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THE JIMMY S BILIMORIA FOUNDATION

PALLIATIVE CARE
GUIDELINES
FOR A HOME SETTING IN INDIA

MALIGNANT SPINAL CORD COMPRESSION

INTRODUCTION

Malignant spinal cord compression (MSCC) is defined as the compression of the dural sac and its contents (spinal cord or cauda equina) by an extradural or intradural mass, which may lead to irreversible neurological damage such as paraplegia or tetraplegia depending on the level of the lesion. Spinal cord compression is more commonly of extradural in origin. In most cases, cord damage occurs due to an extension of vertebral body metastasis into epidural spaces, but damage can be due to vertebral collapse, direct metastasis through the intervertebral foramen and due to obstruction of the vascular supply. MSCC is common in multiple myeloma, cancers of breast, prostate and lung. The most common site of cord compression is the thoracic vertebrae (70%) followed by lumbar (20%) and cervical vertebrae (10%). MSCC can present at more than one level. It is an oncological emergency. Early identification and treatment initiation can improve patient outcomes.

ASSESSMENT

- **General**
  - Assessment must determine the underlying cause and level of compression, and impact on quality of life for the patient and their family (***refer to the Guideline - Symptom Assessment***)
  - Patients with high risk of bone metastases/back pain should have a detailed history and complete neurological examination to rule out MSCC

- **Symptom Assessment**
  - Back pain - radicular, tight band like, girdle-like sensation around chest or abdomen, aggravated by movement, straining (cough, sneezing, passing stools) and lying down
  - Progressive weakness of limbs
  - Sensory impairment (tingling, paraesthesia and numbness) usually starts in both feet and ascends the legs
  - Saddle area numbness
  - Urinary symptoms - hesitancy or incontinence, usually a late feature
  - Bowel disturbance - constipation/faecal incontinence

- **Examination**
  - Motor deficits - limb weakness, paralysis, brisk or absent reflexes
  - Sensory deficits - loss of sensation, paraesthesia, defined sensory level
  - Localised tenderness in the spine

- Autonomic dysfunction - anal tone - reduced or absent (in cauda equina syndrome)
- Distended bladder/retention of urine
- Lhermitte's sign

- **Laboratory Investigations**
  - Magnetic Resonance Imaging of the spine is the investigation of choice

- **Points to consider during evaluation**
  - Does this patient have a high likelihood of having MSCC?
  - Do the symptoms suggest MSCC?
  - What is the ambulatory status?
  - What is the overall prognosis from the underlying cancer?

MANAGEMENT

- Patients with high risk of bone/spine metastasis should be made aware of the early symptoms and signs of MSCC and advised to seek immediate medical help (e.g. severe pain in the upper/lower back - which worsens on straining, localised spinal pain and pain worse at night preventing sleep, weakness of the limbs)
- Should be managed by a multidisciplinary team (radiation oncologist, neurosurgeon, radiologist, nurses, psychologist, physiotherapist, occupational therapist and palliative care physician)
- For best patient outcomes treatment should be instituted within 24 - 48 hours of onset of symptoms (appropriate and urgent referral to radiation oncologist, neurosurgeon should be done)
- Nurse lying flat and transport as per a spinal injury patient
- Analgesics (as per WHO Analgesic Ladder)
- Corticosteroids
  - Immediate loading dose of dexamethasone 16mg PO or IV OD and to be administered before 2 pm and to be given as a single dose even after 2 pm, if it is the initial dose
  - Continue short course of dexamethasone 16mg PO OD for three to five days
  - Maintain 8mg PO OD until the completion of radiotherapy
  - If there is neurological deterioration on downward titration, the previous satisfactory dose should be reinstated and continued for further two weeks before attempting downward titration
  - A maintenance dose would have to be continued in a few patients to maintain neurological function
  - Corticosteroids alone can be used in those who are unfit for oncological management for a couple of weeks and then weaned

  - Use a Proton Pump Inhibitor (PPI) as gastro-protector
- When deciding on definitive treatment, consider
  - Performance status
  - Extent of metastatic disease
  - Spinal stability
  - Underlying tumour radiosensitivity
  - Degree of spinal cord compression
- Surgery is considered if
  - Single level compression
  - Compression fracture, spinal instability, vertebral displacement
  - Primary unknown
  - Radio-resistant tumours
  - Paraparesis < 24 hours
  - Good prognosis and expected QOL
  - Patient performance status good otherwise
- Radiotherapy
  - Radiosensitive tumour
  - Multiple levels of compression
  - Unfit for major surgery
  - Extensive metastatic disease
  - As an adjuvant treatment after surgery
- Chemotherapy
  - Paediatric tumours responsive to chemotherapy
  - Adjuvant treatment for adult tumours responsive to chemotherapy
  - Relapse of previously irradiated tumour responsive to chemotherapy
- Long term management
  - Cautious re-mobilisation
  - Skin care
  - Bowel and bladder care
  - If bed-ridden (***refer to the Guideline - Care of the Bedbound Patient***)
  - Rehabilitation
  - Psychosocial support to patient and family
- Extensive investigations/treatments may not be beneficial with
  - Well established paralysis of more than a week's duration
  - Poor baseline performance status
  - Predicted lifespan of only days to weeks from underlying disease
  - Palliative care with consideration of empirical corticosteroids (Dexamethasone 8mg PO or S/C bd) if beneficial

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