A 3-year-old girl with no medical history presented to the emergency department with 1 day of abnormal gait and bilateral mydriasis. Two weeks prior, she had upper respiratory symptoms and bacterial conjunctivitis treated with topical ofloxacin. On examination, pupils were fixed and dilated to 8 mm, extraocular movements were intact, and fundus examination was normal. She had brisk reflexes, poor coordination, and a wide-based unsteady gait. Bloodwork revealed leukocytosis and an elevated erythrocyte sedimentation rate; cultures remained without growth. Lumbar puncture with cerebrospinal fluid studies, computed tomography scan, and magnetic resonance imaging of brain and orbits were normal. The patient was discharged 3 days later following improvement in lethargy and gait with a diagnosis of acute cerebellar ataxia.

When she presented to ophthalmology for 1-week follow-up, her visual acuity was central, steady, and maintained in both eyes. She demonstrated sluggish but reactive pupils and new-onset ophthalmoplegia. She was unable to move either eye in any direction, including with doll’s head maneuver. She was readmitted to the hospital and demonstrated diminished reflexes bilaterally and unsteady gait. Repeat magnetic resonance imaging demonstrated diffuse enhancement of the lower thoracic and cauda equina nerve roots and enhancement of the left oculomotor nerve.

What Would You Do Next?

1. Repeat blood cultures and start antibiotics
2. Repeat lumbar puncture with cerebrospinal fluid studies
3. Order anti-GQ1b antibody and start intravenous immune globulin
4. Start intravenous corticosteroids