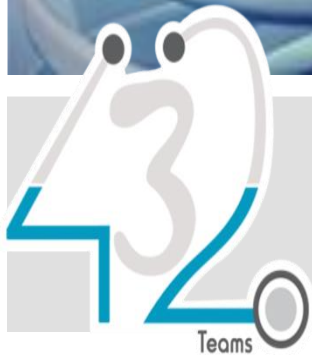
Orthopedics

OSCE - Back Examination



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Color Code: Slides | 431 team work | Sessions' Notes | Arabic Words | Team Notes | Books' notes | Important | Other Sources

Back Examination

Goal:

To establish competence in physical examination of the thoraco-lumbar spine .

Method:

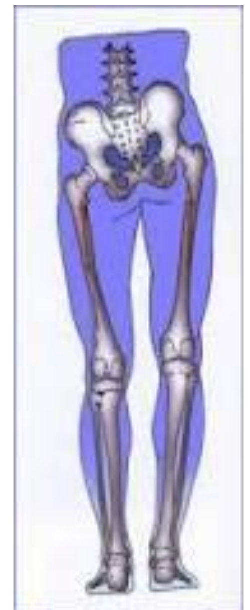
Standing/walking position

Look:

café au lait spots

- ✓ Expose the trunk and lower limbs properly.
- ✓ Examine front and back.
- ✓ Any deformity, swelling, or skin changes (scars, hairy tuft, "café au lait" spots).
- ✓ Are shoulders & pelvis level.
- ✓ Muscle wasting

Gait:



- ✓ Abnormal types: Antalgic, Trendelenberg, waddling.

https://www.youtube.com/watch?v=W-S8Pk63YRE (Antalgic)
https://www.youtube.com/watch?v=Rz7V1i8kYGU (Trendelenberg)

- ✓ Heel and toe walking: "This examinations for the nerve roots"
  - Unable to heel walk=L4 weakness
  - Unable to toe walk= S1 weakness

Feel:

- ✓ Palpate spinous processes for tenderness, steps or gaps. (Check for the spinous processes alignment if it is central)
- ✓ Soft tissues: temperature, tenderness.

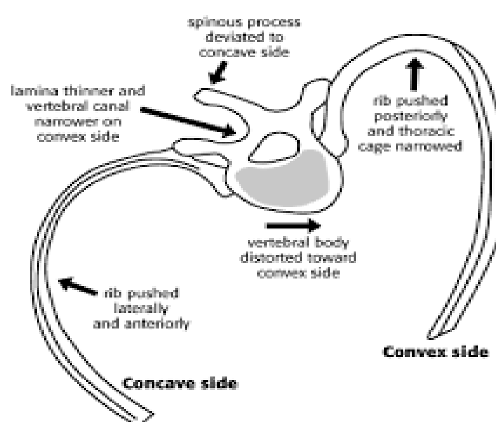
Move: Start with active ROM in all 6-directions:

- ✓ Flexion. Record as such: able to touch toes/shins/knee/thighs...etc. "Expressed by the hand reaching which level of the lower limb (toes, shin, knee, thighs)"
- ✓ Extension: normal around30°
- ✓ Lateral bending: normal around30°

- ✓ Rotation: normal around 40° (The examiner must stabilize the pelvis of the patient while rotating his back).
- ✓ Note if painful/painless ROM.
- ✓ Attempt passive ROM if active ROM is limited and painless, record.

Special test:

- ✓ **Adams Forward bending test:**
  Full forward flexion until back is horizontal to the floor. If thoracic scoliosis is present, then rib hump will become visible. (Flexion of the back, complete knee extension and hands in the air not touching the knee).
  https://www.youtube.com/watch?v=1EPii3Pz6V0



Supine position (to check the lower limb muscles, nerves)

Look:

- ✓ Note any muscle wasting in the lower limbs. (Very important muscle wasting)

Feel:

- ✓ Check for Leg length discrepancy (ASIS to medial malleolus). (Pelvic asymmetry may show false secondary scoliosis not present in reality)

Special tests:

Straight leg raising test (SLRT): With the patient supine, passively elevate the leg –the examiner's hand behind the heel- with knee extended while observing the patient's face for sign of discomfort.

✓ A positive test is reproduction of sciatica-i.e. sharp shooting pain that radiates below the knee- between 30° and 70°of hip flexion.

a. The pain is aggravated with dorsiflexion of the ankle and relieved with knee flexion.

b. Hamstring tightness and knee or hip pain should be distinguished from a true positive SLR.

✓ Screening Hip and knee examination (e.g. rotation of the hips, joint line tenderness at the knees) should be done to rule out hip or knee OA which can be confused with sciatica.

Positive SLRT might be sciatica or hamstring tightness and knee or hip pain. We differentiate between them by flexion of the knee this relieves the pain in case of sciatica. If the pain didn't reduce with knee flexion the cause is most likely from the hip or the knee. Then do quick flexion, internal and external rotation of the hip "to rule out hip joint abnormalities".

https://www.youtube.com/watch?v=v8moZMdXJfI

Neurologic examination:

- ✓ Motor: Hip flexion=L2, knee extension=L3, Ankle dorsiflexion=L4, EHL=L5, Ankle plantar flexion=S1.
- ✓ Sensory: dermatomes.
- ✓ Tone: normal, flaccid or rigid.
- ✓ Reflexes: knee & ankle jerks.

Vascular examination:

- ✓ Pedal pulses (DP & PT).
- ✓ Capillary refill (normal < 2 seconds).