

**Patient Name:** J

**Chief Complaint:**

The patient presents with worsening fatigue, intermittent weakness in the right leg, and episodes of blurred vision over the past six months.

**History of Present Illness:**

J is a 39-year-old female diagnosed with Relapsing-Remitting Multiple Sclerosis (RRMS) in 2019, after presenting with acute optic neuritis in the left eye. At that time, she experienced significant vision loss, which partially recovered over the course of three months with intravenous methylprednisolone. Since her diagnosis, she has had several relapses, each managed with high-dose corticosteroids. In the last year, she reports a marked increase in fatigue, particularly in the afternoons, which she describes as “hitting a wall.” She also experiences episodic weakness and numbness in her right leg, which has led to difficulties in walking and occasional falls.

Additionally, she reports frequent paresthesia in her hands and transient episodes of diplopia that are more pronounced during stress. Most recently, she has had difficulty with cognitive tasks, experiencing what she refers to as “brain fog,” impacting her ability to concentrate at work.

**Past Medical History:**

- **Multiple Sclerosis** (RRMS), diagnosed in 2019, currently managed with Ocrelizumab (infusions every six months, last dose received on 07/2024).
- **Hypertension**, managed with Lisinopril 20 mg daily.
- **Migraine** with aura, episodic, treated with Sumatriptan 50 mg PRN.

**Surgical History:**

- Appendectomy in 2003.

**Family History:**

- Mother has rheumatoid arthritis.
- No family history of Multiple Sclerosis or other neurological disorders.

**Social History:**

- Non-smoker and consumes alcohol socially, approximately 1-2 drinks per week.
- Works as a high school teacher but has considered reducing her workload due to fatigue and cognitive symptoms.
- Lives with her partner and two children, ages 12 and 15. She has a supportive family network.

**Medications:**

- **Ocrelizumab** (300 mg IV infusion every six months)
- **Lisinopril** 20 mg PO daily
- **Vitamin D** 2000 IU PO daily (due to deficiency)
- **Amantadine** 100 mg PO BID (for MS-related fatigue)
- **Sumatriptan** 50 mg PO PRN (for migraine)
- **Baclofen** 10 mg PO TID (for spasticity)

**Allergies:**

- No known drug allergies.

**Review of Systems:**

- **Constitutional:** Reports significant fatigue, especially in the afternoons. No weight loss or night sweats.
- **Eyes:** Blurred vision with episodes of diplopia, typically lasts several minutes. Occasional eye pain, especially on movement.
- **Neurological:** Right leg weakness, worsened by prolonged activity. Intermittent paresthesia in both hands. Cognitive difficulties, particularly with concentration and memory.

- **Musculoskeletal:** Increased muscle stiffness, especially in lower extremities, leading to decreased mobility.

#### **Physical Examination:**

- **General:** Alert and oriented x3, appears fatigued but in no acute distress.
- **Cranial Nerves:**
  - CN II: Reduced visual acuity in the left eye, 20/40. Fundoscopic exam shows mild optic pallor.
  - CN III, IV, VI: Mild dysconjugate gaze noted on rightward gaze.
  - CN V: Intact sensation bilaterally.
  - CN VII-XII: No deficits noted.
- **Motor:**
  - 4/5 strength in the right lower extremity with slight spasticity.
  - 5/5 strength in all other extremities.
- **Sensory:**
  - Decreased sensation to light touch and vibration in the right lower extremity.
- **Reflexes:**
  - Hyperreflexia in the lower extremities, 3+ with clonus at the right ankle.
- **Coordination:**
  - Mild ataxia on finger-to-nose testing on the right side.
- **Gait:**
  - Spastic gait noted, with a tendency to veer right.
  - Positive Romberg test.

#### **Imaging/Laboratory Results:**

- **MRI Brain and Cervical Spine (08/2024):**
  - Multiple T2 hyperintense lesions in periventricular and juxtacortical regions, consistent with MS plaques. New lesion noted in the cervical spinal cord at C3-C4 since last MRI.
- **Bloodwork (08/2024):**
  - Vitamin D: 25 ng/mL (low; patient on supplementation).
  - CBC, CMP, TSH: Within normal limits.

#### **Assessment:**

J is a 39-year-old woman with a history of Relapsing-Remitting Multiple Sclerosis (RRMS), currently managed with Ocrelizumab. Her recent MRI shows disease progression with new T2 hyperintense lesions, including one in the cervical spinal cord.

Patient-reported symptoms include right leg weakness, episodic diplopia, and cognitive difficulties, which are indicative of demyelinating activity affecting both the motor and visual pathways. Physical exam findings, including hyperreflexia and spasticity in the right leg, suggest involvement of corticospinal tracts. The cervical lesion aligns with her physical findings of reduced strength and increased tone. The sensory disturbances, particularly the paresthesia in her hands, point toward somatosensory pathway disruptions. The presence of cognitive dysfunction, coupled with episodes of "brain fog," is consistent with cerebral white matter lesion, an area needed for attention and memory. Furthermore, her visual symptoms of blurred vision and diplopia suggest disruptions within the optic pathways, possibly involving the optic nerves. These findings underscore the multifocal nature of MS, which typically affects various central nervous system areas, leading to a diverse symptomatology.

In summary, Ms. Doe's symptoms correlate with her MRI findings, and ongoing management with disease-modifying therapy and supportive care is crucial as her disease progresses. As MS is a chronic condition with variable progression, it is also important to incorporate psychological support to help Ms. Doe cope with the emotional impact of the disease. Close coordination between

neurology, rehabilitation services, and mental health providers will improve her comprehensive care and help maintain her quality of life.

**Plan:**

1. **Continue Ocrelizumab** with the next scheduled infusion in 01/2025.
2. **Prescribe Modafinil 100 mg PO** daily to manage fatigue.
3. **Refer to Physical Therapy** for gait training and strength exercises to improve mobility and reduce fall risk.
4. **Occupational Therapy** evaluation to assist with cognitive strategies at work and daily activities.
5. **Vitamin D supplementation** to continue at 2000 IU PO daily; recheck levels in six months.
6. **Follow-up** in three months with repeat MRI at six months to monitor disease progression.

**Counseling and Education:**

- Discussed lifestyle modifications, including regular exercise and stress management, to aid symptom management.
- Advised to report any new or worsening symptoms immediately.
- Encouraged patient to join a support group for individuals with MS for additional social support.