Teaching Module : Back
II Examination

Preparation

Patient undressed to undergarments, socks off.

Look

From the side

Assess normal thoracic kyphosis and cervical/lumbar lordosis.
Any gibbus in thoracic spine (infection) -or exaggerated lumbar lordosis (spondylolisthesis)

From behind

Assess the level of shoulder and hips - patient to bend forwards, any rib hump ?
Paraspinal muscle spasm - muscles stand out on both sides of the vertebral columnn Any cutaneous blemishes - sinuses, hairy patch, café-au-lait spots or lipomas.

Feel

Assess paravertebral spasm - muscle feels very rigid
Light palpation of spinous processes from C7 to top of sacrum
Look for deep tenderness once light palpation confirms no excessive pain - either with digital pressure or light percussion of spine
Deep pressure at SI joints looking for tenderness.

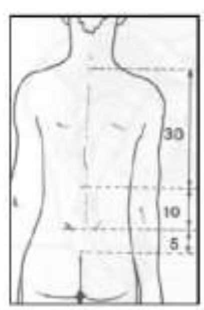
Movements

Flexion

Forward flexion is a summation of thoracic, lumbar and hip movements hence bending forwards and noting the distance of fingers from floor may not be ideal.

Modified Schober method (Lumbar spine)
Position a tape with the 10 cm mark at PSIS level (dimple of Venus)
Mark the skin at 0 and 15 cm
Ask the patient to bend fully forwards
Note where the 15 cm mark on skin strikes the tape
Increment of 6-7 cm is normal :< 5 cm is abnormal

Modified Schober method (Thoracic spine) 30 cm above the previous 0 mark on the skin
Normal increment is 3 cm : thoracic flexion is quite less



Chest expansion

At the level of nipples (4th interspace) - normal is 6 cm.
< 2.5 cm is suggestive of Anky spondylitis

Extension

Patient still standing - pull back his shoulder - steadying the pelvis
Approximate range 30 degrees in total

Movements (Cont'd)

Lateral Flexion

Patient standing - slide hands down the legs on either side - distance from floor in Cms

Rotations

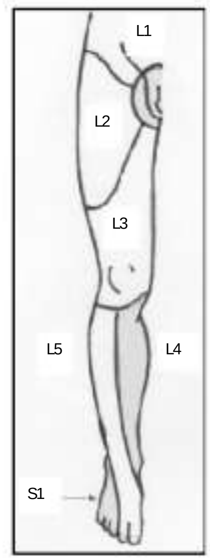
Patients seated - arms on the hips - ask the patient to twist around each side
Assess rotation between the plane of shoulders and pelvis
Approximate normal value is 40 degrees, almost entirely thoracic.

Neuro-muscular Examination

Patient supine on couch - relaxed - towel across the groins - Do SLR and other tension tests last

Sensation

Pin prick on autonomous dermatome areas



Motor

Ankle dorsiflexion - Great toe extension (EHL) - L4/5 Ankle
plantar flexion - Great toe flexion (FHL) - S1/2
Knee extension (Quads) - L3/4
Knee flexion (Hams) - L5/S1
Hip abduction & extension (Glutei) - L4/5
Hip flexion (Ilio-psoas) - L2/3

Reflexes

Knee jerk - L3/4
Ankle jerk - S1/2 (use reinforcement and/or leaning on knees foot dangling free)
Babinski's

Stretch tests

SLR (Lasegue)
Gently raise the leg straight watching the patient's face- lower the leg when pain occurs by few de- gree until pain disappears - gently dorsiflex foot and see whether the pain appears down the leg.

Bowstring
Patient supine as before - flex the knee and hip - now gently extend the knee with the thumb press- ing into popliteal fossa—just medial to the biceps femoris tendon - the pain here suggests peroneal nerve irritation due to sciatic nerve root compression.

Cross SLR : difficult to interpret **PFS**

(Passive femoral stretch)
Patient on the side - affected side up - hip in full extension - steady the thigh in one hand - gently flex the knee looking at the patient - pain front of thigh is suggestive of femoral nerve root irritation.

Waddell functional signs

Excessive pain with light pressure on the head, shoulder and gentle pinching of skin over the sup- posed tender area of the spine and patients who can sit up whilst SLR with knee straight.

SI Joints

Rarely involved - poorly tested -Tenderness over the joint (PSIS region) is suggestive of SI Pathology
Pump handle test - forcibly adduct fully flexed hip
Pelvis compression / distraction tests

Hip examination and Peripheral pulses