Kingston Hospital NHS Foundation Trust

Emergency Department Approach to Back Pain

Initial Assessment

Important History:

1. **History of the pain:**
   Site – ask the patient to point to where the pain is. True hip pain is felt in the groin region. Don't assume that the site of the pain is where the pathology is.
   Onset – When did the pain start, and was the onset sudden or gradual?
   Character – Sharp? Stabbing? Dull
   Radiation
   Associations? Any other signs or symptoms associated with the pain?
   Time course? Does the pain follow any pattern?
   Exacerbating/relieving factors
   Severity
2. **History of trauma?**
3. **Occupational and sporting history**
4. **General medical history**

Evaluate for RED FLAGS for serious diagnosis:

- History of trauma
- Weight loss, fever
- Acute onset in the elderly
- Nocturnal pain
- Constant or progressive pain
- History of malignancy
- Bilateral or alternating symptoms
- Thoracic (dissecting aneurysm)
- Immunosuppression
- Claudication/signs of peripheral ischaemia

RED FLAGS for CORD **COMPRESSION**:

- Neurological disturbance
- Sphincter disturbance – urinary retention/faecal incontinence
- Motor weakness
- Sensory changes in the perineum
- Sexual dysfunction
- Gait change (cauda equina)
- Bilateral sciatica

CERVICAL PAIN

History of major trauma or minor trauma if osteoporotic?

YES

HIGH RISK FACTORS:

- Head injury with suspected c-spine injury
- Facial injury with suspected c-spine injury
- Known pre-existing spinal pathology
- Focal peripheral neurological deficit
- Type of injury – distracting/hyper-flexion/hyper-extension
- Dangerous Mechanism:
  - >65yrs fall from standing/chair
  - Fall from height >1m or 5 steps (3 if >65yrs)
  - Axial loading
  - RTC: high speed/rollover/ejection/motorcycle/ bicycle

CT SCAN

MEDIUM RISK FACTORS:

- Minor rear-end collision RTC
- Comfortable in sitting position
- Ambulatory since time of injury
- No midline c-spine tenderness
- Delayed onset of neck pain
- Unavle to actively rotate neck 45 degrees to left and right
- Under 65 years

Plain film

Fracture

NO

YES

Keep Immobilized
REFER TO ORTHO

POSSIBLE CAUSES:

- Cervical paraspinal muscle sprain secondary to strain
- Cervical hyperextension (whiplash injury
- Sprained ligaments

NO

POSSIBLE CAUSES:

- Osteoarthritis
- Spondyloarthropathies
- Neoplasm
- Abscess
- Torticollis

Ix as appropriate:
Bloods: FBC, CRP, ESR
Imaging as indicated

Any RED FLAGS

REFER TO ORTHO

Drafted By Dr L Folscher May 2017
For Review May 2020

THORACIC PAIN

Assess specifically for:
- Localised spinal pain
- Pain radiating round the chest wall
- Pain radiating round into the neck
- Reduction in vertebral body height

NB: Thoracic pain is a red flag symptom until proven otherwise!

Life threatening diagnoses to exclude:
- Infection/epidural abscess
- Myocardial Infarction
- Aortic Aneurysm

Other differentials:
- Trauma with fracture
- Neoplasm
- Pleural pain
- Ankylosing spondylitis

Imaging and bloods as appropriate

Any RED FLAGS for spinal compression

REFER TO ORTHO

LUMBAR PAIN

History of trauma?

YES

Examination, analgesia and Plain X-ray

FRACTURE or any RED FLAG signs for compression

REFER TO ORTHO

NO

Causes of lumbar pain:

Structural: mechanical/non-specific, facet joint arthritis, prolapsed intervertebral disc, annular tear, spinal stenosis
Neoplasm: primary or secondary
Inflammatory: sponyloarthropathies
Infection: discitis, osteomyelitis, paraspinal abscess
Metabolic: osteoporotic vertebral collapse, osetomalacia, Paget's disease, hyperparathyroidism
Referred pain: from viscera, retroperitoneal organs, hip, aorta

Assess RED FLAGS for spinal compression

NO

Trial of **adequate** analgesia including:
- Paracetamol
- NSAIDS
- OPIODS

Improved?

YES

Discharge with adequate analgesia which includes paracetamol, NSAIDS and opioids (short term only).
Currently insufficient evidence for diazepam.
Refer to GP for further W/U or arrange MRI if indicated.
Avoid complete bed rest.

NO

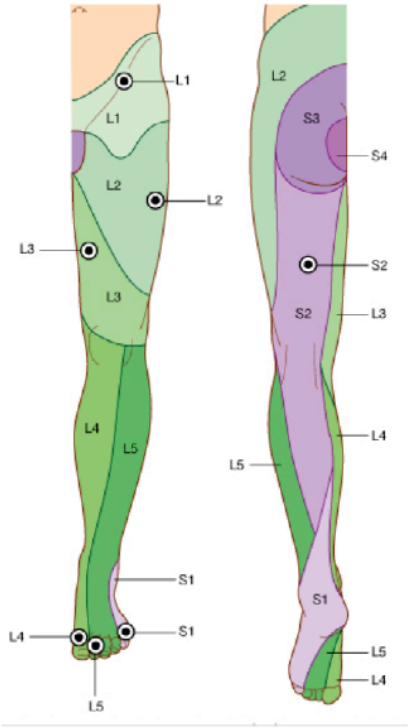
REFER TO ORTHO

YES

REFER TO ORTHO

Quick Neuro Exam

Drafted By Dr L Folscher May 2017
For Review May 2020



Quick test for lower limb power[2]

Stand on toes	(S1)
Stand on heels	(L4, L5)
Squat and stand	(L3, L4)

Lower limb reflexes

Cremasteric Reflex	(L1,2)
Knee Jerk	(L3,4)
Ankle Jerk	(S1,2)
Plantar Reflex	(L5,S1,2)
Bulbocavernosus Reflex	(S2,3,4)
Anal reflex	(S2,3,4)

Indications for Imaging:

- Trauma
- Motor or autonomic neurological deficit
- Concern for serious underlying cause as outlined above

Outpatient management of lower back pain

MANAGEMENT

Most episodes of acute low back pain will resolve in 6 weeks even in the absence of any therapy.[1] Relative **rest, activity modification, NSAIDs and physiotherapy** are the mainstays of therapy.

It is crucial to **align a patient's expectations** with the reality of back pain's likely natural progression – most episodes settle with time and supportive therapy and only a very small percentage benefit from surgical intervention.

Lifestyle Management Advice is crucial and often overlooked. An obese patient with back pain will benefit from weight loss. Outpatient referral to a dietician is appropriate. Physiotherapy, core muscle strengthening and aerobic conditioning also have an important role.

Opioids do not expedite return to work or improve functional outcome and are complicated by constipation, sedation and the risk of addiction. They are best avoided outside of the short term.