

# **The Pattern of Neurological Disorders Requiring Hospitalization during The COVID-19 Era.**

## **Abstract**

### **Background**

Coronavirus was primarily discovered in December 2019, causing pneumonia and severe acute respiratory syndrome. It was reported several neurological symptoms associated with COVID-19. Both the central and peripheral nervous systems could be affected which might result in a higher mortality rate in hospitalized patients. This study

**aimed** to determine the spectrum of neurological clinical presentations among patients admitted to Fayoum University Hospital before, during, and after the COVID-19 era and to examine the influence of COVID-19 vaccines mandated by the Egyptian government on neurological disorders.

**Methods** This is a historical cohort study that was conducted on patients admitted to the Neurology Department at Fayoum University Hospital before, during, and after COVID-19 outbreaks from January 1st, 2018, to July 31, 2022. All participants had undergone thorough history taking and neurological examination and the necessary investigations according to the suspected diagnosis. All hospitalized patients during the COVID-19 pandemic were positive for the virus, as determined by either a positive rapid antigen test or a positive real-time reverse transcription polymerase chain reaction (RT-PCR).

**Results** It was shown that the patients hospitalized during the COVID-19 era were notably older, smokers, and diabetic in comparison to other groups. Cerebrovascular disorders were more prevalent in the COVID-19 pandemic. Surprisingly, compared to prior times, individuals with autoimmune-mediated neurological diseases had higher hospitalization rates than those with other neurological disorders. Patients who were not vaccinated reported more vascular complications than those who got them. However, patients who received vaccination exhibited significantly higher neurological complications as regards, exacerbation of paroxysmal disorders.

**Conclusion** It was concluded that the frequency of hospitalizations with cerebrovascular disorders and autoimmune-mediated illnesses was significantly influenced during the pandemic era. Although COVID-19 vaccinations have potential adverse effects, they have played a crucial role in preventing serious neurological problems.

**Keywords** COVID-19, Neurological presentations, Fayoum University Hospital

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