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'Not So Atypical': An Atypical Presentation of West Nile Virus and Guillain-Barre Syndrome

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Introduction

- Guillain-Barre syndrome (GBS) is defined by acute areflexic paralysis, usually starting in the distal lower extremities and ascending to the upper extremities
- Associated with albuminocytologic dissociation, high levels of protein in the cerebral spinal fluid, and normal cell count
- Miller-Fischer Syndrome (MFS) : a triad of ophthalmoplegia, ataxia, and areflexia

Case Report

- A 49-year-old male with a past medical history of scoliosis and gastroesophageal reflux disease presented with progressive bilateral upper and lower extremity weakness, numbness, and tingling for one day
- Patient reported playing golf over the past few days and yesterday noticed worsening of his lower extremity weakness
- Patient had subjective intermittent fevers about 5 days prior to presentation that lasted two days
- Denies any recent travel, sick contact, eating uncooked meat, diarrhea, nausea
- Patient had possible tick bites as he has been out playing golf, most recently a month before admission. The bite was not severe enough to warrant medical attention
- The physical exam findings were as follows
 - Left-sided ptosis developed after few hours of hospitalization
 - Sensation: Decreased bilateral sensation on tips of fingers. Light touch sensation to the face, upper and lower extremities bilaterally was intact
 - Reflexes: 0/4 bilaterally in the upper and the lower extremities. Babinski reflex negative
 - Strength: 3/5 in upper extremity bilaterally, 5/5 in lower extremity bilaterally. Ataxia present in upper and lower extremities
 - Skin examination: vesicular rash on trunk and ankles bilaterally

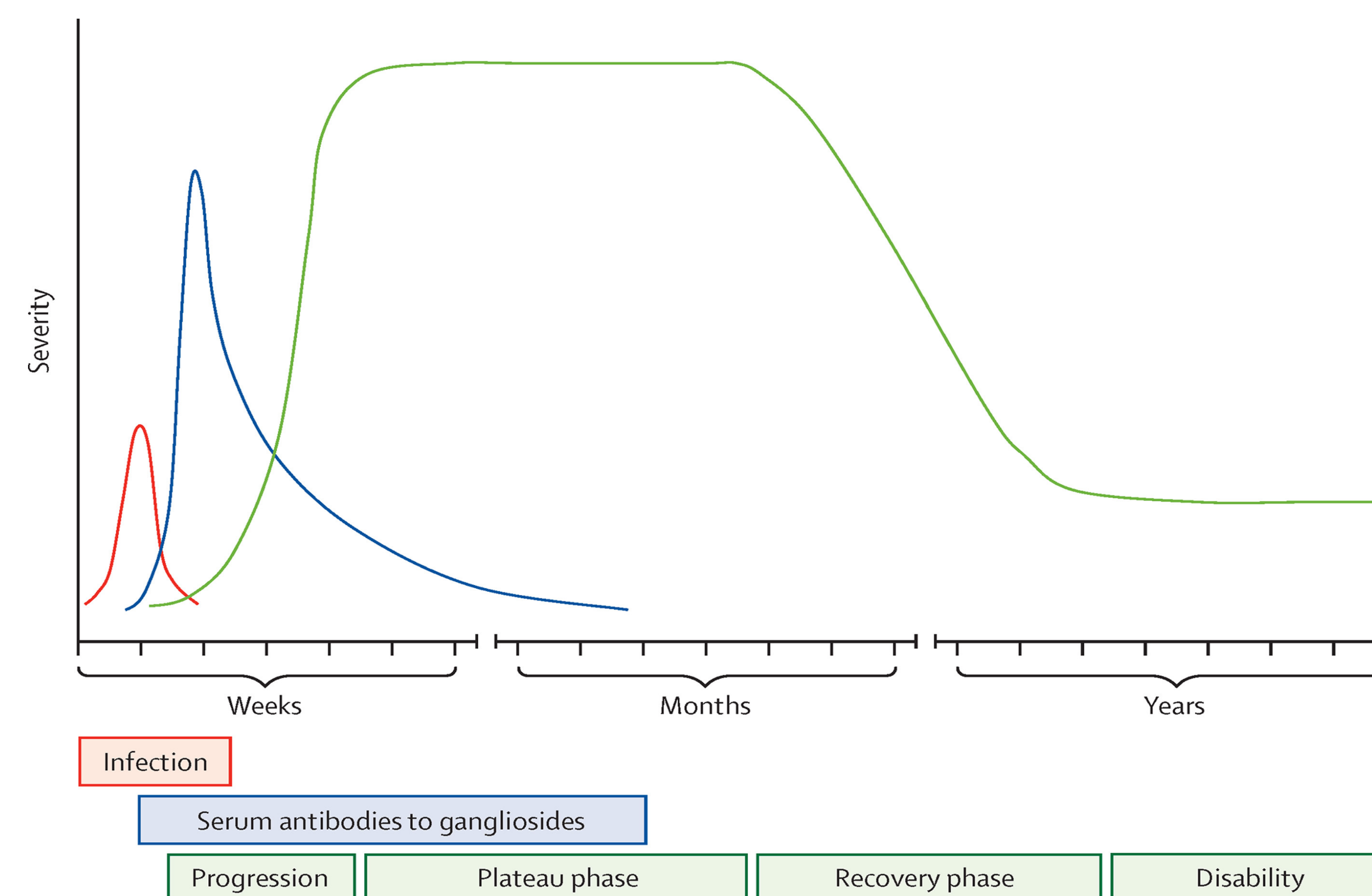
Case Report

Pertinent lab work

- CSF analysis: albuminocytologic dissociation with CSF protein 63.4mg/dl and cell count 8
- Ganglioside GM1 IgG elevated at 105
- West Nile Virus positive for IgG antibodies

Management

- Vital capacity and Negative Inspiratory force was monitored every 4 hours
- Six-day course of Intravenous Immunoglobulin (IVIG)
- Doxycycline 100 mg twice a day orally for potential tick-borne etiology



Discussion

- West Nile Virus (WNV) is a flavivirus transmitted primarily by mosquitoes and presents with neurological derangements
- Symptoms appear 2-15 days after the inciting event and include: fever, headache, chills, nausea, diarrhea, asymmetric flaccid paralysis, and non-pruritic, papular rash on trunk, arms or legs.
- 50% of GBS patients have cranial nerve involvement, most notably CN VII.
- WNV can cause GBS in 13% of cases
- MFS includes acute ophthalmoplegia, tingling, numbness in feet and/or hands, back pain, and loss of coordination of arms and legs.
- Our patient had...
 - weakness developing in a distal to proximal direction, with paresthesia noted on fingertips and toes
 - left-sided ptosis with no ocular muscle disturbances that improved over the course of the hospital stay.
- Why atypical?
 - Isolated unilateral ptosis without ophthalmoplegia has not been previously reported as a symptom of GBS
 - Our patient did not consume undercooked meats, which is a classic etiology of GBS
 - Our patient presented with MFS symptoms in varying degrees

Conclusion

- Our patient presented with mild GBS symptoms and atypical symptoms usually not seen in GBS.
- Consider MFS if a patient is positive for West Nile markers and presents with a series of neurologic symptoms that do not match any set criteria

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