



A Case of Guillain Barre Syndrome associated with COVID-19

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Introduction

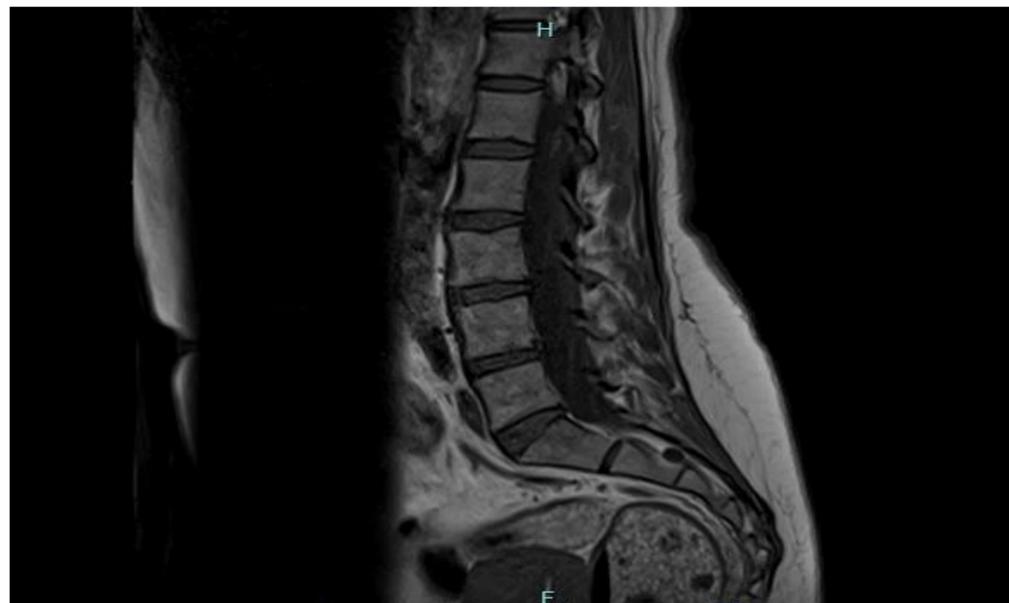
- More than 79 million US patients have been infected with COVID-19 infection with more than 2 million in New Jersey
- Guillain Barre Syndrome (GBS) is an inflammatory polyradiculoneuropathy associated with various viral infections and is characterized by progressive, ascending, symmetrical flaccid limbs paralysis, along with areflexia or hyporeflexia and with or without cranial nerve involvement. .

Case presentation

- A 55-year-old female with no significant medical history was admitted with bilateral lower extremity weakness and numbness for one week. She also reported pins and needles sensation associated with extreme fatigue.
- The patient tested positive for COVID-19 two weeks ago. She reported worsening weakness of the lower extremities to the point she could not ambulate. She denied prior history of such symptoms.
- Physical exam revealed motor strength 4/5 in upper extremities, 2/5 in lower extremities, paresthesia in the lower extremities and reflexes were also diminished.

Hospital Course/Treatment

- Blood work was unremarkable except for mild elevation of inflammatory markers and chest x-ray showed bibasilar opacities.
- Cerebrospinal fluid analysis was unremarkable including normal opening pressure. MRI of the cervical, thoracic, and lumbar spine was unremarkable.
- The patient was treated empirically with intravenous immunoglobulin, but she continued to have progressive weakness and later developed acute urinary retention requiring Foley catheter placement.
- MRI brain was unremarkable, however MRI lumbar plexus showed diffuse enhancement of the cauda equina throughout lumbar spine extending to sacral region, suspicious for GBS (Fig 1).
- She was then started on plasmapheresis with improvement in her neurologic findings.



Discussion

- Patients with GBS can develop autonomic dysfunction and neuromuscular respiratory failure requiring mechanical ventilation.
- GBS can be debilitating but 80% of the patients will be able to walk independently after recovery. It can cause severe motor impairment in around 10% of the patients.
- Clinicians should be suspicious of GBS in patients with recent COVID-19 infection presenting with new neurologic signs and symptoms as early treatment with immunomodulatory therapy with either intravenous immunoglobulins or plasma exchange can improve patient outcomes and can decrease morbidity and mortality associated with this disease.

References

1: Caress JB, Castoro RJ, Simmons Z, Scelsa SN, Lewis RA, Ahlawat A, Narayanaswami P. COVID-19-associated Guillain-Barré syndrome: The early pandemic experience. *Muscle Nerve*. 2020 Oct;62(4):485-491. doi: 10.1002/mus.27024.