

CASE REPORT TEMPLATE

MASS-QUERADING MS David A. Moss, MD, Capt, MC, USAF, Family Medicine Residency, Nellis AFB, NV 89191

Introduction/Objective: *Focal neurologic deficits occur in multiple sclerosis (MS) and brain tumors, which are normally differentiated on brain MRI. Presented is a patient with combined symptoms of demyelinating lesions and intracranial mass effect who had a large ring enhancing lesion on MRI.*

Case Presentation: *A 23 year-old -female presented to clinic with transient right leg weakness, transient right arm paralysis, photophobia, headache, flat affect and shuffling gait. Previous work up included brain MRI showing six areas of leukoencephalomalacia. Subsequent MRI three weeks later showed an expanding lesion in the left parietal region with new ring enhancement. Infection was ruled out and two lumbar punctures were unremarkable for MS. Biopsy of the largest lesion was performed. Histopathology favored low grade glioma or CNS lymphoma over demyelinating lesion. A third lumbar puncture showed one gamma restriction band, insufficient for diagnosis of MS. Samples were sent to a neuropathologist specializing in demyelinating lesions who diagnosed Tumefactive MS. Her symptoms quickly and dramatically improved with systemic steroids.*

Discussion: *Tumefactive MS is a well described and rare form of MS. Brain MRI normally shows a single large ring enhancing lesion with mass effect. Histopathology will demonstrate demyelination without vessel proliferation or intravascular necrosis, hallmarks of neoplasm. This patient was atypical because she had multiple lesions with one predominant ring enhancing lesion. The natural course of tumefactive MS is for the lesion(s) to resolve with no recurrence and treatment is with systemic steroids.*

Scholarly Question: *Can neoplasm be distinguished from tumefactive MS without biopsy?*

Conclusion: *Family Physicians encounter undifferentiated patients requiring extensive work- ups. Persistence, repeat testing and multiple opinions are sometimes needed to establish rare diagnoses. Accurate diagnosis facilitates appropriate treatment and prevents unnecessary interventions. Tumefactive MS should be considered in young patients presenting with MS like symptoms and ring enhancing lesions on MRI.*