

## An unusual case of Cerebellar Ataxia: Untreated Klebsiella Mastoiditis

Jennifer M. Cushman MD <sup>1</sup> Bryan B. Pezeshki MD <sup>2</sup> Anne Ambrose MD <sup>1</sup> Dorian Alexander MD <sup>2</sup>

Montefiore



<sup>1</sup> Department of Rehabilitation Medicine, Montefiore Medical Center <sup>2</sup> Department of Emergency Medicine, Brookdale University Hospital Medical Center



## **Background**

Brain abscesses are a feared complication of

Etiology includes organisms such as Proteus

Aureus and rarely Klebsiella Pneumoniae.

prior neurosurgical procedures<sup>3</sup>.

Predisposing factors for the Klebsiella species

otologic infections and can be life-threatening<sup>1,2</sup>.

Mirabilis, Strep Milleri, Strep Pneumoniae, Staph

include metastatic spread, chronic otitis media, and

CT imaging with contrast showed a right cerebellar posterior fossa mass with vasogenic edema and local mass effect. Most of his symptoms including the dysmetria and falling to one side were resolved following the emergency craniectomy and drainage.

Management

## Discussion

Rehabilitation teams should carefully consider imaging in these types of patients. Suspected infections of the TMJ, Cranium, and Spine in patients with new onset or refractory ataxia, frequent history of recurrent falls, or any new or worsening neurological signs and symptoms<sup>4,5</sup> should be worked up with brain imaging. This is especially true in the elderly population or in those individuals with underlying immunocompromised conditions.

#### Discussion

Mastoiditis and infections of upper facial and lower section of the skull need to be a part of the differential diagnosis in cases of new onset falls and cerebellar symptoms.

#### Conclusion

This case illustrates the challenges of fragmented medical care. In patients presenting with complaints of recurrent falls and ataxia, it is important to examine the TMJ, and raise suspicions of any worsening tooth or oral mucosal infections, as well as investigate any untreated ear infections. Although the patient presented multiple times to the ED with otologic and vestibular symptoms, It is important that each visit is not treated in isolation and to keep in mind that rare infections can propagate from the ear, nose and throat into the brain in patients with comorbid conditions especially in the immunocompromised, diabetics, and advanced age.

# Case Description

73-yo-Male with recurrent ED visits for falls and gait disturbances presents with with nausea, headaches, unsteady gait, dysmetria, left sided sensory loss and weakness for past 3 days. His most recent fall was a few days prior. He was also hospitalized a month prior to this ED admission due to a bad fall. He also had complaints of worsening hearing loss and some ear pain for the last few months.

### **Brain Imaging**



#### References

- 1 Barry B, et al Otogenic intracranial infections in adults. Laryngoscope. 1999;
- 2. Duarte MJ,, et al. Otogenic brain abscesses: A systematic review. Laryngoscope Investig Otolaryngol. 2018
- 3. Liliang PC, et al. Klebsiella brain abscess in adults. Infection. 2001;29(2):81-6.
- 4. Mafee MF etal. Acute otomastoiditis and its complications: role of CT. Radiology 1985
- 5.. Dhooge IJ et al Intratemporal and intracranial complications of acute suppurative otitis media in children: renewed interest. Int J Pediatr Otorhinolaryngol. 1999;49(Suppl 1):S109–