English: The pattern of neurological disorders requiring hospitalization era -COVID the during 19:Fayoum University Hospital, Egypt experience from an

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 afected 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 infuence 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 investiga-

tions 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 polymer-

ase chain reaction (RT-PCR).

Results It was shown that the patients hospitalized during the COVID-19 era were notably older, smokers, and dia-

betic 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 autoim-

mune-mediated illnesses was significantly infuenced during the pandemic era. Although COVID-19 vaccinations

have potential adverse efects, they have played a crucial role in preventing serious neurological problems.

Keywords COVID-19, Neurological presentations, Fayoum University Hospital

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