Spinal Cord Injury After Palliative Percutaneous Spine Cryoablation and Kyphoplasty in Metastatic Renal Cell Carcinoma: A Case Report

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Case Description:

- 57 year old male with metastatic renal cell carcinoma to thoracic spine and T6 compression fracture underwent fluoroscopic guided palliative cryoablation for increased back pain.
- Following the procedure, patient developed neurogenic bowel and bladder, right lower extremity paralysis without pain or loss of sensation.
- Physicians suspected hypothermic damage to spinal cord and patient was started on IV steroids.
- MRI thoracic spine demonstrated right lateral cord edema at T5-T6, see Figure 1 & 2.
- Post-procedure day 8, patient was admitted to inpatient rehab facility (IRF).
- Initial ASIA exam demonstrated right lower extremity weakness, normal bilateral light touch sensation, & bilateral loss of pin prick sensation starting at T7, see figure 3.

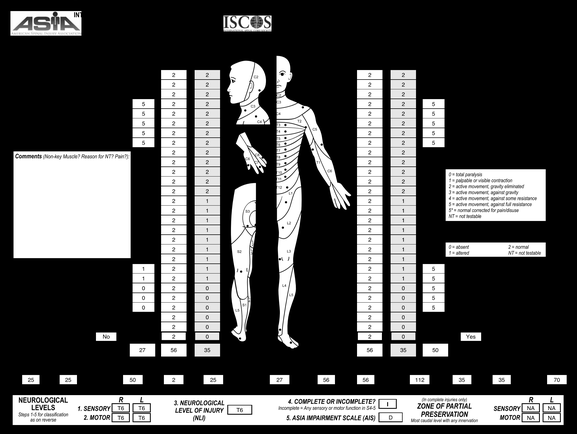

Figure 3: Patient's ASIA exam on arrival to Inpatient Rehab Facility

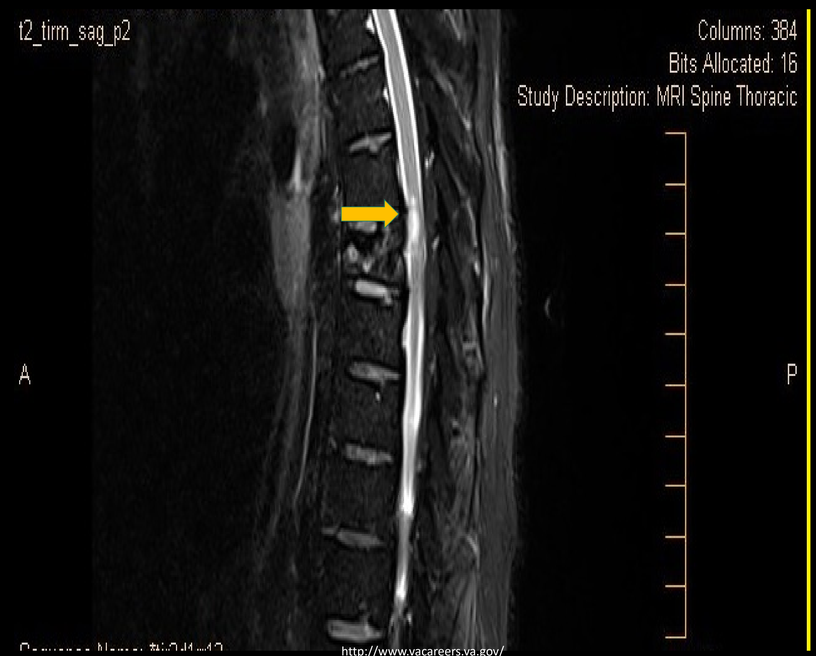

Figure 1: T2 weighted MRI Thoracic Spine: Sagittal view demonstrating hyperintensity in the right lateral cord at T5-T6

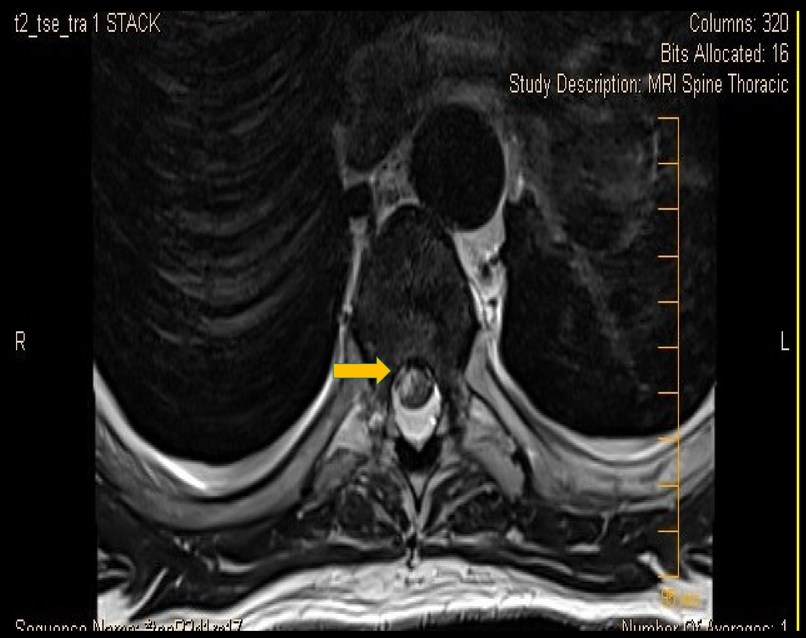

Figure 2: T2 weighted MRI Thoracic Spine: transverse view demonstrating hyperintensity in the right lateral cord at T5-T6

Assessment/Results:

- On discharge, repeat ASIA exam demonstrated normal light touch sensation bilaterally, right lower extremity weakness & loss of pin prick sensation on the left, consistent with a partial Brown-Sequard syndrome.
- Patient received education on bladder and bowel program but needed supervision for ADLs and minimum assistance for transfers.
- Patient unable to walk due to significant weakness and pain in his leg requiring use of wheelchair for ambulation.

Discussion:

- To our knowledge, this is the first reported case of Brown-Sequard syndrome following cryoablation of metastatic renal cell carcinoma to the thoracic spine.
- Patient underwent this procedure to improve pain & quality of life, but complications led to significant disability, including the inability to ambulate.

Conclusion:

- As palliative cryoablation therapy is used more frequently, physiatrists should be aware of such debilitating complications complicating quality of life for cancer patients.