EPIDURAL SPINAL CORD COMPRESSION

Overview
• Occurs in 5-14% of cancer patients
• Cord compression usually due to metastases involving vertebral body or intervertebral space (see figure)
• Thoracic (60%) > lumbosacral (30%) > cervical spine (10%)
• Compression causes obstruction of epidural venous plexus → vasogenic edema → demyelination → spinal cord infarction with prolonged compression
• Early diagnosis matters! Neurologic status at time of treatment initiation most important prognostic factor
• Breast, lung, prostate cancer account for most cases

Clinical Presentation
• Back pain present in 88-95% of cases, usually first symptom
• Weakness, sensory deficits, bowel/bladder dysfunction (usually urinary retention) late symptoms

Diagnosis
• Neuro exam: Saddle anesthesia, rectal tone (defer if neutropenic), leg weakness, reflexes
• Imaging: Whole spine MRI
  o Good sensitivity, specificity
  o Detects non-contiguous lesions – approx 30% of patients will have multiple epidural mets (Schiff, Cancer 1998), which can be included in radiation ports if known

Management
• Steroids - when in doubt, start empirically; dexamethasone 10-100mg IV, then 4mg q6h; taper by 1/3 every 3-4 days if stable or improving
• Surgery consult
• Radiation oncology consult

  o 101 patients with metastatic epidural spinal cord compression (MESCC) and signs/symptoms
  o Randomized to surgery (surgical decompression/resection) followed by RT or RT alone
  o Combined-modality therapy associated with better outcomes
    o Patients more likely to walk maintain ability to walk (94% vs 74% in surgery and RT alone groups, respectively; p=0.024)
    o Reduction in use of steroids and analgesics
    o Among subset unable to walk at presentation, 62% in surgery group vs 19% in RT group regained ability to walk (p=0.012)

<table>
<thead>
<tr>
<th></th>
<th>RT alone median</th>
<th>Surgery + RT median</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days able to walk</td>
<td>54 days</td>
<td>153 days</td>
<td>0.024</td>
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<tr>
<td>Maintenance of continence</td>
<td>17 days</td>
<td>156 days</td>
<td>0.016</td>
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<td>Survival time</td>
<td>100 days</td>
<td>126 days</td>
<td>0.033</td>
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References:
4. Up to Date