous processes for tenderness, steps or gaps.			
Soft tissues: temperature, tenderness.			
<i>Move</i>			
Active ROM: flexion (to what level)			
Active ROM: Extension (normal 30)			
Active ROM: Lateral bending (normal 30)			
Active ROM: Rotation (normal 40)			
Active ROM: note if painful/painless			
Attempt passive ROM if active ROM is limited and painless.			
<i>Special tests</i>			
Adams Forward bending test.			

<b>TASK</b>	<b>Done (1)</b>	<b>Partly done (0.5)</b>	<b>Not done (0)</b>
<b>WIPE</b>			
<b>Supine position</b>			
<i>Look</i>			
Note any muscle wasting in the lower limbs.			
<i>Feel</i>			
Check for Leg length discrepancy (ASIS to medial malleolus).			
<i>Special tests</i>			
Straight leg raising test (SLRT).			
Neurologic examination:			
Motor:Hip flexion.			
Motor:Knee extension.			
Motor:Dorsiflexion.			
Motor:EHL.			
Motor:Ankle plantarflexion.			
Sensory:Dermatomes.			
Tone.			
Reflexes:Knee and ankle			

Vascular examination (Distal pulses and capillary refill)			
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### Open fracture management

TASK	Done (1)	Partly done (0.5)	Not done (0)
<b>Initially:</b>			
Biohazard precautions guideline (gowns, shoes cover, sterile gloves).			
Obtain informed consent from patient, explaining to him what are you going to do.			
Administer appropriate analgesia.			
Start IV antibiotic based on open fracture initial staging and patient allergy history. (mention the appropriate antibiotic)			
Consider administration of appropriate Tetanus prophylaxis.			
<b>Initial local wound care:</b>			
Expose the wound and obtain photograph if possible.			
Remove any obvious foreign body from wound (avoid digging deep into wound).			
Irrigate wound with Normal Saline (1-2 L).			
Push any prominent fracture fragment gently.			

Cover the wound with sterile saline-soaked gauzes and Wrap the limb with sterile cotton roll.			
<b><i>After wound care:</i></b>			
Check distal neurovascular status.			
Reduction: reduce fracture by applying traction and countertraction followed by correcting the deformity.			
Apply appropriate temporary splint (Immobilization).			
Re-check distal neurovascular status.			
Send patient for appropriate X-rays.			
Mention to book patient for urgent debridement, thorough irrigation and application of external fixation.			
Mention second look surgery after 48-72 hours; Wound debridement and possible closure can be considered.			

## Foot & Ankle Examination

<b>TASK</b>	<b>Done (1)</b>	<b>Partly done (0.5)</b>	<b>No t do ne (0)</b>
<b>WIPE</b>			
Standing inspection & Lying Inspection			
<i>Look (weight bearing &amp; Non weight bearing)</i>			
Alignment			
Deformity			
Skin Changes			
Soft tissue Swelling			
Muscle Wasting			
<i>Feel</i>			
Skin: Temperature			

Soft tissue: Achilles tendon, plantar fascia, Medial and lateral collateral ligaments			
Bony prominence: first metatarsal head (OA. Bunion), fifth metatarsal base (tenderness-avulsion fracture), medial and lateral malleoli and calcaneal tuberosity			
Joint line anteriorly			
<i>Move Active and passive</i>			
Ankle movement: Dorsi flexion 20, plantar flexion 40, inversion & eversion at subtalar joint			
Midtarsal movement: hold calcaneus with one hand and abduct 10 and adduct 20 with the other hand			
Toe movement: straighten and curl toes, spread and adduct			
<i>Special tests</i>			
Anterior drawer test with ankle plantarflexion to evaluate anterior talofibular ligament (8mm diff)			
Achilles tendon test: Thompson test.			
If flat foot: you will ask the pt to tip toe to check if it is flexible or rigid flatfoot, you have to observe if the heel will correct from valgus to varus or not as well as mid foot arch reconstitution.			
Differentiate between Achilles tightness or only gastroc. Tightness, by dorsal flexion of ankle while the knee extended then flexed will help for spine session but not for ankle and foot itself)			



Neurologic examination:

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