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1.Long-COVID: An Evolving Problem with An Extensive Impact

M Mendelson, J Nel, L Blumberg, et al. *S Afr Med J*. 2020 Nov 23;111(1):10-12.
doi: 10.7196/SAMJ.2020.v111i11.15433.

Abstract

Persistence of symptoms or development of new symptoms relating to SARS-CoV-2 infection late in the course of COVID-19 is an increasingly recognised problem facing the globally infected population and its health systems. 'Long-COVID' or 'COVID long-haulers' generally describes those persons with COVID-19 who experience symptoms for >28 days after diagnosis, whether laboratory confirmed or clinical. Symptoms are as markedly heterogeneous as seen in acute COVID-19 and may be constant, fluctuate, or appear and be replaced by symptoms relating to other systems with varying frequency. Such multisystem involvement requires a holistic approach to management of long-COVID, and descriptions of cohorts from low- and middle-income countries are eagerly awaited. Although many persons with long-COVID will be managed in primary care, others will require greater input from rehabilitation medicine experts. For both eventualities, planning is urgently required to ensure that the South African public health service is ready and able to respond.

2.6-month Consequences of COVID-19 in Patients Discharged from Hospital: A Cohort Study

Chaolin Huang , Lixue Huang , Yeming Wang et al *Lancet*. 2021 Jan 16;397(10270):220-232. doi: 10.1016/S0140-6736(20)32656-8.Epub 2021 Jan 8.

Abstract

Background: The long-term health consequences of COVID-19 remain largely unclear. The aim of this study was to describe the long-term health consequences of patients with COVID-19 who have been discharged from hospital and investigate the associated risk factors, in particular disease severity.

Methods: We did an ambidirectional cohort study of patients with confirmed COVID-19 who had been discharged from Jin Yin-tan Hospital (Wuhan, China) between Jan 7, 2020, and May 29, 2020. Patients who died before follow-up, patients for whom follow-up would be difficult because of psychotic disorders, dementia, or re-admission to hospital, those who were unable to move freely due to concomitant osteoarthropathy or immobile before or after discharge due to diseases such as stroke or pulmonary embolism, those who declined to participate, those who could not be contacted, and those living outside of Wuhan or in nursing or welfare homes were all excluded. All patients were interviewed with a series of questionnaires for evaluation of symptoms and health-related quality of life, underwent physical examinations and a 6-min walking test, and received blood tests. A stratified sampling procedure was used to sample patients according to their highest seven-category scale during their hospital stay as 3, 4, and 5-6, to receive pulmonary function test, high resolution CT of the chest, and ultrasonography. Enrolled patients who had participated in the Lopinavir Trial for Suppression of SARS-CoV-2 in China received severe acute respiratory syndrome coronavirus 2 antibody tests. Multivariable adjusted linear or logistic regression models were used to evaluate the association between disease severity and long-term health consequences.

Findings: In total, 1733 of 2469 discharged patients with COVID-19 were enrolled after 736 were excluded. Patients had a median age of 57·0 (IQR 47·0-65·0) years and 897 (52%) were men. The follow-up study was done from June 16, to Sept 3, 2020, and the median follow-up time after symptom onset was 186·0 (175·0-199·0) days. Fatigue or muscle weakness (63%, 1038 of 1655) and sleep difficulties (26%, 437 of 1655) were the most common symptoms. Anxiety or depression was reported among 23% (367 of 1617) of patients. The proportions of median 6-min walking

distance less than the lower limit of the normal range were 24% for those at severity scale 3, 22% for severity scale 4, and 29% for severity scale 5-6. The corresponding proportions of patients with diffusion impairment were 22% for severity scale 3, 29% for scale 4, and 56% for scale 5-6, and median CT scores were 3.0 (IQR 2.0-5.0) for severity scale 3, 4.0 (3.0-5.0) for scale 4, and 5.0 (4.0-6.0) for scale 5-6. After multivariable adjustment, patients showed an odds ratio (OR) 1.61 (95% CI 0.80-3.25) for scale 4 versus scale 3 and 4.60 (1.85-11.48) for scale 5-6 versus scale 3 for diffusion impairment; OR 0.88 (0.66-1.17) for scale 4 versus scale 3 and OR 1.77 (1.05-2.97) for scale 5-6 versus scale 3 for anxiety or depression, and OR 0.74 (0.58-0.96) for scale 4 versus scale 3 and 2.69 (1.46-4.96) for scale 5-6 versus scale 3 for fatigue or muscle weakness. Of 94 patients with blood antibodies tested at follow-up, the seropositivity (96.2% vs 58.5%) and median titres (19.0 vs 10.0) of the neutralising antibodies were significantly lower compared with at the acute phase. 107 of 822 participants without acute kidney injury and with estimated glomerular filtration rate (eGFR) 90 mL/min per 1.73 m² or more at acute phase had eGFR less than 90 mL/min per 1.73 m² at follow-up.

Interpretation: At 6 months after acute infection, COVID-19 survivors were mainly troubled with fatigue or muscle weakness, sleep difficulties, and anxiety or depression. Patients who were more severely ill during their hospital stay had more severe impaired pulmonary diffusion capacities and abnormal chest imaging manifestations, and are the main target population for intervention of long-term recovery.

Figures

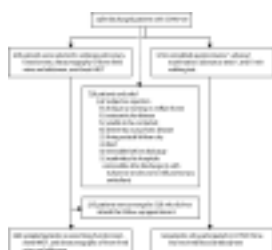


Figure 1

Flow chart of patients with...

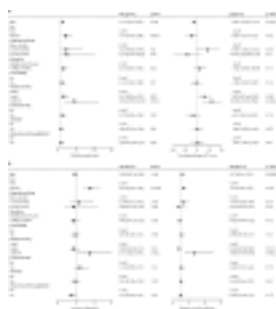


Figure 2

Risk factors associated with diffusion...

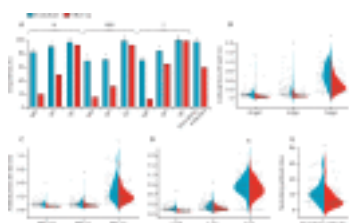


Figure 3

Temporal changes of seropositivity and...

3.'Long-COVID': A Cross-sectional Study of Persisting Symptoms, Biomarker and Imaging Abnormalities Following Hospitalisation for COVID-19

Keywords: respiratory infection; viral infection.

Swapna Mandal , Joseph Barnett , Simon E Brill et al. *Thorax*. 2021 Apr;76(4):396-398. doi: 10.1136/thoraxjnl-2020-215818. Epub 2020 Nov 10.

Abstract

Large numbers of people are being discharged from hospital following COVID-19 without assessment of recovery. In 384 patients (mean age 59.9 years; 62% male) followed a median 54 days post discharge, 53% reported persistent breathlessness, 34% cough and 69% fatigue. 14.6% had depression. In those discharged with elevated biomarkers, 30.1% and 9.5% had persistently elevated d-dimer and C reactive protein, respectively. 38% of chest radiographs remained abnormal with 9% deteriorating. Systematic follow-up after hospitalisation with COVID-19 identifies the trajectory of physical and psychological symptom burden, recovery of blood biomarkers and imaging which could be used to inform the need for rehabilitation and/or further investigation.

Figures

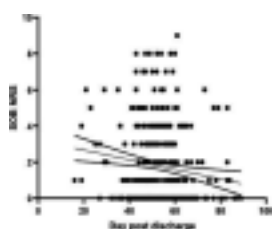


Figure 1

Patient reported breathlessness (0–10 scale)...

4. Case Report and Systematic Review Suggest that Children may Experience Similar Long-term Effects to Adults after Clinical COVID-19

Keywords: coronavirus; fatigue; heart problems; long COVID; pandemic; school attendance.

Jonas F Ludvigsson. *Acta Paediatr.* 2021 Mar;110(3):914-921. doi: 10.1111/apa.15673. Epub 2020 Dec 3.

Abstract

Aim: Persistent symptoms in adults after COVID-19 are emerging and the term long COVID is increasingly appearing in the literature. However, paediatric data are scarce.

Methods: This paper contains a case report of five Swedish children and the long-term symptoms reported by their parents. It also includes a systematic literature review of the MEDLINE, EMBASE and Web of Science databases and the medRxiv/bioRxiv pre-print servers up to 2 November 2020.

Results: The five children with potential long COVID had a median age of 12 years (range 9-15) and four were girls. They had symptoms for 6-8 months after their clinical diagnoses of COVID-19. None were hospitalised at diagnosis, but one was later admitted for peri-myocarditis. All five children had fatigue, dyspnoea, heart palpitations or chest pain, and four had headaches, difficulties concentrating, muscle weakness, dizziness and sore throats. Some had improved after 6-8 months, but they all suffered from fatigue and none had fully returned to school. The systematic review identified 179 publications and 19 of these were deemed relevant and read in detail. None contained any information on long COVID in children.

Conclusion: Children may experience similar long COVID symptoms to adults and females may be more affected.

5. Long COVID-19: Challenges in the Diagnosis and Proposed Diagnostic Criteria

A.V. Raveendran *Diabetes Metab Syndr.* 2021 January-February; 15(1): 145–146. Published online 2020 Dec 15. doi: 10.1016/j.dsx.2020.12.025

Reports from various parts of the world show that significant proportion of people who recovered from COVID-19 suffers from various health issues which are collectively called “long COVID-19” or post COVID-19 syndrome. The common symptoms include fatigue, breathlessness, cough, joint pain, chest pain, muscle aches, headaches and so on. Even though collectively called long COVID-19, researchers identified that it is a collection of at least 4 distinct clinical entities which are post-intensive care syndrome,

post-viral fatigue syndrome, permanent organ damage, and long-term COVID-19 syndrome [1]. In our experience in addition to these we identified that drug related side effects, complications of COVID-19 (like pneumothorax, pneumomediastinum, vascular thrombosis leading to pulmonary thromboembolism, myocardial infarction, stroke etc), post-COVID-19 psychological issues and other infections (bacterial, other viral, fungal or re-infection with SARS-CoV-2 itself) can also cause similar symptoms in COVID-19 recovered patients. Careful evaluation to rule out causes unrelated to COVID-19 is important to offer correct treatment.

In people infected with SARS-CoV-2, 80% of infections are mild or asymptomatic, 15% are severe infection and 5% are critical infections [2]. Usually in people with mild disease symptoms resolve within 2 weeks, where as in severe illness it may persist for 3–6 weeks [3]. Presence of long COVID-19 challenges the assumption that “mild” disease recover within 2 weeks [4].

There are lots of challenges in the diagnosis of long COVID-19. Those who had history of typical symptoms of acute COVID-19 with positive throat swab RT-PCR, presenting with long duration symptoms, the diagnosis of long COVID is straight forward. But those with acute COVID-19 symptoms and negative throat swab RT-PCR, presenting with long symptoms pose real challenge in day to day clinical practice. Significant proportions of SARS-CoV-2 infected individuals are asymptomatic. And development of long COVID-19 symptoms in those asymptomatic individuals adds to the diagnostic confusion. Similarly the duration of acute symptoms vary in patients again adding confusion to differentiate acute COVID-19 from long COVID-19. Based on our experience and after reviewing relevant literature, we are proposing criteria for the diagnosis of long COVID-19 ([Table 1](#)).....

6. Persistent Symptoms after Covid-19: Qualitative Study of 114 "Long Covid" Patients and Draft Quality Principles for Services

Keywords: Chronic Covid-19; Long Covid; Post-acute Covid-19; Qualitative study; Quality standards.

Emma Ladds, Alex Rushforth, Sietse Wieringa et al. *BMC Health Serv Res.* 2020 Dec 20;20(1):1144. doi: 10.1186/s12913-020-06001-y.

Abstract

Background: Approximately 10% of patients with Covid-19 experience symptoms beyond 3-4 weeks. Patients call this "long Covid". We sought to document such patients' lived experience, including accessing and receiving healthcare and ideas for improving services.

Methods: We held 55 individual interviews and 8 focus groups (n = 59) with people recruited from UK-based long Covid patient support groups, social media and snowballing. We restricted some focus groups to health professionals since they had already self-organised into online communities. Participants were invited to tell their stories and comment on others' stories. Data were audiotaped, transcribed, anonymised and coded using NVIVO. Analysis incorporated sociological theories of illness, healing, peer support, clinical relationships, access, and service redesign.

Results: Of 114 participants aged 27-73 years, 80 were female. Eighty-four were White British, 13 Asian, 8 White Other, 5 Black, and 4 mixed ethnicity. Thirty-two were doctors and 19 other health professionals. Thirty-one had attended hospital, of whom 8 had been admitted. Analysis revealed a confusing illness with many, varied and often relapsing-remitting symptoms and uncertain prognosis; a heavy sense of loss and stigma; difficulty accessing and navigating services; difficulty being taken seriously and achieving a diagnosis; disjointed and siloed care (including inability to access specialist services); variation in standards (e.g. inconsistent criteria for seeing, investigating and referring patients); variable quality of the therapeutic relationship (some participants felt well supported while others felt "fobbed off"); and possible critical events (e.g. deterioration after being unable to access services). Emotionally significant aspects of participants' experiences informed ideas for improving services.

Conclusion: Suggested quality principles for a long Covid service include ensuring access to care, reducing burden of illness, taking clinical responsibility and providing

continuity of care, multi-disciplinary rehabilitation, evidence-based investigation and management, and further development of the knowledge base and clinical services.

7. Progress of Traditional Chinese Medicine Treating COVID-19

Keyword : Chinese patent medicines; coronavirus disease 2019; decoctions; traditional Chinese medicine;

Ming-Xue Li Yue-Ying Yang Yang Liu et al. World Journal of Traditional Chinese Medicine 2021 year 02 issue ISSN : 2311-8571

Abstract:

The new coronavirus pneumonia (coronavirus disease 2019 [COVID-19]), caused by the new coronavirus (severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]), mainly manifests by fever, dry cough, and fatigue. The emergence of SARS-CoV-2 poses a huge threat to people's lives. Unfortunately, so far, there are no effective treatment drugs and vaccines. Traditional Chinese medicine (TCM) has played an important role and achieved good results for treating this epidemic. More than 85% of patients wi... More

8. Prevention and Treatment of Covid-19 Using Traditional Chinese Medicine : A Review

Keywords: COVID-19; Novel coronavirus pneumonia; Progress; Traditional Chinese Medicine.

Zhenyu Zhao, Yanda Li, Liangyun Zhou et al. *Review Phytomedicine*. 2021 May;85:153308. doi: 10.1016/j.phymed.2020.153308. Epub 2020 Aug 20.

Abstract

Background: A novel coronavirus (SARS-CoV2) outbreak in more than 200 countries recently caused viral pneumonia that was extremely infectious and pathogenic. The Chinese government proposes that both Traditional Chinese medicine (TCM) and Western medicine can be used in combination to treat pneumonia caused by SARS-CoV2, and TCM effectively provides continuous prevention and treatment.

Methods: The present review analyzes and summarizes the prevention and treatment of the novel coronavirus disease (COVID-19) with TCM. A classified analysis of the efficacy and advantages of TCM for the prevention and treatment of COVID-19 was performed, and the mechanisms of TCM in treating COVID-19 are summarized.

Results: TCM is effective in preventing COVID-19, and medical staff can prevent an iatrogenic infection by taking a decoction made based on the principles of TCM. As of March 13, 2020, new cases of COVID-19 in China have decreased in number to single digits. TCM's curative effect was outstanding, with a national participation rate of over 90%. More than 70,000 people were cured of COVID-19 and discharged from the hospital. Only approximately 10,000 patients are currently being treated, and the total treatment time is approximately 2 months.

Conclusions: TCM is currently the best choice for the treatment and prevention of COVID-19, and it is expected that it will be promoted by countries around the world.

9.Rehabilitation of Patients with COVID-19

Keywords: COVID-19; critically ill patients; physiotherapy; rehabilitation; respiratory rehabilitation.

Tiantian Sun ,Liyun Guo ,Fei Tian et al. Expert Rev Respir Med. 2020 Dec;14(12):1249-1256. doi: 10.1080/17476348.2020.1811687. Epub 2020 Oct 12.

Abstract

Introduction: In 2020, due to severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), coronavirus disease (COVID-19) has become a pandemic. As of 11 August 2020, the cumulative number of confirmed cases worldwide had reached 19 million, with 700,000 reported deaths, indicating this pandemic's significant global impact.

Areas covered: We reviewed the application of rehabilitation therapy in the clinical treatment of COVID-19 patients. A systematic search was performed using PubMed, Springer, CNKI, and Wanfang Data of database up to 1 August 2020. The search terms included the English terms and their Chinese equivalents: 'COVID-19,' 'ARDS,' 'rehabilitation,' 'critically ill patients,' 'physiotherapy,' 'respiratory rehabilitation,' 'traditional Chinese medicine,' and 'psychotherapy.'

Expert opinion: Rehabilitation research concerning patients with COVID-19 remains ongoing. Rehabilitation guidance for such patients with COVID-19 is based on previous experience. However, as different patients have differing degrees of dysfunction, personalized plans need to be designed according to the patients' age, sex, lifestyle, hobbies, occupation, and physical conditions. The rapid development of remote devices that can monitor patients' real-time physical conditions post-discharge may encourage better adherence to rehabilitation training.

