

## COVID-19 and Neurologic Manifestations: An Experience at Major New York City Hospitals

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**Importance:** Several studies from various countries have already reported neurologic manifestations in Covid patients. However, the reported incidence had a wide variation from as high as 67% to as low as 4%. The volume of patients they studied varied from 40 pts to 840 patients. Since we had a much higher volume of 5,455 patients, we wanted to compare and contrast our findings with theirs. Secondly, we wanted to find out if there is a correlation between comorbidities and neurologic manifestations in patients with COVID-19.

**Objective:** This study aims to add to the current dearth of information examining the link between COVID-19 and neurological symptom manifestations. The second objective was to assess the impact of comorbidities on the incidence of neurologic manifestations in covid patients.

**Design:** A Retrospective analysis of 5,455 Electronic Medical records of patients admitted to four of the 11 teaching hospitals in the NYCHH (New York Health + Hospitals) between 3-1-2020 to 8-31-2020 with a confirmed COVID-19 diagnosis. Comprehensive data were collected using medical documentation in 5 categories: demographic details, comorbidities, symptoms, laboratory findings, and radiologic examinations. All neurologic manifestation keywords were provided to the statisticians by two trained and board-certified Physiatrists. Neurologic manifestations were categorized into central nervous system (CNS) manifestations and peripheral nervous system (PNS) manifestations.

**Results:** Of the 5,455 patients, 285 patients (5.2%) had central nervous system manifestations, a prevalence in people older than 50, and had a high incidence of comorbidities. We found that they also had significantly increased D-dimer levels, indicating a high inflammatory response and abnormal coagulation. Our findings agree with two of the three authors with significant case volume.

### Biography

Dr Subhadra Nori M.D, is a Clinical Professor Icahn school of Medicine at Mount Sinai, and the Regional Medical Director, for the Department of Physical Medicine and Rehabilitation (PM&R) at Queens Hospital and Elmhurst Hospitals.