

14. Back pain: the GP's role

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THIS CHAPTER REVIEWS

- The assessment of back pain in general practice.
- The treatment of back pain in general practice.
- When to refer patients.

Many GPs feel inadequately trained to assess and diagnose back pain. This can lead to overprescribing, unnecessary use of x-rays and needless referral to hospital specialists. Back pain is common and treatable. Most people will manage it themselves: 37% of adults in the UK experience back pain each year, but only 14% seek medical help. Of those who do not trouble their GP, many buy pain killers, some go to a physiotherapist and an increasingly large number will seek spinal manipulation.

Most patients with back pain who consult their GP are aged 25–60 years. It is rare in teenagers and is uncommon as a new symptom in the elderly; therefore these patients should raise a high index of suspicion.

Clinical assessment

Back pain can be accurately assessed in a 10-minute consultation. The diagnosis should be based on taking an accurate history and the clinical examination.

Most patients who have back pain should carry on working, but we must have confidence in our assessment to encourage them to do so.

Observation

Watch the patient walk into the consultation room. Note posture, facial gestures and the way they walk. Assess their demeanour.

Some patients somatize inner unhappiness, and this may be misleading; be careful how you interpret the clues. Chronic back pain can be linked to psychosocial problems; some patients use back pain as a means of communicating distress.

Most patients have an underlying physical problem, but for some their inner belief systems lead them to magnify the intensity and importance of their pain. They may respond to counselling or antidepressants.

Review of medical history

Ask about the patient's general health and previous health problems. Have they had cancer? Tumours of the breast, lung, prostate, kidney and thyroid are particularly likely to metastasize to bone. Could they be HIV-positive or could they have had tuberculosis? Ask about symptoms of systemic ill health, such as weight loss, night sweats and fatigue. Osteoporosis puts the patient at risk of vertebral collapse.

Previous back problems

Find out whether the patient has a history of back pain. How was it treated? Back pain is often recurrent and most patients first experience it in their twenties or thirties. Be wary of the elderly patient who presents with back pain for the first time (or after a long interval), as they may have serious underlying pathology.

Previous experience of treatment will colour the patient's expectation of what you, the GP, can or should provide. Many patients get very hung up on the labels applied to their condition by previous therapists and this can sometimes cause communication problems. Take time to clarify what they mean by the words or phrases they use.

Joint problems

Ask whether the patient suffers from pain in any other joints. Most back pain is not related to underlying disease, but it may be a manifestation of ankylosing spondylitis or rheumatoid arthritis.

Medication

Find out what medication, if any, the patient is taking: antimetabolic drugs such as tamoxifen might suggest serious ▶



Box 14.1 Don't miss cauda equina compression

- Cauda equina compression causes loss of sphincter control
- The patient may have bilateral neurogenic leg pain
- Test for impaired sensation in the saddle area and assess anal sphincter tone by digital examination, while the patient tries to squeeze your examining finger
- A compressed nerve root recovers with time, but a compressed cauda equina does not resolve without treatment and the patient is at risk of permanent incontinence. The condition is rare, but must be excluded. If in doubt, admit the patient immediately

disease. Steroid therapy, either currently or previously, leaves the patient at risk of osteoporosis and vertebral collapse.

Is the patient taking anything for the pain? Beware of the patient who sees it as your job to fix them. Accepting responsibility for their own health will decrease their risk of long-term illness. Fear of what the pain might mean and avoidance of pain-provoking activities suggest a bad prognosis.

Occupational history

The patient's occupation gives a clue to the prognosis, but not in the way many would expect. Job satisfaction is crucial. Patients in heavy manual jobs get more back pain than others, but patients who hate their jobs, whatever these may be, are more likely to take time off.

Pain history

Onset and duration

Ask how long the pain has been present and how it started. Most patients can recall an event that triggered the problem and an approximate time of onset. Be wary of pain that just seemed to creep up from nowhere, as this may indicate serious pathology (Box 14.1).

Site of pain

Is the pain mainly in the back or mainly in the leg? Pain in the leg and numbness or pins and needles indicate a problem at the nerve root. This type of pain is typically shooting, lancinating or like an electric shock, and may be felt all the way to the foot. Simple back pain does not usually spread far beyond the buttock, is dull in nature and

may feel like toothache. Patients may not describe the correct site of the pain, for example saying 'hip' when they mean 'buttock'.

Type of pain

Beware of the patient who can never get comfortable, as the inability to find a position that gives relief suggests serious pathology. Chronic, unremitting pain, particularly with sleep disturbance, is a serious symptom.

Exacerbating/relieving features

Most cases of back pain improve with rest and worsen with activity. The exception is ankylosing spondylitis.

Examination

With practice, the physical examination can take a few minutes. Patients will need to undress for this.

When the patient is standing:

- Inspect for obvious spinal asymmetry.
- Assess the lumbar lordosis – a very flat lordosis may indicate ankylosing spondylitis.
- Look for muscle wasting in the gluteal region, the calf or the thigh.
- Check for discrepancy in leg lengths by comparing the levels of knee and buttock creases and the relative levels of the posterior superior iliac spines.
- Ask the patient to extend their spine, to flex forward and then to flex to the side by sliding their palms down their outer thigh. This will show the quality and range of spinal movement. Most patients who have simple backache will be slightly stiff in extension, painful on flexion and have asymmetric limitation and pain on sideways flexion of the spine.

When the patient is supine:

- Check for other joint pain.
- Assess the hip joints for range of movement and for pain. Hip joint pathology can present with predominant back and buttock pain, although more typically a 'hip patient' will feel pain in the groin. A loss of range on internal rotation of the hip is often the earliest sign of hip disease.
- Perform stress tests on the sacroiliac joints, especially in younger or female patients. Mechanical dysfunction or inflammatory processes in these joints cause buttock and groin pain, which may radiate down the leg.
- Use the straight-leg-raise test to examine the nerve roots. This stretches nerve roots L₅, S₁ and S₂. Pick up

Box 14.2 Tests for assessing the power of lumbar nerve roots

- L₂ and L₃: resisted flexion of the hip
- L₄: resisted dorsiflexion of the ankle
- L₅: resisted extension of the big toe
- S₁: resisted eversion of the foot or resisted plantar flexion of the ankle
- S₂: resisted hamstring contraction (resisted knee flexion)

the leg at the ankle and keep the knee fully extended. Take the leg up towards 90° or beyond. If the patient has significant nerve root entrapment you will cause shooting leg pain before you get much beyond 30° of elevation. Back pain produced by straight-leg raising is common and does not indicate nerve root involvement.

- Assess muscle power and tone (Box 14.2).
- Check the reflexes: The knee jerk is innervated from nerve roots L₃ and L₄, the ankle jerk from L₅ and S₁. Assess the Babinski plantar response (Fig. 14.1). Check for skin sensory loss.

When the patient is prone:

- Test nerve roots L₂, L₃ and L₄ in the femoral nerve stretch test. Keep the patient's anterior thigh fixed on the couch and flex the knee towards 90°. If the patient has femoral nerve irritation or entrapment this manoeuvre will cause a burning discomfort in the groin and anterior thigh. Palpate the spine for tenderness and for muscle spasm.

By the end of the examination it should be possible to differentiate between patients with simple backache, nerve root pain or possible serious spinal pathology.

Further investigations

Most patients with back pain need no investigation before starting treatment.

Radiography

X-ray examination rarely helps with planning management in back pain. One set of lumbar films uses the same amount of radiation as 150 chest x-rays. False-positive findings are common and often only confuse the issue. The Royal College of General Practitioners suggests taking an x-ray if



Figure 14.1 The Babinski plantar response. A firm stroking stimulus to the outer edge of the sole of the foot evokes dorsiflexion (extension) of the large toe and fanning of the other toes. Reproduced with permission from Swash, *Hutchison's Clinical Methods*, 21st edn, Saunders, 2001.

the pain has persisted for more than 6 weeks, although the results may not be useful.

X-rays are of benefit in younger patients with suspected spondylolysis or spondylolisthesis (Fig. 14.2). X-rays can help to detect osteoporotic collapse in the elderly and can be helpful if the patient has had recent trauma, whatever their age.

If the patient is thought to have serious pathology, x-ray is not appropriate as a first investigation because advanced tumours, for example, may not show on the film. If the patient appears to have underlying disease, perform a full blood count, test the erythrocyte sedimentation rate and alkaline phosphatase level, and check isoenzymes for bone if the basic level is elevated.

Magnetic resonance imaging

Magnetic resonance imaging (MRI) is not usually appropriate for patients with back pain. It should be used to investigate neurogenic leg pain or if serious pathology is suspected. ▶



Figure 14.2 Spondylolisthesis is an anterior slippage of one vertebral body on another, usually L₅ on S₁. Reproduced from Ridgewell, *Update*, 8 February 2001.

False-positive results are common and the scan does not always correspond to the patient's clinical presentation. MRI can be entirely normal in people with severe back pain, yet patients who have never had back pain can show marked changes on scanning.

Admission

Acute admission for back pain is appropriate when:

- there is suspected cauda equina compression
- there is evidence of a rapidly progressive root palsy (if the L₅ root is involved the patient can be left with a foot drop)
- the patient has intractable pain despite appropriate analgesia and good compliance with the prescribed regimen.

Key points

- Treatment of back pain is moving away from highly technical and expensive procedures towards simple, effective interventions. Chiropractors aim to correct nerve function by manipulating the spine.
- Delays in treatment can affect the patient's job, relationships and mental health.
- A simple step-by-step assessment will help you to diagnose the cause of most back pain.
- Patients in manual jobs are more likely to get back pain, but job satisfaction is more likely to determine time off work.
- Most patients who have back pain should carry on working.
- Remember cauda equina compression, particularly where there is bilateral sciatica. Ask the patient about bladder and bowel function and check perineal sensation and anal sphincter tone.