

An unusual cause of neck pain: a case study

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Background

- Neck pain is a common complaint. While MSK causes are most frequent, there are a wide array of etiologies.
- A differential often includes cervical strain, spondylosis, cervical disc disease with or without radicular symptoms, and myofascial pain.
- Less common causes include vertebral metastases and infectious causes such as osteomyelitis and discitis.

We present a case of neck pain not due to a commonly etiology included in the differential, which eluded early diagnosis.

Description

A 33 yo female presented with an insidious 2 year history of neck pain followed by shooting pains down both arms, hand numbness, and “dropping things.” Initial encounters with primary care physicians did not trigger appropriate investigation—as her symptoms were attributed a past history of substance abuse, anxiety and depression, and chronic hepatitis C. Eventually plain films were done, which showed only mild spondylosis. EMG revealed L C5, C6, C7, and C8 radiculopathies, as well as on the R side at C7 and C8. Pain and hand weakness persisted so she was referred to a specialist.

PMH, FH, & SH

- PMH
 - Hepatitis C, anxiety, depression, substance use disorder
 - Denies any use within the past 2 years
- Meds: Sertraline, Gabapentin
- FH
 - Glioblastoma in MGM
- SH
 - Working at gas station
 - Widowed with 3 children
 - + smoking, + vaping

Physical exam

Well nourished, well developed female in no acute distress.

T 97.9 | P 71 | R 18 | BP 117/74

Eyes: PERRLA, EOMI w/o nystagmus

Neuro: CN II-XII intact, DTRs 2+

MSK: Strength: RUE 4+/5 except hands 4/5; LUE 4/5; RLE and LLE 5/5; LT and PP decreased in hands. Remaining PE within normal limits.

Results

WBC: WNL

Chemistries: K+: 3.2, Glucose: 110, AST: 72, ALT: 80

MRI: intramedullary tumor 1.8 * 3.9 cm from C2-3 to C5-6, with cysts and peritumoral hemorrhage



Example: cervical ependymoma

Surgery and disposition

Pt underwent successful tumor resection surgery by neurosurgery team. Pathology revealed ependymoma, WHO grade 2. Follow-up MRI at 3 and 6 months revealed no residual tumor.

Discussion

Spinal cord tumors can arise in any of 3 compartments. Intramural tumors arise within the cord itself—from glial cells. Extramural tumors develop exterior to the cord, but within the dura. The most common spinal tumors arise from vertebral metastases from primary cancers such as lung, breast, and prostate cancers. In contrast to the brain, intramural spinal tumors are rarely glioblastomas. A larger number are astrocytomas, while most tumors are ependymomas. Ependymomas can be benign (grade 1) or malignant (grades 2 or 3). All these tumors are slow growing and usually present with persistent pain, months or years in advance of neurological deficits.

Conclusion

The rarity of ependymomas and their insidious presentation often results in delayed diagnosis. In this case, prejudices against mental illness and substance abuse likely also played a role. While spinal cord tumors should not be thought of first when evaluating patients with neck pain—if pain persists—and no alternative diagnoses are established, MRI should be pursued—especially with the appearance of any neurological symptoms.