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**INTRODUCTION**

- Multiple myeloma (MM) is a clonal plasma cell neoplasm that can manifest with classic symptoms of hypercalcemia, renal disease, anemia, and bone lesions ("CRAB" criteria).
- Treatment involves multiagent chemotherapy, with consideration of autologous stem-cell transplant.

**CASE**

- **Patient**
  - 65-year-old male with refractory MM was started on ixazomib (proteasome inhibitor) as 3rd line therapy.
  - Developed acute-onset generalized weakness and an episode of bowel and bladder incontinence.

- **Exam**
  - Vitals unremarkable. 4/5 strength in his bilateral lower extremities, mildly decreased rectal tone.

- **Studies**
  - Worsening pancytopenia
  - MRI total spine showed lumbar canal stenosis and diffuse smooth enhancement of cauda equina nerve roots

- Neurosurgery had no concern for cord compression or cauda equina syndrome given lack of correlation of imaging and exam.
- Differential included deconditioning given co-morbidities; nerve root enhancement was possibly post-surgical changes from remote L-spine decompression. Could not exclude leptomeningeal myeloma.

**IMAGES**

- Sagittal T1 Pre-contrast
- Sagittal T1 Post-contrast

**DISCUSSION**

- CSF from LP with lymphocyte predominance and M-spike; flow cytometry revealed monoclonal plasma cells with CD20, CD38, CD138, kappa+; FISH showed t(11;14).
- Leptomeningeal myelomatosis diagnosed. Transitioned to comfort care for worsening cytopenias and infection, died soon after.

- **Take away**
  - CNS myeloma can be a challenging diagnosis due to mild, heterogenous, and nonspecific symptoms in a complex picture (treatment side effects, deconditioning, cytopenia).
  - In myeloma patients with nonspecific neurologic symptoms, MRI with contrast of CNS is best.
  - Lower threshold for LP to examine CSF for unexplained CNS findings.

**REFERENCES**