#3125 Title: Novel Framework for Neurocognitive Covid-19 Assessment

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Background:

The neurotrophic effects of Covid-19 are becoming increasingly recognized, with altered mental state now being the second most common presenting complaint insert numbers. A key question is whether this has long term consequences. Cognitive problems are commonly reported in patients 3 months after acute infection as part of the so called 'Long-Covid' syndrome. However, the underlying cause is not well understood. Candidate explanations include legacy from encephalitis and stroke; however, other complications such as the sequelae, delirium, remain underexplored. Furthermore, little consideration has been given to functional cognitive disorders and the cognitive consequences of depression, anxiety and fatigue.

Aims: We propose a structured approach to clinical assessment for clinicians reviewing late cognitive complaints after COVID 19.

Methods: We created our own unique framework for neurocognitive Covid assessment based upon a review of the literature.

Results:

Covid status- Any positive test. If not review of core symptoms such as breathlessness, headache, anosmia, nasal obstruction, cough, myalgia, or gustatory dysfunction; duration, extent of exposure to Covid confirmed cases. Consider rapid antibody testing.
Neuropsychiatric history- Part 1 symptoms at onset- in particular disruptions of consciousness and altered mental state. Acute memory impairment,anterograde/retrograde and with/without a temporal gradient. neurocognitive function. ITU admission and oxygen requirements.

Part 2 Current cognitive and mental state- in addition to standard history seek evidence of internal inconsistency of memory symptoms and attentional dysregulation. Has social cognition and meta-cognition been affected. Note attribution bias ie no "I'm not depressed, I can't enjoy anything because of my symptoms"
Background history- subtle suggestion of neurodegeneration and depression, anxiety and functional symptoms should be explored.

MRI findings- signal changes in the medial temporal lobe, nonconfluent multifocal white matter hyperintense lesions, and isolated white matter microhemorrhages.
Novel biomarkers IL-6, MCP-1, and IP-10.

Conclusion:

Cognitive symptoms are common after confirmed and assumed COVID exposure. We propose a framework for neuropsychiatric assessment and the use of adjuvant imaging and potential biomarkers.