

# Spinal Cord Compression (SCC)

## KEY POINTS

- ➔ Acute SCC is a palliative care emergency
- ➔ Pain is the presenting symptom for more than 90% of patients; the pain is either localized (at the site of compression) or radicular (from spinal root compression)
- ➔ SCC is common in lung, prostate, kidney, thyroid, breast cancer and multiple myeloma
- ➔ Generally, if the patient has lost the ability to walk before treatment, they will not regain ambulatory function (<10% chance, even with prompt treatment)
- ➔ Many patients can live a relatively long time after experiencing SCC, with the added burden of paralysis

## ASSESSMENT

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- ➔ A high level of suspicion is required
- ➔ Increasing back pain is often the earliest sign, and pain is often worse at night, i.e. the patient wakes with back pain
- ➔ Sensory, motor, and autonomic symptoms may also occur
- ➔ Autonomic symptoms include loss of bowel and bladder function, sexual dysfunction

➔ Pain may be difficult to evaluate in paediatric patients who cannot verbalize their pain, so other markers can be used, including regression in motor milestones or refusal to ambulate



- ➔ It is important to ask about bowel and bladder function, as patients may not volunteer this information, and urinary retention and constipation may also be early signs

- Loss of bowel function does not always present as incontinence; constipation may also be present

## MANAGEMENT

- Acute SCC should be considered an emergency and treated without delay
- The extent of the diagnostic work up should be determined by the overall condition of the patient and the duration of symptoms prior to diagnosis
- Imaging: MRI spine is the recommended imaging modality, however, in many cases the diagnosis is made clinically
  - An MRI is recommended when radiation is available, and the patient is expected to be well enough to benefit
  - If radiation is unavailable, MRI is not a priority investigation
  - Avoid MRI if the patient has not been able to walk for more than 48 hours, since the only treatment in such a case will be dexamethasone
- If SCC is suspected, immediately administer high-dose **dexamethasone (16 mg PO), then continue with 16 mg PO once daily** (there is no evidence of benefit in splitting the dose) **until surgery is completed or radiotherapy has started** (if appropriate and available)
  - Continue **dexamethasone 8 mg PO daily until radiation is completed**; then taper over 1-2 weeks
- Dexamethasone may assist initially in decreasing spinal cord oedema to improve neurological features while definitive therapeutic options, such as surgery, radiation and/or chemotherapy, are being considered
- Consider confirmatory imaging and emergency referral for radiation therapy or sometimes for surgical decompression if available

*Consider if the patient is well enough to benefit from investigation or treatment*



- ➔ Some patients may require a maintenance dose of dexamethasone to preserve neurological function

#### ➔ Paediatric dosing: Dexamethasone

➔ Loading dose: 1-2 mg/kg PO/IV x 1 dose , followed by 0.25 mg/kg/dose q6h or 0.5mg q12h

➔ It is important to note that dexamethasone can induce tumour lysis, so precautions should be taken/considered in patients at risk of developing tumour lysis syndrome, especially those with leukaemia and lymphoma



- ➔ GI tract ulcer prophylaxis with a **proton pump inhibitor (e.g. omeprazole or pantoprazole)** is recommended when prescribing high-dose dexamethasone
- ➔ Consider the use of prophylactic anticoagulation in cases of immobility
- ➔ Treat severe pain with opioids to achieve analgesia

#### PITFALLS/CONCERNS

- ➔ A delay in diagnosis or treatment may result in preventable paralysis and/or bowel and bladder dysfunction
- ➔ The degree of neurologic function at diagnosis and at the start of treatment is the most significant factor in determining the recovery of function
- ➔ Rapid onset (less than 48 hours) and progression of symptoms are poor prognostic factors for recovery of spinal cord function (e.g. mobility)
- ➔ If the patient has been paralyzed for more than 48 hours, the chance of neurological recovery is very poor

#### PALLIATIVE TIPS

- ➔ Back pain exacerbated by the Valsalva manoeuvre should increase suspicion of developing cord compression

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