

COVID-19 und das Nervensystem

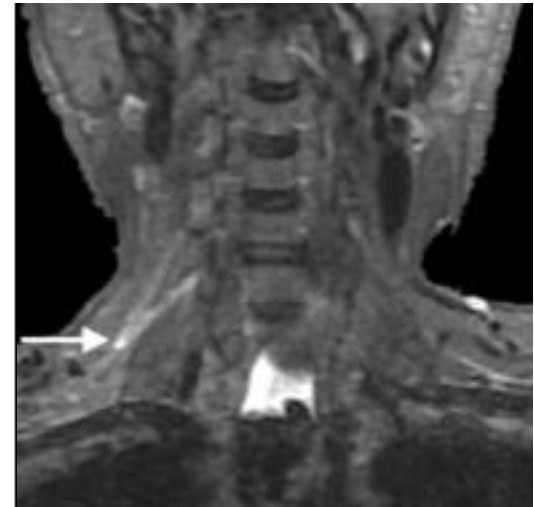
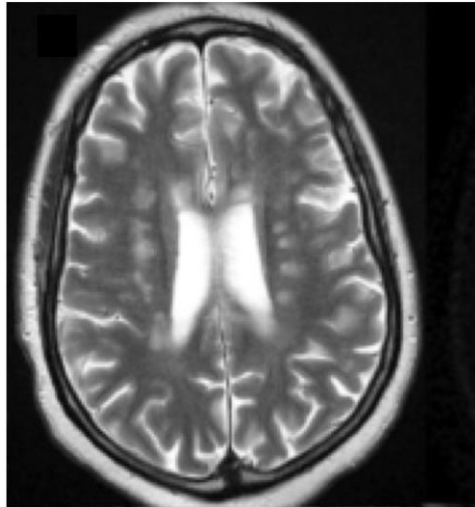
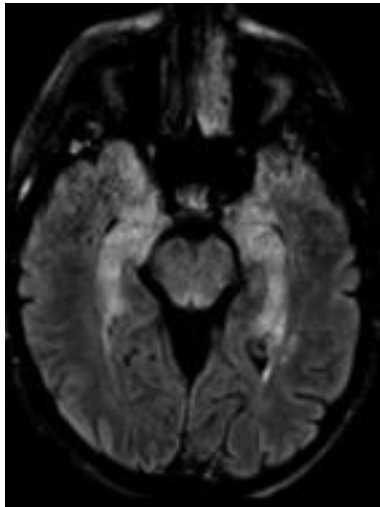
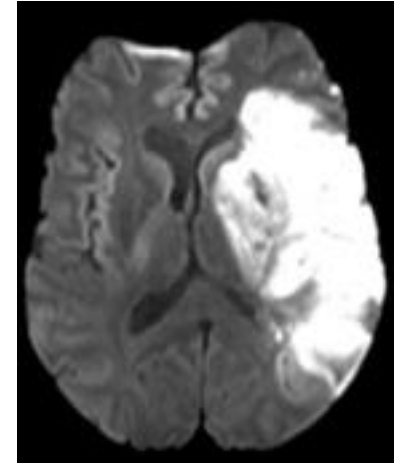
SIM 17.3.2022

Kantonsspital
Baselland

David Winkler

David.Winkler@ksbl.ch

The emerging spectrum of COVID-19 neurology: clinical, radiological and laboratory findings



Neurologische Manifestationen bei COVID-19 – Leitlinien für Diagnostik und Therapie in der Neurologie

Agitation und Delir

Epileptische Anfälle

Extrapyramidal-motorische Bewegungsstörungen

Fatigue

Kopfschmerz

Lähmungen

Myalgien

Neurokognitive Störungen

Rhabdomyolyse

Riechstörung/Anosmie

Akute disseminierte Enzephalomyelitis - ADEM

Critical-illness Myo- und Neuropathy

Enzephalitis

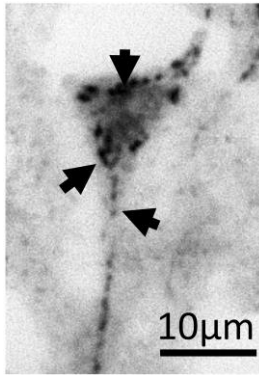
Enzephalopathie

Guillain-Barré-Syndrom - AIDP

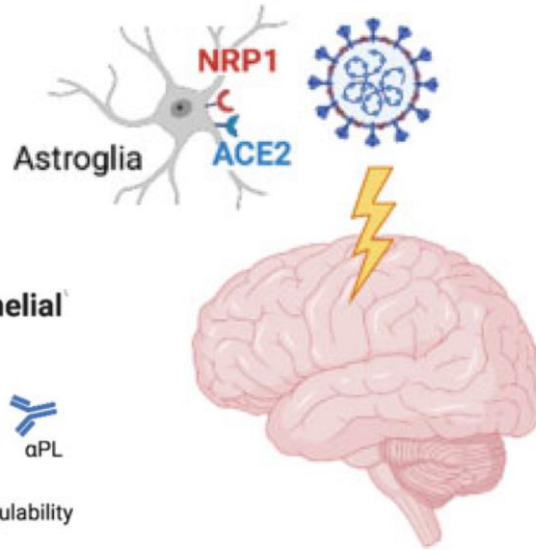
Intrazerebrale Blutungen

Ischämische Schlaganfälle

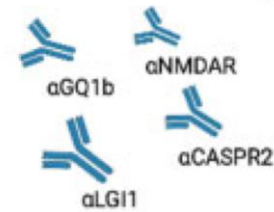
Nerven- und Muskelaaffektionen



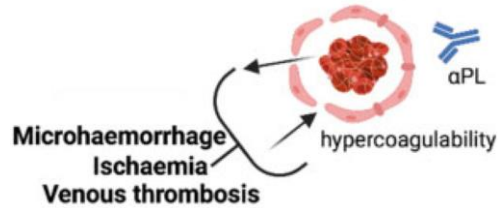
Viral entry



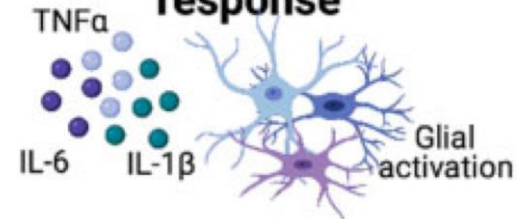
Autoimmunity



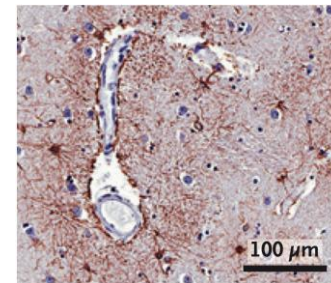
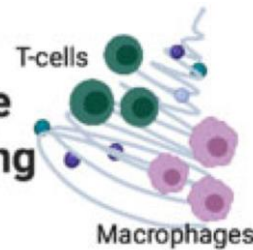
BBB/Endothelial injury

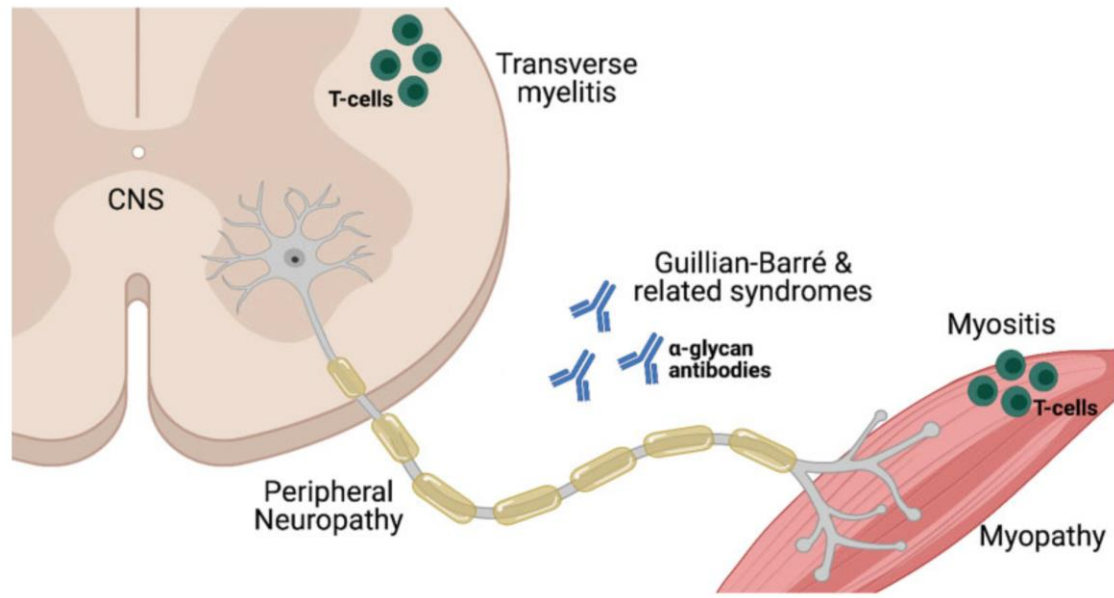


Innate neuroimmune response



Systemic immune response/infiltrating immune cells





Frequency of Neurologic Manifestations in COVID-19

A Systematic Review and Meta-analysis

Results

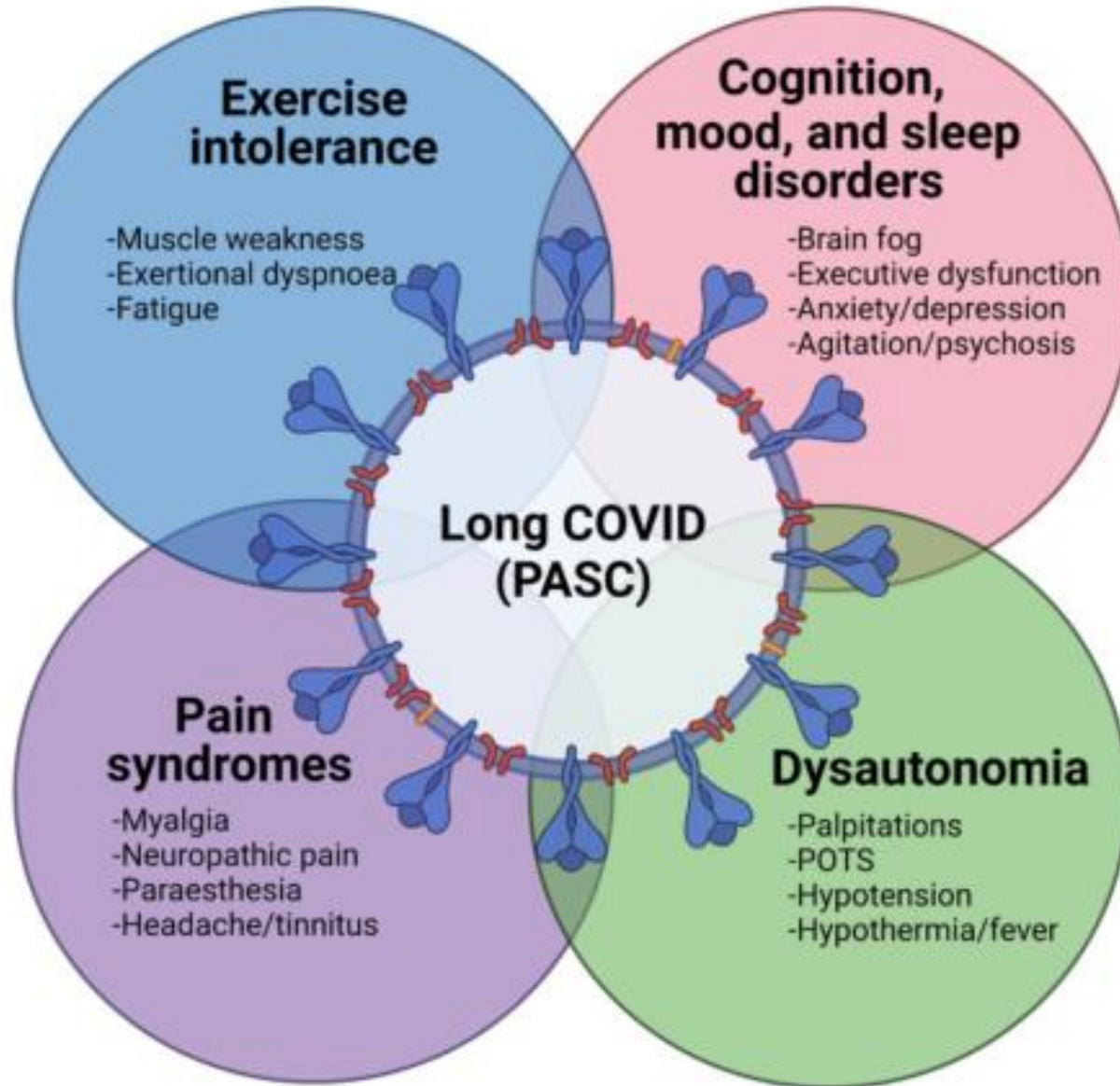
Of 2,455 citations, 350 studies were included in this review, providing data on 145,721 patients with COVID-19, 89% of whom were hospitalized. Forty-one neurologic manifestations (24 symptoms and 17 diagnoses) were identified. Pooled prevalence of the most common neurologic symptoms included fatigue (32%), myalgia (20%), taste impairment (21%), smell impairment (19%), and headache (13%). A low risk of bias was observed in 85% of studies; studies with higher risk of bias yielded higher prevalence estimates. Stroke was the most common neurologic diagnosis (pooled prevalence 2%). In patients with COVID-19 ≥ 60 years of age, the pooled prevalence of acute confusion/delirium was 34%, and the presence of any neurologic manifestations in this age group was associated with mortality (OR 1.80, 95% CI 1.11–2.91).

Discussion

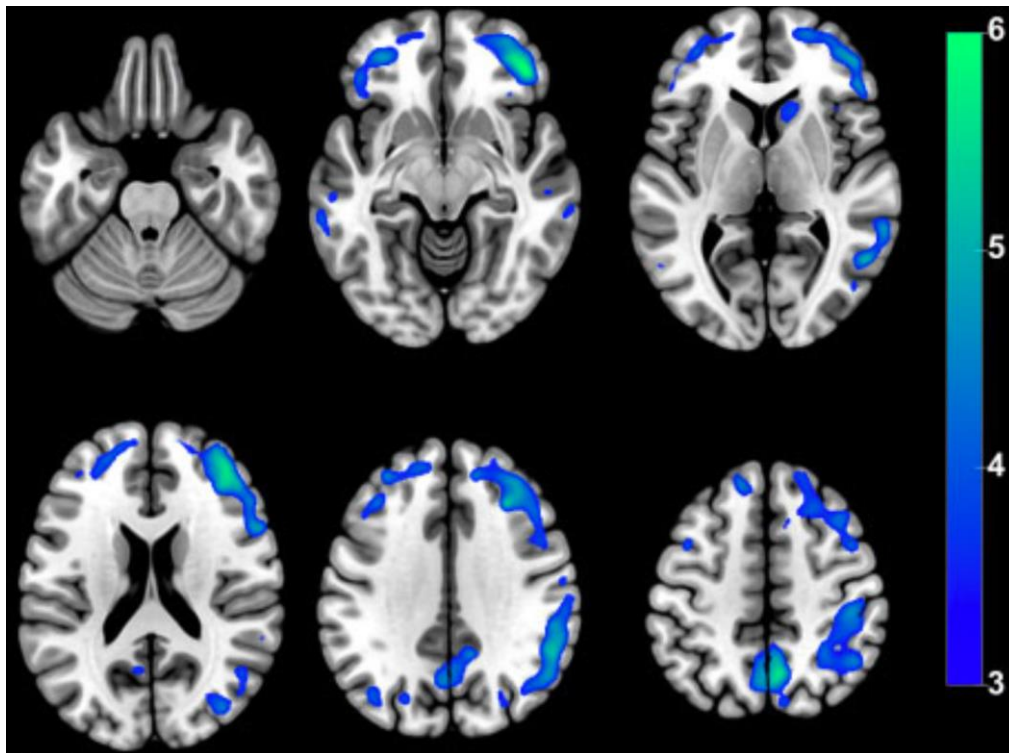
Up to one-third of patients with COVID-19 analyzed in this review experienced at least 1 neurologic manifestation.

Long COVID in a prospective cohort of home-isolated patients

Long-term complications after coronavirus disease 2019 (COVID-19) are common in hospitalized patients, but the spectrum of symptoms in milder cases needs further investigation. We conducted a long-term follow-up in a prospective cohort study of 312 patients—247 home-isolated and 65 hospitalized—comprising 82% of total cases in Bergen during the first pandemic wave in Norway. At 6 months, 61% (189/312) of all patients had persistent symptoms, which were independently associated with severity of initial illness, increased convalescent antibody titers and pre-existing chronic lung disease. We found that 52% (32/61) of home-isolated young adults, aged 16–30 years, had symptoms at 6 months, including loss of taste and/or smell (28%, 17/61), fatigue (21%, 13/61), dyspnea (13%, 8/61), impaired concentration (13%, 8/61) and memory problems (11%, 7/61). Our findings that young, home-isolated adults with mild COVID-19 are at risk of long-lasting dyspnea and cognitive symptoms highlight the importance of infection control measures, such as vaccination.



Cognitive impairment and altered cerebral glucose metabolism in the subacute stage of COVID-19



Δ Symptom onset: 18FDG PET (n = 15), 31.2 ± 13.9 days

Long COVID in a prospective cohort of home-isolated patients

Long-term complications after coronavirus disease 2019 (COVID-19) are common in hospitalized patients, but the spectrum of symptoms in milder cases needs further investigation. We conducted a long-term follow-up in a prospective cohort study of 312 patients—247 home-isolated and 65 hospitalized—comprising 82% of total cases in Bergen during the first pandemic wave in Norway. At 6 months, 61% (189/312) of all patients had persistent symptoms, which were independently associated with severity of initial illness, increased convalescent antibody titers and pre-existing chronic lung disease. We found that 52% (32/61) of home-isolated young adults, aged 16–30 years, had symptoms at 6 months, including loss of taste and/or smell (28%, 17/61), fatigue (21%, 13/61), dyspnea (13%, 8/61), impaired concentration (13%, 8/61) and memory problems (11%, 7/61). Our findings that young, home-isolated adults with mild COVID-19 are at risk of long-lasting dyspnea and cognitive symptoms highlight the importance of infection control measures, such as vaccination.