Spinal cord compression

Spinal cord compression occurs in 3-5% of patients with advanced cancer. Cancers of the breast, bronchus and prostate account for 40%. Most occur in the thoracic spine. There is compression at more than one level in 20% of patients. Below the level of L2 vertebra, compression is of the cauda equina (i.e. peripheral nerves) and not the spinal cord.

A high index of suspicion is necessary in order to avoid missing cases of spinal cord compression. Early signs may be subtle e.g. heaviness of the legs. Do not wait for signs to become unequivocal: early diagnosis and urgent treatment (within hours) are vital to improve outcome, mobility and continence. Once paralysis has developed only 5% will walk again but some patients survive more than a year.

Diagnosis

Consider spinal cord compression if any of the following are present:

- Back pain with or without radiation in the territory of a nerve root (including a change in the severity and quality of existing pain)
- Leg weakness
- Sensory changes / sensory level
- Bowel or bladder disturbance
- Falls

Examination

The patient may be unaware of sensory loss until examined, particularly if this is confined to the sacrum or perineum. Pain generally predates other symptoms and signs of cord compression by weeks or months.
Pain may be caused by vertebral metastasis, root compression or compression of the long tracts of the spinal cord.
Pain is often exacerbated by neck flexion, straight leg raising, coughing, sneezing or straining.

- Examine for a sensory level below which there is no sensation or altered sensation. If there is a high level of compression there is likely to be a sensory level with brisk reflexes. Check anal sphincter tone.
- Patients with recent onset problems with sphincter control, especially if associated with leg weakness, may have a cauda equina compression. Check saddle area sensation and anal sphincter tone.
- Reflexes may be diminished.
- Patients with severe back pain on movement but no neurological changes may have spinal instability.

They require urgent referral.

Management:

Patients with newly developed paraplegia, a sensory level and/or sphincter loss may have a recently established cord compression. They need IMMEDIATE REFERRAL to oncology department and must be treated as an emergency. Recovery is more likely with lesions of the cauda equina. Complete paraplegia and loss of sphincter function are bad prognostic signs. Always consider the overall condition of the patient .Treatment will depend on the patient's general condition and potential for benefit.

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1) Immediate

- Dexamethasone 16mg PO stat and 16mg mane PO OD. Reductions are made according to the rate and completeness of response to treatment and control of symptoms.
- Urgent MRI scan
- Urgent oncology referral for consideration of radiotherapy
- Consider orthopaedic referral if neurological symptoms and signs progress despite radiotherapy and steroids or if there is evidence of spinal instability.

2) If gradual onset, or if rapid onset but paraplegia present in less than 24hrs, surgical decompression may be possible. Seek orthopaedic opinion.

3) Rapid onset and established paraplegia may be due to infarction of the spinal cord. Radiotherapy may not help except for pain relief. Seek oncology opinion

4) Established paraplegia

- Urinary catheter.
- Pressure area care.
- Bowel regulation: allow some constipation and use regular enemas/suppositories to empty lower rectum. This will reduce faecal leakage.
- Do not use codanthrusate or codanthramer because danthron can cause superficial burns if prolonged contact with skin, which often occurs in catheterised or incontinent patients.
- Physiotherapy / OT assessment. Early mobilisation is recommended as soon as symptoms are controlled.
- Psychological readjustment is often difficult and ongoing support can be helpful.

5) Specialist palliative care assessment for symptom management / rehabilitation is recommended.

References

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