Spinal Cord Compression Management in Cancer Patients

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**PATIENT PRESENTATION**

Suspected spinal cord compression (severe pain or abnormal neurology, or incidental finding on MRI; not intended for traumatic injuries. If in emergency center, triage patient as emergent.)

- Pain and/or neurological symptoms with progression within 48 hours?
  - Yes
  - Emergent treatment as follows:
    - Dexamethasone \(^2\) 10 mg STAT followed by 16 mg daily in divided doses (taper over 2 weeks)
    - Obtain urgent MRI \(^3\) of entire spine without contrast (to be reviewed by Radiologist while patient in MRI to evaluate for addition of contrast)
    - Consider bed rest (no walking)
    - If cervical spine lesions suspected place patient in Philadelphia Collar
    - Baseline neurological exam followed by serial neurological exams after steroid treatment
  - No
  - MRI supports spinal cord compression?:
    - Yes
    - Consider Dexamethasone \(^2\) 10 mg followed by 16 mg daily in divided doses (taper over 2 weeks)
    - Obtain MRI \(^3\) of entire spine without contrast during this encounter (to be reviewed by Radiologist while patient in MRI to evaluate for addition of contrast)
    - MRI supports spinal cord compression?:
      - Yes
      - Attending physician initiates discussions to determine appropriate treatment (considering spine stability, extent of disease, performance status, prognosis) with:
        - Patient
        - Primary physician regarding prognosis
        - If neurological deficits: emergent Neurosurgical Consult and Radiotherapy Consult
        - If suspected spinal instability: emergent Neurosurgical consult
        - If patient neurologically intact: admit for further evaluation by primary service and notify Radiation Oncology and Neurosurgery of patient status and consult
        - If question whether signs and symptoms correlate with MRI: consider Neurology Consult
        - Consider Pain Consult if clinically indicated
        - Consider Infectious Disease Consult if clinically indicated
      - No
      - Further work-up by treating physician
      - Notify Neurosurgery if suspected spinal instability
    - No
    - Consider Tissue diagnosis if clinically indicated
  - No
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  - Baseline neurological exam followed by serial neurological exams after steroid treatment

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    - No
    - Consider Tissue diagnosis if clinically indicated

- Tissue diagnosis if clinically indicated
  - Yes
  - Primary team to treat with chemotherapy
  - No
  - Consider Tissue diagnosis if clinically indicated

- Chemosensitive disease?
  - Yes
  - Primary team to treat with chemotherapy
  - No
  - Consider Chemosensitive disease?

- Surgery appropriate?
  - Yes
  - Surgery
  - No
  - Consider Surgery appropriate?

- Radiation therapy appropriate?:
  - Yes
  - Radiation Therapy
  - No
  - Consider Radiation therapy appropriate?

- Post-treatment follow up
  - Re-evaluate symptoms and determine further treatment

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\(^1\) Consider use of Frankel Classification to assist with patient’s current status (see Appendix A)

\(^2\) Use of steroids in undiagnosed lymphomas is not recommended

\(^3\) CT scan if not eligible for MRI

\(^4\) Consider use of ESCC Radiographic Classification for cord compression assessment (see Appendix B)

\(^5\) In instances where patient is already receiving chemotherapy the oncologist will advise on whether treatment should be continued/discontinued/delayed

\(^6\) Consider radiosensitivity of tumor

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Department of Clinical Effectiveness V2
Approved by the Executive Committee of the Medical Staff on 03/31/2015
# APPENDIX A – Frankel Classification

<table>
<thead>
<tr>
<th>Grade</th>
<th>Status</th>
<th>Sensory Function below level of compression</th>
<th>Motor Function below Level of Compression</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Paraplegia</td>
<td>No sensation</td>
<td>Complete paralysis (no function)</td>
</tr>
<tr>
<td>B</td>
<td>Sensory function only</td>
<td>Some sensation</td>
<td>Complete paralysis (no function)</td>
</tr>
<tr>
<td>C</td>
<td>Nonambulatory</td>
<td></td>
<td>Some motor function, but of no practical use to the patient</td>
</tr>
<tr>
<td>D</td>
<td>Ambulatory</td>
<td></td>
<td>Some motor function with some use to the patient</td>
</tr>
<tr>
<td>E</td>
<td>No neurologic signs or symptoms</td>
<td>Normal</td>
<td>Normal</td>
</tr>
</tbody>
</table>
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APPENDIX B – Epidural Spinal Cord Compression Scale (ESCC)

Schematic representation of the 6-point ESCC grading scale.

- Grade 0: Bone-only disease
- Grade 1a: Epidural impingement, without deformation of thecal sac
- Grade 1b: Deformation of thecal sac, without spinal cord abutment
- Grade 1c: Deformation of thecal sac with spinal cord abutment, without cord compression
- Grade 2: Spinal cord compression, with cerebral spinal fluid (CSF) visible around the cord
- Grade 3: Spinal cord compression, no CSF visible around the cord

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SUGGESTED READINGS


This practice consensus algorithm is based on majority expert opinion of the Spinal Cord Compression Work Group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following medical, radiation and surgical oncologists.

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