

A case report of oligodendroglioma and multiple sclerosis: Occam's razor or Hickam's dictum? /h3

A. Shirani, G. Wu, A. Cross

Department of Neurology, Washington University School of Medicine, USA

Tumefactive lesions on brain imaging can pose a diagnostic dilemma in patients with or without known multiple sclerosis (MS). It is important to differentiate tumefactive demyelinating lesions from intracranial neoplasms. Here we report on the case of a middle-aged man who presented with acute unilateral optic neuritis. Brain MRI showed enhancement of the right optic nerve, and multiple non-enhancing supratentorial white matter lesions including a three cm focal lesion in the right frontal lobe with adjacent gyral expansion. Cerebrospinal fluid (CSF) analysis showed more than five CSF-restricted oligoclonal bands and an elevated IgG index. The patient was treated with a short course of high dose intravenous methylprednisolone and started on glatiramer acetate for likely tumefactive MS. A follow-up brain MRI six months later showed no new or enlarging lesions but persistence of the frontal gyral expansion. Brain biopsy led to the diagnosis of a grade II oligodendroglioma (with isocitrate dehydrogenase-1 mutation and 1p/19q co-deletion) managed with surgical resection and radiotherapy. A post-operative follow-up brain MRI showed a new enhancing periventricular lesion, making the choice of optimal disease modifying therapy for MS more challenging. This case highlights the possibility of co-existence of MS and oligodendroglioma in the absence of a preceding diagnosis of MS, emphasizes the importance of a tissue diagnosis in the presence of atypical imaging features for MS, and underlines the challenges of choosing an appropriate disease modifying therapy when MS is concurrent with a brain tumor.