

55th ANNUAL DIAGNOSTIC SLIDE SESSION 2014.

CASE 2014-3

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Clinical History: The patient is a 57 year old male with history of non-small cell lung cancer status post pneumonectomy and whole brain radiation therapy for brain metastases eight years prior to presentation. He was in his usual state of health until two days prior to admission, when he complained of headache for which he took imitrex and excedrin, and went to sleep. However, he did not wake up the next day and apparently had an episode of bladder incontinence. The patient was taken to the ED by his family, where he had altered mental status and fever (102.4 deg). On neurologic exam, he was able to follow commands, but had a left facial droop, left hemiplegia, and left sided neglect with right gaze preference. A stroke evaluation was negative. A head CT showed an old lacunar infarct but no acute hemorrhage. An MRI showed cortical FLAIR signal in the right frontoparietal region. An EEG revealed right centroparietal slowing and decreased background activity on the right. Cerebrospinal fluid analysis revealed elevated protein at 74 mg/dl, normal glucose at 50 mg/dl, 0 WBC/microliter, and 0 RBC/microliter. CSF cultures and PCR for VZV and JC virus were negative. A comprehensive workup for CSF and serum paraneoplastic autoantibodies was negative. A repeat MRI performed one week after initial presentation was notable for diffuse gyral thickening in the right hemisphere (increased from prior study) and progressive diffuse meningeal enhancement.

Material submitted:

1. Image of brain MRI: Axial T1 post contrast and axial Flair T2
2. H&E section of "Right frontal lesion" (Virtual Slide)

Points for discussion:

1. Additional stains?
2. Differential diagnosis
3. Pathogenesis