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Title of Thesis: **Impact of covid 19 era on neurological manifestations in Fayoum University Hospitals**

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Abstract

Corona virus caused a mysterious pneumonia in late 2019, COVID-19 infection had a variety of neurological manifestations, affecting central or peripheral nervous system. Also COVID-19 vaccines, were associated with neurological complications. But greatly affect risk of infection. This study aimed to determine spectrum of neurological presentations among patients admitted in Neurology Department of Fayoum University Hospitals before, during and after Covid-19 era. This was a historical cohort study, that was conducted on patients admitted at neurology department in Fayoum university hospitals from 2018 to July 2022. Data collected from records at Fayoum University Hospitals statistics department, based on COVID-19 suspicion and vaccination, the study population were sub divided into suspected, confirmed and non-COVID groups, in addition, into vaccinated and non-vaccinated and different neurological complications were compared among these groups.

Among cases of the study, there was significant increase in frequency of cases with different neurological complications during years of COVID-19 era including vascular complications (66%), autoimmune (71%), neuro-ophthalmological (72%) and neuro-paroxysmal complications (57%). Autoimmune neurological complications were the most to increase, there was increase of neuro-paroxysmal neurological complications. A significant worse prognosis of cases by COVID-19 infection (66%). As regards vaccination, there was significant increase in neurological complications except for vascular complications (41%), with no statistically significant difference between different vaccine types. Prognosis of vaccinated cases was better (52%) than non-vaccinated ones. D-dimer and lymphopenia were in a higher level among

COVID patients, D-dimer increase markedly in cases of cerebral venous sinus thrombosis with mean level 4.05 mg / L.