Recurrent and Multiphasic Disseminated Encephalomyelitis, Case series
Mirla Avila MD, George Hutton MD, Victor M Rivera MD

Introduction: Disseminated encephalomyelitis (DEM) is an inflammatory demyelinating disease of the central nervous system with no well accepted diagnostic criteria or biological markers for the diagnosis. The course is usually monophasic. Recurrence and multiphasic presentations are rare.

Objective: To report clinical and radiologic features of patients with recurrent and multiphasic DEM.

Methods: We include 3 patients, 2 with recurrent and 1 with multiphasic DEM. Clinical and radiologic features will be provided.

Results: Case 1: 42 year old woman with distractibility, headaches, dysnomia and dysgraphia. Brain MRI showed a large left temporal lesion. CSF showed 2 oligoclonal bands. Brain MRS was consistent with demyelination. She improved after IV steroids. 3 months later she developed incoordination and dysarthria. Brain MRI showed new enhancing lesions. Brain biopsy was consistent with demyelination.

Case 2: 27 year old woman with headaches, vomiting and blurred vision. Brain MRI showed enhancing right basal ganglia lesion, extending to the caudate and cerebral peduncle. Treatment with IV steroids granted clinical and radiographic improvement. 4 months later, she developed seizures and respiratory distress which required intubation. Brain MRI showed involvement of right basal ganglia, thalamus and medulla which increased from previous study. She received IV steroids and recuperated.

Case 3: 38 year old man with aphasia and tonic clonic seizures. Brain MRI showed a large left temporoparietal cortical-subcortical lesion which partially enhanced. Brain biopsy revealed demyelination and inflammation. Symptoms partially improved after IV steroid treatment. 7 month follow up brain MRI showed improvement with mild enhancement remaining in temporal lesion. 1 year follow up MRI showed a new enhancing subcortical occipital lesion. CSF analysis, evoked potentials and spinal MRI were all normal. Patient received steroid treatment. MRI 5 months later showed improvement of the occipital lesion.

Conclusion: DEM must be considered in the differential diagnosis of multiple sclerosis. Radiologic characteristics can help distinguish the two, including extent of the lesions, involvement of gray matter, and preference of basal ganglia, thalamus and mid brain. Early diagnosis and initial management may improve clinical outcome.

References: