BACK PAIN PATHWAY DEFINTIONS

Cauda Equina Syndrome (CES)

Current or imminent compression of the sacral nerve roots resulting in neurogenic bladder and bowel dysfunction. Symptoms typically include:

- severe low back pain and bilateral sciatica
- urinary retention
- saddle anaesthesia,
- faecal incontinence
- multi-level bilateral motor deficits (may include frequency/urgency of urine).

Complete CES is usually obvious clinically but unfortunately by this time recovery is less likely even if prompt surgical decompression is performed.

Partial or imminent CES are more difficult to recognise but results after surgical decompression are very good and it is assumed that many of these patients are saved from developing complete CES.

Worrying early symptoms include:

- low back pain
- bilateral sciatica
- urinary frequency
- urinary urgency
- urinary incontinence (or retention in males)
- altered perianal or genital sensation
- lower limb motor deficits and faecal incontinence.

Obviously a number of these are common symptoms and it is important to combine them together to produce a measure of clinical suspicion. Assessment of perianal sensation to pin prick, anal tone and anal squeeze form part of a complete assessment.

Myelopathy

Caused by *slow compression* of the spinal cord– in neck/ thoracic spine.

Symptoms

Early symptoms include gradual onset of hand clumsiness and numbness and lower limb unsteadiness (ataxia).

Some patients will complain of altered sensation on the soles of the feet, or be unable to walk at a brisk pace, or have frequent falls. They may have intermittent shooting pains in arms or legs.

Upper and lower limb weakness and bladder/bowel symptoms are late features.

Signs

Long tract – hyperreflexia, Babinski, clonus, crossed adductor reflex, Hoffman's (flicking middle finger , causes index and thumb to flex), Lhermitte's sign (on neck flexion, pain like electric shock spreads from neck down arms, spine and legs)

Compromised co-ordination may be evidenced by difficulty walking/placing one foot in front of the other

Not all patients with myelopathy will have long tract signs or if MRI demonstrates cord signal change at the stenotic level (even in absence of symptoms/signs)

Red Flags

Risk factors for:

Cancer- weight loss, new onset >55yrs, hx cancer, thoracic pain(see thoracic pain below)

Infection- fever, IV drug use, recent infection, thoracic pain

Fracture – Trauma, hx osteoporosis, thoracic pain

Investigations – Cancer- X-ray/MRI (depending on availability but MRI is recognized as best screen for significant pathology), Bloods/urine (FBC, LFT, ESR, CRP, BONE, PSA, myeloma screen)

-Infection X-ray/ MRI (as above), bloods (FBC, ESR, CRP)- consider acute referral if strong suspicion

- Fracture – plain x-ray/MRI

Thoracic pain

Thoracic spinal pain in isolation without any other red flags should be managed conservatively as any other mechanical spinal pain for 2-4 weeks. Failure to improve or worsening should prompt a further detailed history and examination particularly looking for deformity or long tract signs. This should then be managed as red flags.

Nerve root pain (upper or lower limb)

Note: Not all arm/leg pain is nerve root pain

Upper or lower limb nerve root pain is dermatomal, myotomal and sclerotomal and is sharp, lancinating and burning in nature, the quality of the pain often helps distinguish from referred pain.

The pain generally goes below the elbow or knee

The arm or leg pain is usually worse that the neck or lumbar spine pain

In upper limb: C4 radicular pain is rare and does not radiate beyond the shoulder.

C5 neck pain and arm pain not going below elbow

C6 neck and arm pain to thumb

C7 neck and arm pain to middle finger

C8 neck and arm pain to little finger

In lower limb: **L2/3** lumbar pain and leg pain – lateral buttock, anterior thigh not going below knee

L3/4 lumbar pain and leg pain – anterior thigh and medial shin

L5 lumbar pain and leg pain – lateral thigh and calf to great toe

S1 lumbar pain and leg pain – posterior thigh, calf and lateral foot

Examination- Straight leg raise (SLR), crossed SLR, slump test, motor and sensory nerve testing of leg/ arm

Mechanical spinal pain - all other spinal pain not covered in definitions

Inflammatory disease - suspect if- younger age, awaking in second part of night, alternating buttock pain, morning stiffness (typically longer than 30 mins), improves with exercise

GP advice - advice sheet available on Internet for GPs to use during consultation, to assist management of back/leg pain. Encourages staying at work/ break fear -avoidance cycles/demystify

NOTE: It is anticipated that most low back pain patients will be managed in primary care, with appropriate review and adjustment of medication. Onward referral to back pain team should be reserved for those not coping or presenting management challenges beyond the scope of primary care. There is no rational for physio for all acute back pain patients.

Assessing need for Support (use of STarT back tool)

We strongly encourage the use of the STarT tool to facilitate assessment of patient biopsychosoical risks of persistent pain, this is a well evidenced based approach. A small proportion of patients may have persisting pain (beyond 6 weeks) in the context of a low score, but usually patients demonstrate a medium/ high score if needing referral to Musculoskeletal teams.

GP analgesia - WHO pain ladder, consider neuropathic medication if nerve root pain.

Pain Clinic - Multidisciplinary approach similar to those offered in Pain clinics with emphasis on functional rehabilitation, and self-management strategies. Will have strong links with occupational health schemes.

Yellow flags assessment – Involves consideration of factors such as work, family, social, mental health, and coping mechanisms. These are predictors of developing Chronic back pain. Can be formally assessed eg START Back, Orebro questionnaires

Spinal specialist team- a team lead by an experienced physiotherapist specialising in management of back. Will involve ongoing assessment and treatment. Will utilise a range of practitioners for a Bio psychosocial approach.

Nerve root block – These are either diagnostic or therapeutic. For therapeutic injections to relieve nerve root pain in the arms/legs, lumbar or caudal epidurals may be alternatives although nerve root injections or foraminal epidural injections are more likely to be therapeutic.

Surgical Opinion – May be orthopaedic or Neurosurgical specialist, specialising in management of spinal pain. Opinion could initially be sort through a paper/MDT triage with history and MRI result, without need to see patient. Further consultation may be necessary or, in occasional cases, patient could be booked straight for pre-assessment for surgery.

Sports Medicine Clinic - Any patient who is serious about exercise (that doesn't only mean at an elite level) and has failed structured rehab and is still being restricted by their spinal pain (assuming no surgical indications) should be referred to a specialist sports/exercise medicine clinic.