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Worsening of neuropsychiatric symptoms after six months from the acute COVID-19 infection in 1183 subjects

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Background and aims
Little is known about the longitudinal evaluation after COVID-19 infection. Here, we longitudinally evaluated a large group of recovered patients to analyze the changes of systemic and neuropsychiatric symptoms.

Methods
We collected self-reported symptoms (twice) from 1183 patients (79% women, the median age of 41 years [range 12–77]) with confirmed COVID-19 diagnosis (1046 (88%) domiciliary treatment, 50 (4%) intensive care and 87 (7%) intensive treatments). We conducted a longitudinal analysis, comparing the proportion of symptoms between two interviews. The analyses were performed with in-house Python scripts.

Results
The median interval between diagnosis and the first interview (V1) was of 75 days [range 15–395]). The median interval between the V1 and second form filling (V2) was 101 days [range 30–261]. Only 9% reported being asymptomatic on V2. Between the V1 and V2, there was an increased proportion of self-reporting fatigue (49% to 55%), memory problems (43 to 55%), motor difficulties (10 to 33%), headache (30 to 42%), and insomnia (1 to 21%), anxiety (1 to 42%), depression (1 to 19%), cardiac problems (1 to 13%), and abnormal sexual desire (0 to 22%). Some symptoms remained stable: hyposmia (27%), dysgeusia (23%), and sleepiness (36%). There was a reduction of some symptoms, including musculoskeletal pain (7 to 1%) and shortness of breath (12 to 0%).

Conclusions
As expected, shortness of breath improved. However, this group of patients (mostly non-hospitalized) presented worsening neuropsychiatric symptoms. Multimodal investigation with neurophysiological tests and neuroimaging will help to clarify the neural substrates of these symptoms.

doi:10.1016/j.jns.2021.119919

Motor skills dysfunction and fatigue persist after mild infection by SARS-CoV-2

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Background and aims
Although neuropsychiatric manifestations have been reported after COVID-19, little is known about fine motor difficulties after mild infection. We evaluate fine motor impairment, fatigue, depression, anxiety and somnolence after COVID-19.

Methods
We applied the 9-hole peg and the “box and blocks” tests to fine motor skills; and Hanoi tower test to evaluate executive functions. Individuals answered the Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Chalder fatigue questionnaire (CFQ) and Epworth sleepiness Scale (ESS). We used SPSS26 with Mann-Whitney U-test to compare variables between groups and partial correlations to correlate the continuous variables.

Results
We evaluated 23 subjects recovered from COVID-19 (after 4 months from diagnosis) (16 women; median of 39 years) and 35 healthy controls (23 women; median 33 years) balanced for sex (p = 0.8), age (p = 0.3) and education (p = 0.6). COVID group presented excessive sleepiness (ESS, median 10 points (range 0–18)), and fatigue (CFQ, median 18 points (range 0–32)). Fatigue correlated with depression symptoms (r = 0.5; p = 0.018), with anxiety (r = 0.49; p = 0.021), and with sleepiness (r = 0.4; p = 0.06). COVID group was slower on the 9-Hole Peg Test for dominant (p = 0.004) and non-dominant hands (p = 0.002), and performed poorer on Box and blocks test (p = 0.047). They were slower on the Hanoi Tower test with 3 pieces (p = 0.04).

Conclusions
We identified persistent neurological symptoms (mainly fatigue and somnolence) motor slowness and difficulties in patients with mild infection and without hospital treatment. Fatigue associated with other neuropsychiatric symptoms. The longitudinal evaluation and neuroimaging correlations in a larger sample may clarify the duration of deficits and the associated cerebral abnormalities.

doi:10.1016/j.jns.2021.119920

Isolated lateral rectus palsy in a patient of post COVID mucormycosis

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Background and aims
The ongoing Covid-19 pandemic has led to a lot of deaths worldwide and has been responsible for major pulmonary as well as extra-pulmonary complications. Recently, mucormycosis has come up as an important epidemic in COVID recovered immunosuppressed patients in India. It has mainly been attributed to steroid use during COVID illness and particularly in diabetic individuals. While classical presentation includes headache, nasal crusting, orbital cellulitis and multiple cranial nerve deficits, varied unusual presentations are also witnessed. One such interesting case is discussed.

Methods
A 51 year old diabetic male underwent treatment for COVID-19 illness. After around 20 days of discharge from hospital, he developed complaint of diplopia. Examination revealed nasal crusting, mild tenderness over left cheek with left sided lateral rectus palsy with no other cranial nerve involvement.