

SUPPLEMENTARY MATERIAL

Neuropsychologic deficits in two young post-COVID-19 patients

Vignette A: 33-year old female adipose patient with a history of asthma and migraine was admitted to the hospital with fever, myalgias and asthenia. A chest radiograph revealed infiltrations in the left lung. Two days earlier her nasopharyngeal swab had tested positive for COVID-19. While in the hospital she developed dyspnoea and a cough. Oxygen saturation dropped as low as 91% and the patient received oxygen therapy via a nasal cannula. After six days the patients' symptoms slowly improved, and she was discharged from the hospital. One month after the acute infection her physical capacity was markedly impaired, and the patient noticed cognitive impairments. For example, she had trouble helping her daughter with her 3rd grade homework. She reported memory gaps and that only with great mental effort she was able to resume her work. Neuropsychologic testing revealed deficits for alertness, divided attention with short-term memory and visual-spatial learning far below average. Neurological examination revealed no pathologic findings, brain MRI and lumbar puncture were normal. The patient described that after about two month the concentration difficulties slowly improved.

Vignette B: A 36-year old woman with a history of a heterozygous Factor-V-Leiden mutation, was admitted to the hospital with fever, cough, myalgias, diarrhoea and thoracic pain that was worsening with deep breathing. Three days earlier her nasopharyngeal swab had tested positive for COVID-19. Computed tomography revealed bipulmonary infiltrations but no signs of pulmonary artery embolism. As part of a clinical study (GS-US-540-5774) the patient was treated with remdesivir. Apart from a slight cough, clinical symptoms resolved the following weeks and the patient was discharged from the hospital after eight days. At home the patient noticed her attention and concentration was markedly impaired. She had trouble keeping up with the everyday life of her three children and would often forget recent conversations with her family. The patient reported severe fatigue, regularly waking up at 3 am, unable to go back to sleep. She experienced paraesthesia of her face and hyperesthesia of both her arms. Neurological examination further revealed hyperpathia of her hair follicular but no further pathologic findings. Brain MRI and lumbar puncture were normal.