Long-COVID Update #3

06 January 2022

Welcome to the second edition of the Long-Covid Update. The aim of this publication is to bring together a range of recently-published research and guidance that will help you make evidence based decisions.

Accessing Articles

The following abstracts are taken from a selection of recently published articles.
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Please contact Holly if you would like more information, or further evidence searches: holly.cook3@nhs.net.

A selection of papers from Medline, Embase and CINHAL from the past 6 months. The most recent is displayed first.

1. An Evolving Approach to Assessing Cardiorespiratory Fitness, Muscle Function and Bone and Joint Health in the COVID-19 Era.

2. Post-acute COVID-19 syndrome (PCS) and health-related quality of life (HRQoL)-A systematic review and meta-analysis

3. Effectiveness of a web-based cognitive rehabilitation program for individuals with long COVID syndrome

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8. Long covid: research must guide future management.

9. Covid-19: Long covid symptoms among hospital inpatients show little improvement after a year, data suggest.

10. Global surveillance, research, and collaboration needed to improve understanding and management of long COVID.

11. Six-month follow-up of functional status in discharged patients with coronavirus disease 2019.

12. Rehabilitative management of post-acute COVID-19: clinical pictures and outcomes.

13. Activity Measure for Post-Acute Care "6-Clicks" for the Prediction of Short-term Clinical Outcomes in Individuals Hospitalized With COVID-19: A Retrospective Cohort Study.

14. Inpatient Rehabilitation Outcomes After Severe COVID-19 Infections: A Retrospective Cohort Study.

15. Assessing the Acceptability of a Co-Produced Long COVID Intervention in an Underserved Community in the UK.

16. Prevalence and impact of COVID-19 sequelae on treatment and survival of patients with cancer who recovered from SARS-CoV-2 infection: evidence from the OnCovid retrospective, multicentre registry study.

17. Long COVID a new derivative in the chaos of SARS-CoV-2 infection: The emergent pandemic?

18. A model framework for projecting the prevalence and impact of Long-COVID in the UK

19. Persistent clotting protein pathology in Long COVID/Post-Acute Sequelae of COVID-19 (PASC) is accompanied by increased levels of antiplasmin

20. Prevalence and predictors of Post-Acute COVID-19 Syndrome (PACS) after hospital discharge: A cohort study with 4 months median follow-up

21. Navigating the social identity of long covid.

22. Long covid: new wine in need of new bottles.

23. Long-Term Evolution of Malnutrition and Loss of Muscle Strength after COVID-19: A Major and Neglected Component of Long COVID-19.

24. Long COVID: Does It Exist? What Is It? We Can We Do For Sufferers?

25. Recommendations for the recognition, diagnosis, and management of long COVID: a Delphi study.

26. Post-extubation dysphagia and dysphonia amongst adults with COVID-19 in the Republic of Ireland: A prospective multi-site observational cohort study.

27. Care models for long COVID: A rapid systematic review

28. Global prevalence of post-acute sequelae of COVID-19 (PASC) or long COVID: A meta-analysis and systematic review

29. Hyperbaric oxygen therapy for the treatment of long COVID: early evaluation of a highly promising intervention

30. Kidney outcomes in long COVID

31. Long-COVID syndrome associated with COVID-19 pneumonia

32. Clinical coding of long COVID in English primary care: a federated analysis of 58 million patient records in situ using OpenSAFELY

33. Supporting patients with long COVID return to work

34. The health system response to long COVID in England at a critical juncture

35. A mixed-methods systematic review of postviral fatigue interventions: Are there lessons for long Covid?

36. Cardiovascular abnormalities and mental health difficulties result in a reduced quality of life in the post-acute covid-19 syndrome

37. Characterizing non-critically ill COVID-19 survivors with and without in-hospital rehabilitation.

38. Building back better: Imagining an occupational therapy for a post-COVID-19 world.

39. 'I Live a Kind of Shadow Life': Individual Experiences of COVID-19 Recovery and the Impact on Physical Activity Levels.

40. The impact of Post-COVID-Syndrome on functioning - results from a community survey in patients after mild and moderate SARS-CoV-2-infections in Germany.

41. Is tele-rehabilitation superior to home exercise program in COVID-19 survivors following discharge from intensive care unit? - A study protocol of a randomized controlled trial.

42. Community-Based Primary Care Management of 'Long COVID': A Center of Excellence Model at NYC Health + Hospitals.

43. Long COVID-19: Implications for Acute and Community Nursing Care.

44. Pericarditis after sars-cov-2 infection: Another pebble in the mosaic of long covid?

45. Long COVID among people with MS: A prospective and longitudinal observational study of the UK MS Register

46. Evaluation of liver alterations in patients with post-acute covid-19 syndrome-a pilot study

47. Covid-19: Long covid must be recognised as occupational disease, says BMA.

48. Long covid: One in seven children may still have symptoms 15 weeks after infection, data show.

49. Understanding the burden of interstitial lung disease post-COVID-19: the UK Interstitial Lung Disease-Long COVID Study (UKILD-Long COVID).

50. Patients' Experiences of "Long COVID" in the Community and Recommendations for Improving Services: A Quality Improvement Survey.

51. Assessment of overactive bladder symptoms in deconditioned patients recovering from post-acute COVID-19 syndrome

52. Future Challenges for Physical Therapy during and after the COVID-19 Pandemic: A Qualitative Study on the Experience of Physical Therapists in Spain.

53. 1-year outcomes in hospital survivors with COVID-19: a longitudinal cohort study.

54. Long covid clinics should be run as research hubs.

55. Risk-factors for re-admission and outcome of patients hospitalized with confirmed COVID-19.

56. Preexisting cardiorespiratory comorbidity does not preclude the success of multidisciplinary rehabilitation in post-COVID-19 patients.

57. Diaphragm dysfunction in severe COVID-19 as determined by neuromuscular ultrasound.

58. Characterizing "long-COVID" using real world data: Post-discharge clinical course among patients initially hospitalized for COVID-19

59. Long COVID and the mental and physical health of children and young people: National matched cohort study protocol (the CLoCk study)

60. Swiss Recommendations for the Follow-Up and Treatment of Pulmonary Long COVID

61. Role of the renin-angiotensin-aldosterone and kinin-kallikrein systems in the cardiovascular complications of COVID-19 and long COVID

62. Persistent Symptoms and Disability After COVID-19 Hospitalization: Data From a Comprehensive Telerehabilitation Program.

63. Return-to-work, disabilities and occupational health in the age of COVID-19.

64. A Global Overview of COVID-19 Research in the Pediatric Field: Bibliometric Review.

65. Long covid-mechanisms, risk factors, and management.

66. Long-term Symptoms After SARS-CoV-2 Infection in Children and Adolescents.

67. Covid-19: Long covid cases are underreported in GP records, research suggests.

68. The road to addressing Long Covid.

69. Interventions for the treatment of persistent post-COVID-19 olfactory dysfunction.

70. Dynamic changes of functional fitness, antibodies to SARS-CoV-2 and immunological indicators within 1 year after discharge in Chinese health care workers with severe COVID-19: a cohort study.

71. Use of the Barthel Index to Assess Activities of Daily Living before and after SARS-COVID 19 Infection of Institutionalized Nursing Home Patients.

72. Follow-up of functional exercise capacity in patients with COVID-19: It is improved by telerehabilitation.

73. Serum Metabolic Profile in Patients With Long-Covid (PASC) Syndrome: Clinical Implications

74. Long COVID - metabolic risk factors and novel therapeutic management

75. Outcomes of a COVID-19 recovery program for patients hospitalized with SARS-CoV-2 infection in New York City: A prospective cohort study.

76. Swallowing and Voice Outcomes in Patients Hospitalized With COVID-19: An Observational Cohort Study.

77. Patient commentary: How power imbalances in the narratives, research, and publications around long covid can harm patients.

78. Covid-19: Third of people infected have long term symptoms.

79. Chronic fatigue syndrome and long covid: moving beyond the controversy.

80. Safety and efficacy of Ayurvedic interventions and Yoga on long term effects of COVID-19: A structured summary of a study protocol for a randomized controlled trial.

81. The Impact of Post-COVID-19 Syndrome on Self-Reported Physical Activity.

82. Long COVID or Post-acute Sequelae of COVID-19 (PASC): An Overview of Biological Factors That May Contribute to Persistent Symptoms

Full strategy

1. An Evolving Approach to Assessing Cardiorespiratory Fitness, Muscle Function and Bone and Joint Health in the COVID-19 Era.

Author(s): Arena, Ross; Myers, Jonathan; Ozemek, Cemal; Hall, Grenita; Severin, Richard; Laddu, Deepika; Kaminsky, Leonard A; Stoner, Lee; Conners, Ryan T; Faghy, Mark A; HL-PIVOT Network

Source: Current problems in cardiology; Jan 2022; vol. 47 (no. 1); p. 100879

Publication Date: Jan 2022

Publication Type(s): Review Journal Article

PubMedID: 34103194

Available at Current problems in cardiology - from Unpaywall

Abstract: Cardiorespiratory fitness (CRF) is now an established vital sign. CRF, along with muscle function and bone and joint health is related to functional independence and a higher quality of life. Wasserman and colleagues proposed a gear model illustrating the integrated role of the respiratory, cardiovascular, and skeletal muscle systems during aerobic exercise; in 2015, a revision to the original model was proposed. Our understanding of the effects and challenges associated with the coronavirus disease 2019 (COVID-19) are rapidly evolving. Initial evidence indicates higher levels of CRF, and muscle function protect individuals infected with COVID-19 from a complicated medical course. Moreover, for those individuals infected with COVID-19, there are initial signs of a reduction in CRF following the initial phase of recovery. We are also gaining an understanding of long COVID syndrome, where individuals who have recovered from the acute phase of viral infection present with lasting symptoms, which include but are not limited to reduced CRF, shortness of breath, and fatigue. Clearly, these individuals will require rehabilitation to restore and/or improve CRF, muscle function, bone and joint health, functional capacity (ie, the ability to perform activities of daily living), and quality of life. The importance of assessing the synergistic function of systems essential to performing activities that require physical exertion is a health care imperative. This graphical narrative provides an update to the gear model initially proposed by Wasserman and updated to a gear and circuit in 2015. External CRF, muscle function, and bone and joint health influencers and an approach to clinical assessment are also introduced.

Database: Medline

2. Post-acute COVID-19 syndrome (PCS) and health-related quality of life (HRQoL)-A systematic review and meta-analysis

Author(s): Malik P.; Pinto C.; Patel U.; Patel K.; Jaiswal R.; Tirupathi R.; Pillai S.

Source: Journal of Medical Virology; Jan 2022; vol. 94 (no. 1); p. 253-262

Publication Date: Jan 2022

Publication Type(s): Article

PubMedID: 34463956

Available at Journal of medical virology - from Wiley Online Library

Abstract: There is an established literature on the symptoms and complications of COVID-19 but the after-effects of COVID-19 are not well understood with few studies reporting persistent symptoms and quality of life. We aim to evaluate the pooled prevalence of poor quality of life in post-acute COVID-19 syndrome (PCS) and conducted meta-regression to evaluate the effects of persistent symptoms and intensive care unit (ICU) admission on the poor quality of life. We extracted data from observational studies describing persistent symptoms and quality of life in post-COVID-19 patients from March 10, 2020, to March 10, 2021, following PRISMA guidelines with a consensus of two independent reviewers. We calculated the pooled prevalence with 95% confidence interval (CI) and created forest plots using random-effects models. A total of 12 studies with 4828 PCS patients were included. We found that amongst PCS patients, the pooled prevalence of poor quality of life (EQ-VAS) was (59%; 95% CI: 42%-75%). Based on individual factors in the EQ-5D-5L questionnaire, the prevalence of mobility was (36, 10-67), personal care (8, 1-21), usual quality (28, 2-65), pain/discomfort (42, 28-55), and anxiety/depression (38, 19-58). The prevalence of persistent symptoms was fatigue (64, 54-73), dyspnea (39.5, 20-60), anosmia (20, 15-24), arthralgia (24.3, 14-36), headache (21, 3-47), sleep disturbances (47, 7-89), and mental health (14.5, 4-29). Meta-regression analysis showed

the poor quality of life was significantly higher among post-COVID-19 patients with ICU admission (p = 0.004) and fatigue (p = 0.0015). Our study concludes that PCS is associated with poor quality of life, persistent symptoms including fatigue, dyspnea, anosmia, sleep disturbances, and worse mental health. This suggests that we need more research on PCS patients to understand the risk factors causing it and eventually leading to poor quality of life.

Database: EMBASE

3. Effectiveness of a web-based cognitive rehabilitation program for individuals with long COVID syndrome

Author(s): Rozanski G.M.; Ren I.; Sastre C.; Iverson B.; Tabacof L.; Putrino D.; Cortes M.

Source: PM and R; 2021; vol. 13

Publication Date: 2021

Publication Type(s): Conference Abstract

Abstract:

Objective: To investigate the effects of an online rehabilitation program (NeuronUp) in participants who experienced cognitive dysfunction after Covid19.

Design(s): Adopter versus non-adopter (control group) analysis of prospective pre-post study.

Setting(s): Hospital research center affiliated with postacute Covid19 care clinic.

Participant(s): 58 subjects (27% male, mean age 48 years old) with cognitive impairment (20% mild, 41% moderate, 23% severe) following Covid19 infection were enrolled.

Intervention(s): Subjects received access to NeuronUp sessions for improving memory, attention, language and executive function (30 minutes duration, 3 times weekly for 8 weeks).

Main Outcome Measure(s): Quality of Life in Neurological Disorders Short Form v2.0 - Cognitive Function (NeuroQoL-CF, primary outcome), General Anxiety Disorder-7, Fatigue Severity Scale, EuroQoL EQ-5D- 5L (usual activities dimension).

Result(s): There were 39 individuals who participated in the NeuronUp program (adopters, median sessions started = 3/24). Adopters reported fatigue associated with Covid19 infection at a higher frequency (33/38 versus 9/16, p=0.014) and had significantly worse cognitive impairment at pre and post-intervention compared to the non-adopter group (NeuroQoL-CF mean +/- SD; 19.1 +/- 5.7 versus 22.6 +/- 5.1, p = 0.026 and 20.2 +/- 6.7 versus 23.9 +/- 6.7, p = 0.048). Subjects who had lower cognitive function participated in more NeuronUp sessions; however, there was no significant difference between the groups in NeuroQoL-CF change over the study period. Global fatigue worsened for adopters, who reported higher fatigue severity and more difficulty with usual activities than controls postintervention.

Conclusion(s): Level of participation in the NeuronUp program was higher for subjects with more impairment. This online intervention did not effectively improve self-reported cognitive function and other symptoms. Fatigue may be a determining factor for the effectiveness and optimal timing of cognitive rehabilitation programs delivered to individuals after Covid19.

Database: EMBASE

4. The conundrum of 'long-covid-19: A narrative review

Author(s): Garg M.; Maralakunte M.; Bhatia V.; Sandhu M.S.; Garg S.; Dhooria S.; Sehgal I.; Agarwal R.; Bhalla A.S.; Vijayvergiya R.; Grover S.; Jagia P.; Bhalla A.; Suri V.; Goyal M.; Puri G.D.

Source: International Journal of General Medicine; 2021; vol. 14 ; p. 2491-2506

Publication Date: 2021

Publication Type(s): Review

Available at International Journal of General Medicine - from Europe PubMed Central - Open Access

Abstract: COVID-19 is an ongoing pandemic with many challenges that are now extending to its intriguing long-term sequel. 'Long-COVID-19 is a term given to the lingering or protracted illness that patients of COVID-19 continue to experience even in their post-recovery phase. It is also being called 'post-acute COVID-19, 'ongoing symptomatic COVID-19, 'chronic COVID-19, 'post COVID-19 syndrome', and 'long-haul COVID-19. Fatigue, dyspnea, cough, headache, brain fog, anosmia, and dysgeusia are common symptoms seen in Long-COVID-19, but more varied and debilitating injuries involving pulmonary, cardiovascular, cutaneous, musculoskeletal and neurop-sychiatric systems are also being reported. With the data on Long-COVID-19 still emerging, the present review aims to highlight its epidemiology, protean clinical manifestations, risk predictors, and management strategies. With the re-emergence of new waves of SARS-CoV-2 infection, Long-COVID-19 is expected to produce another public health crisis on the heels of current pandemic. Thus, it becomes imperative to emphasize this condition and disseminate its awareness to medical professionals, patients, the public, and policymakers alike to prepare and augment health care facilities for continued surveillance of these patients. Further research comprising cataloging of symptoms, longer-ranging observational studies, and clinical trials are necessary to evaluate long-term consequences of COVID-19, and it warrants setting-up of dedicated, post-COVID care, multi-disciplinary clinics, and rehabilitation centers.

Database: EMBASE

5. Proposed subtypes of post-COVID-19 syndrome (or long-COVID) and their respective potential therapies

Author(s): Yong S.J.; Liu S.

Source: Reviews in Medical Virology; 2021

Publication Date: 2021

Publication Type(s): Review

Available at Reviews in Medical Virology - from Wiley Online Library

Abstract: The effects of coronavirus disease 2019 (COVID-19), a highly transmissible infectious respiratory disease that has initiated an ongoing pandemic since early 2020, do not always end in the acute phase. Depending on the study referred, about 10%-30% (or more) of COVID-19 survivors may develop long-COVID or post-COVID-19 syndrome (PCS), characterised by persistent symptoms (most commonly fatigue, dyspnoea, and cognitive impairments) lasting for 3 months or more after acute COVID-19. While the pathophysiological mechanisms of PCS have been extensively described elsewhere, the subtypes of PCS have not. Owing to its highly multifaceted nature, this review proposes and characterises six subtypes of PCS based on the existing literature. The subtypes are non-severe COVID-19 multi-organ sequelae (NSC-MOS), pulmonary fibrosis sequelae (PFS), myalgic encephalomyelitis or chronic fatigue syndrome (ME/CFS), postural orthostatic tachycardia syndrome (POTS), post-intensive care syndrome (PICS) and medical or clinical sequelae (MCS). Original studies supporting each of these subtypes are documented in this review, as well as their respective symptoms and potential interventions. Ultimately, the subtyping proposed herein aims to provide better clarity on the current understanding of PCS.

Database: EMBASE

6. Female gender is associated with long COVID syndrome: a prospective cohort study

Author(s): Bai F.; Tomasoni D.; Falcinella C.; Barbanotti D.; Castoldi R.; Mule G.; Augello M.; Mondatore D.; Allegrini M.; Cona A.; Tesoro D.; Tagliaferri G.; Vigano O.; Suardi E.; Tincati C.; Beringheli T.; Varisco B.; Tavelli A.; Marchetti G.; Monforte A.D.; Battistini C.L.; Piscopo K.; Vegni E.; Terzoni S.

Source: Clinical Microbiology and Infection; 2021

Publication Date: 2021

Publication Type(s): Article

Abstract:

Objective: We explored the association between female gender and long COVID syndrome, defined as persistence of physical and/or psychological symptoms for more than 4 weeks after recovery from acute COVID-19 disease. The secondary aim was to identify predictors of long COVID syndrome by multivariable logistic regression analysis.

Method(s): This was a single-centre prospective cohort study conducted at San Paolo Hospital in Milan, Italy. We enrolled adult patients who were evaluated at the post-COVID outpatient service of our Infectious Diseases Unit between 15 April 2020 and 15 December 2020. Participants were individuals who had clinically recovered from COVID-19 and in whom virological clearance had occurred. Previous infection by SARS-CoV-2 was microbiologically documented by positivity using a reverse-transcriptase polymerase chain reaction (RT-PCR) assay of nasopharyngeal swab. All enrolled patients underwent blood tests and a comprehensive medical examination at follow-up. Individuals were interviewed about resolved and persisting symptoms and were asked to fill in two questionnaires to allow assessment of the Hospital Anxiety and Depression symptoms (HADS) score and of the Impact of Event Scale-Revised (IES-R) score.

Result(s): A total of 377 patients were enrolled in the study. The median time from symtpom onset to virological clerance was 44 (37-53) days. A diagnosis of long COVID syndrome was made in 260/377 (69%) patients. The most common reported symptoms were fatigue (149/377, 39.5%), exertional dyspnoea (109/377, 28.9%), musculoskeletal pain (80/377, 21.2%) and "brain fog" (76/377, 20.2%). Anxiety symptoms were ascertained in 71/377 (18.8%) individuals, whereas 40/377 (10.6%) patients presented symptoms of depression. Post-traumatic stress disorder (defined by a pathological IES-R score) was diagnosed in one-third of patients (85/275, 31%). Female gender was independently associated with long COVID syndrome at multivariable analysis (AOR 3.3 vs. males, 95% CI 1.8-6.2, p < 0.0001). Advanced age (adjusted (A)OR 1.03 for 10 years older, 95% CI 1.01-1.05, p 0.01) and active smoking (AOR 0.19 for former smokers vs. active smokers, 95% CI 0.06-0.62, p 0.002) were also associated with a higher risk of long COVID, while no association was found between severity of disease and long COVID (AOR 0.67 for continuous positive airway pressure (CPAP)/non-invasive mechanical ventilation (NIMV)/orotracheal intubation (OTI) vs. no 02 therapy, 95% CI 0.29-1.55, p 0.85).

Discussion(s): Factors that were found to be associated with a higher risk of developing "long COVID" syndrome were female gender, older age and active smoking, but not severity of the acute disease. Individuals affected by SARS-CoV-2 infection with the aforementioned features should be early identified and involved in follow-up programmes.

Database: EMBASE

7. Evidence for impaired chronotropic responses to and recovery from 6-minute walk test in women with post-acute COVID-19 syndrome

Author(s): Baranauskas M.N.; Carter S.J.

Source: Experimental Physiology; 2021

Publication Date: 2021

Publication Type(s): Article

Available at Experimental Physiology - from Wiley Online Library

Abstract:

New Findings: What is the central question of this study? Are chronotropic responses to a 6-minute walk test different in women with post-acute coronavirus disease 2019 (COVID-19) syndrome compared with control subjects? What is the main finding and its importance? Compared with control subjects, the increase in heart rate was attenuated and recovery delayed after a 6-minute walk test in participants after infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Women reporting specific symptoms at time of testing had greater impairments compared with control subjects and SARS-CoV-2 participants not actively experiencing these symptoms. Such alterations have potential to constrain not only exercise tolerance but also participation in free-living physical activity in women during post-acute recovery from COVID-19.

Abstract: The short-term cardiopulmonary manifestations of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) are well defined. However, the implications of cardiopulmonary sequelae, persisting beyond acute illness, on physical function are largely unknown. Herein, we characterized heart rate responses to and recovery

from a 6-minute walk test (6MWT) in women ~3 months after mild-to-moderate SARS-CoV-2 infection compared with non-infected control subjects. Forty-five women (n = 29 SARS-CoV-2; n = 16 controls; age = 56 +/- 11 years; body mass index = 25.8 +/- 6.0 kg/m2) completed pulmonary function testing and a 6MWT. The SARS-CoV-2 participants demonstrated reduced total lung capacity (84 +/- 8 vs. 93 +/- 13%; P = 0.006), vital capacity (87 +/- 10 vs. 93 +/- 10%; P = 0.040), functional residual capacity (75 +/- 16 vs. 88 +/- 16%; P = 0.006) and residual volume (76 +/- 18 vs. 93 +/- 22%; P = 0.001) compared with control subjects. No between-group differences were observed in 6MWT distance (P = 0.194); however, the increase in heart rate with exertion was attenuated among SARS-CoV-2 participants compared with control subjects (+52 +/- 20 vs. +65 +/- 18 beats/min; P = 0.029). The decrease in heart rate was also delayed for minutes 1-5 of recovery among SARS-CoV-2 participants (all P < 0.05). Women reporting specific symptoms at the time of testing had greater impairments compared with control subjects and SARS-CoV-2 participants not actively experiencing these symptoms. Our findings provide evidence for marked differences in chronotropic responses to and recovery from a 6MWT in women several months after acute SARS-CoV-2 infection.Copyright © 2021 The Authors. Experimental Physiology published by John Wiley & Sons Ltd on behalf of The Physiological Society

Database: EMBASE

8. Long covid: research must guide future management.

Author(s): David, Anthony S

Source: BMJ (Clinical research ed.); Dec 2021; vol. 375 ; p. n3109

Publication Date: Dec 2021

Publication Type(s): Editorial

PubMedID: 34921017

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

9. Covid-19: Long covid symptoms among hospital inpatients show little improvement after a year, data suggest.

Author(s): Torjesen, Ingrid

Source: BMJ (Clinical research ed.); Dec 2021; vol. 375 ; p. n3092

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34911690

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

10. Global surveillance, research, and collaboration needed to improve understanding and management of long COVID.

Author(s): Ward, Helen; Flower, Barnaby; Garcia, Patricia J; Ong, Sean Wei Xiang; Altmann, Daniel M; Delaney, Brendan; Smith, Nikki; Elliott, Paul; Cooke, Graham

Source: Lancet (London, England); Dec 2021; vol. 398 (no. 10316); p. 2057-2059

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34774190

Database: Medline

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02444-2/fulltext

11. Six-month follow-up of functional status in discharged patients with coronavirus disease 2019.

Author(s): Du, Hou-Wei; Fang, Shuang-Fang; Wu, Sang-Ru; Chen, Xiao-Ling; Chen, Jun-Nian; Zhang, Yi-Xian; Huang, Hua-Yao; Lei, Han-Han; Chen, Rong-Hua; Pan, Xiao-Bin; Li, Xiao-Qing; Xia, Pin-Cang; Zheng, Zhen-Yang; Ling-Luo; Lin, Hai-Long; Chen, Li-Min; Liu, Nan; Fujian Medical Team Support Wuhan for COVID19

Source: BMC infectious diseases; Dec 2021; vol. 21 (no. 1); p. 1271

Publication Date: Dec 2021

Publication Type(s): Journal Article Observational Study

PubMedID: 34930161

Available at BMC infectious diseases - from BioMed Central

Available at BMC infectious diseases - from Europe PubMed Central - Open Access

Available at BMC infectious diseases - from ProQuest (Health Research Premium) - NHS Version

Available at BMC infectious diseases - from EBSCO (MEDLINE Complete)

Abstract:

BACKGROUND: The long-term functional outcome of discharged patients with coronavirus disease 2019 (COVID-19) remains unresolved. We aimed to describe a 6-month follow-up of functional status of COVID-19 survivors.

METHODS: We reviewed the data of COVID-19 patients who had been consecutively admitted to the Tumor Center of Union Hospital (Wuhan, China) between 15 February and 14 March 2020. We quantified a 6-month functional outcome reflecting symptoms and disability in COVID-19 survivors using a post-COVID-19 functional status scale ranging from 0 to 4 (PCFS). We examined the risk factors for the incomplete functional status defined as a PCFS > 0 at a 6-month follow-up after discharge.

RESULTS: We included a total of 95 COVID-19 survivors with a median age of 62 (IQR 53-69) who had a complete functional status (PCFS grade 0) at baseline in this retrospective observational study. At 6-month follow-up, 67 (70.5%) patients had a complete functional outcome (grade 0), 9 (9.5%) had a negligible limited function (grade 1), 12 (12.6%) had a mild limited function (grade 2), 7 (7.4%) had moderate limited function (grade 3). Univariable logistic regression analysis showed a significant association between the onset symptoms of muscle or joint pain and an increased risk of incomplete function (unadjusted OR 4.06, 95% CI 1.33-12.37). This association remained after adjustment for age and admission delay (adjusted OR 3.39, 95% CI 1.06-10.81, p = 0.039).

CONCLUSIONS: A small proportion of discharged COVID-19 patients may have an incomplete functional outcome at a 6-month follow-up; intervention strategies are required.

Database: Medline

12. Rehabilitative management of post-acute COVID-19: clinical pictures and outcomes.

Author(s): Güler, Tuba; Yurdakul, Fatma Gül; Acar Sivas, Filiz; Kiliç, Zeynep; Adigüzel, Emre; Yaşar, Evren; Bodur, Hatice

Source: Rheumatology international; Dec 2021; vol. 41 (no. 12); p. 2167-2175

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34580754

Abstract: This study aimed to detect patients' characteristics who suffered severe and critical COVID-19 pneumonia admitted to the post-acute COVID-19 rehabilitation clinic in Ankara City Hospital, Physical Medicine and

Rehabilitation Hospital and to share our experiences and outcomes of rehabilitation programmes applied. This study was designed as a single-centre, retrospective, observational study. Severe and critical COVID-19 patients, admitted to the post-acute COVID-19 rehabilitation clinic, were included in patient-based rehabilitation programmes, targeting neuromuscular and respiratory recovery. Functional status, oxygen (O2) requirement and daily living activities were assessed before and after rehabilitation. Eighty-five patients, of which 74% were male, were analysed, with the mean age of 58.27 ± 11.13 and mean body mass index of 25.29 ± 4.81 kg/m2. The most prevalent comorbidities were hypertension (49.4%) and diabetes mellitus (34.1%). Of the 85 patients, 84 received antiviral drugs, 81 low-molecular-weight heparin, 71 corticosteroids, 11 anakinra, 4 tocilizumab, 16 intravenous immunoglobulin and 6 plasmapheresis. 78.8% of the patients were admitted to the intensive care unit, with a mean length of stay of 19.41 ± 18.99 days, while those who needed O2 support with mechanic ventilation was 36.1%. Neurological complications, including Guillain-Barré syndrome, critical illness-related myopathy/neuropathy, cerebrovascular disease and steroid myopathy, were observed in 39 patients. On initial functional statuses, 55.3% were bedridden, 22.4% in wheelchair level and 20% mobilised with O2 support. After rehabilitation, these ratios were 2.4%, 4.7% and 8.2%, respectively. During admission, 71 (83.5%) patients required O2 support, but decreased to 7 (8.2%) post-rehabilitation. Barthel Index improved statistically from 44.82 ± 27.31 to 88.47 ± 17.56. Patient-based modulated rehabilitation programmes are highly effective in severe and critical COVID-19 complications, providing satisfactory well-being in daily living activities.

Database: Medline

13. Activity Measure for Post-Acute Care "6-Clicks" for the Prediction of Short-term Clinical Outcomes in Individuals Hospitalized With COVID-19: A Retrospective Cohort Study.

Author(s): Tevald, Michael A; Clancy, Malachy J; Butler, Kelly; Drollinger, Megan; Adler, Joe; Malone, Daniel

Source: Archives of physical medicine and rehabilitation; Dec 2021; vol. 102 (no. 12); p. 2300

Publication Date: Dec 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34496269

Abstract:

OBJECTIVE: To determine the ability of the Activity Measure for Post-Acute Care (AM-PAC) "6-Clicks" assessments of mobility and activity to predict key clinical outcomes in patients hospitalized with coronavirus disease 2019 (COVID-19).

DESIGN: Retrospective cohort study.

SETTING: An academic health system in the United States consisting of 5 inpatient hospitals.

PARTICIPANTS: Adult patients (N=1486) urgently or emergently admitted who tested positive for COVID-19 and had at least 1 AM-PAC assessment.

INTERVENTIONS: Not applicable.

MAIN OUTCOME MEASURES: Discharge destination, hospital length of stay, in-hospital mortality, and readmission.

RESULTS: A total of 1486 admission records were included in the analysis. After controlling for covariates, initial and final mobility (odds ratio, 0.867 and 0.833, respectively) and activity scores (odds ratio, 0.892 and 0.862, respectively) were both independent predictors of discharge destination with a high accuracy of prediction (area under the curve [AUC]=0.819-0.847). Using a threshold score of 17.5, sensitivity ranged from 0.72-0.79, whereas specificity ranged from 0.74-0.83. Both initial AM-PAC mobility and activity scores were independent predictors of mortality (odds ratio, 0.885 and 0.877, respectively). Initial mobility, but not activity, scores were predictive of prolonged length of stay (odds ratio, 0.957 and 0.980, respectively). However, the accuracy of prediction for both outcomes was weak (AUC=0.659-0.679). AM-PAC scores did not predict rehospitalization.

CONCLUSIONS: Functional status as measured by the AM-PAC "6-Clicks" mobility and activity scores are independent predictors of key clinical outcomes individual hospitalized with COVID-19.

Database: Medline

14. Inpatient Rehabilitation Outcomes After Severe COVID-19 Infections: A Retrospective Cohort Study.

Author(s): Abramoff, Benjamin A; Dillingham, Timothy R; Caldera, Franklin E; Ritchie, Marylyn D; Pezzin, Liliana E

Source: American journal of physical medicine & rehabilitation; Dec 2021; vol. 100 (no. 12); p. 1109-1114

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34657085

Abstract:

OBJECTIVE: The aim of the study was to describe the characteristics and functional outcomes of patients undergoing acute inpatient rehabilitation after hospitalization for COVID-19.DESIGNUsing a retrospective chart review, patients were identified who were admitted to inpatient rehabilitation after COVID-19. Patient information collected included sociodemographic characteristics, comorbidities, length of stay, discharge disposition, self-care, mobility, and cognitive functioning. These patients were compared with patients (controls) without COVID-19 with similar impairment codes treated at the same facility before the COVID-19 pandemic.

RESULTS: There were 43 patients who were admitted to the inpatient rehabilitation hospital after COVID-19 infection and 247 controls. Patients who had COVID-19 were significantly more likely to be African American and to have been admitted to a long-term acute care hospital. They also had a longer length of rehabilitation stay. The groups did not differ by age, sex, or insurance. Functionally, although presenting with significantly worse mobility, self-care, and motor scores, the patients previously infected with COVID-19 had similar functional outcomes at time of discharge to the control group.

CONCLUSIONS: Although patients with a history of COVID-19 had worse function at time of admission to acute rehabilitation, inpatient rehabilitation significantly improved their function to comparable levels as patients who did not have COVID-19.

TO CLAIM CME CREDITS: Complete the self-assessment activity and evaluation online at http://www.physiatry.org/JournalCME.

CME OBJECTIVES: Upon completion of this article, the reader should be able to: (1) Identify how characteristics of patients with COVID-19 admitted to acute rehabilitation differ from those with similar admission codes but without COVID-19; (2) Describe changes in functional measures at admission and discharge of COVID-19 patients compared with patients without COVID-19; and (3) Recognize how inpatient rehabilitation may help reduce inequities in outcomes after severe COVID-19 infection.

LEVEL: Advanced.

ACCREDITATION: The Association of Academic Physiatrists is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.The Association of Academic Physiatrists designates this Journal-based CME activity for a maximum of 1.0 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Database: Medline

15. Assessing the Acceptability of a Co-Produced Long COVID Intervention in an Underserved Community in the UK.

Author(s): Fowler-Davis, Sally; Young, Rachel; Maden-Wilkinson, Tom; Hameed, Waqas; Dracas, Elizabeth; Hurrell, Eleanor; Bahl, Romila; Kilcourse, Elisabeth; Robinson, Rebecca; Copeland, Robert

Source: International journal of environmental research and public health; Dec 2021; vol. 18 (no. 24)

Publication Date: Dec 2021

Publication Type(s): Journal Article

PubMedID: 34948798

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at International journal of environmental research and public health - from ProQuest (Health Research Premium) - NHS Version

Abstract:

BACKGROUND: The COVID-19 pandemic has disproportionately affected people from more deprived communities. The experience of Long COVID is similarly distributed but very few investigations have concentrated on the needs of this population. The aim of this project was to co-produce an acceptable intervention for people with Long COVID living in communities recognised as more deprived.

METHODS: The intervention was based on a multi-disciplinary team using approaches from sport and exercise medicine and functional rehabilitation. The co-production process was undertaken with a stakeholder advisory group and patient public involvement representation. This study identified participants by postcode and the indices of multiple deprivation (IMD); recruitment and engagement were supported by an existing health and wellbeing service. A virtual 'clinic' was offered with a team of professional practitioners who met participants three times each; to directly consider their needs and offer structured advice. The acceptability of the intervention was based on the individual's participation and their completion of the intervention.

RESULTS: Ten participants were recruited with eight completing the intervention. The partnership with an existing community health and wellbeing service was deemed to be an important way of reaching participants. Two men and six women ages ranging from 38 to 73 were involved and their needs were commonly associated with fatigue, anxiety and depression with overall de-conditioning. None reported serious hardship associated with the pandemic although most were in self-employment/part-time employment or were not working due to retirement or ill-health. Two older participants lived alone, and others were single parents and had considerable challenges associated with managing a household alongside their Long COVID difficulties.

CONCLUSIONS: This paper presents the needs and perspectives of eight individuals involved in the process and discusses the needs and preferences of the group in relation to their support for self- managed recovery from Long COVID.

Database: Medline

16. Prevalence and impact of COVID-19 sequelae on treatment and survival of patients with cancer who recovered from SARS-CoV-2 infection: evidence from the OnCovid retrospective, multicentre registry study.

Author(s): Pinato, David J; Tabernero, Josep; Bower, Mark; Scotti, Lorenza; Patel, Meera; Colomba, Emeline; Dolly, Saoirse; Loizidou, Angela; Chester, John; Mukherjee, Uma; Zambelli, Alberto; Dalla Pria, Alessia; Aguilar-Company, Juan; Ottaviani, Diego; Chowdhury, Amani; Merry, Eve; Salazar, Ramon; Bertuzzi, Alexia; Brunet, Joan; Lambertini, Matteo; Tagliamento, Marco; Pous, Anna; Sita-Lumsden, Ailsa; Srikandarajah, Krishnie; Colomba, Johann; Pommeret, Fanny; Seguí, Elia; Generali, Daniele; Grisanti, Salvatore; Pedrazzoli, Paolo; Rizzo, Gianpiero; Libertini, Michela; Moss, Charlotte; Evans, Joanne S; Russell, Beth; Harbeck, Nadia; Vincenzi, Bruno; Biello, Federica; Bertulli, Rossella; Liñan, Raquel; Rossi, Sabrina; Carmona-García, Maria Carmen; Tondini, Carlo; Fox, Laura; Baggi, Alice; Fotia, Vittoria; Parisi, Alessandro; Porzio, Giampero; Saponara, Maristella; Cruz, Claudia Andrea; García-Illescas, David; Felip, Eudald; Roqué Lloveras, Ariadna; Sharkey, Rachel; Roldán, Elisa; Reyes, Roxana; Earnshaw, Irina; Ferrante, Daniela; Marco-Hernández, Javier; Ruiz-Camps, Isabel; Gaidano, Gianluca; Patriarca, Andrea; Bruna, Riccardo; Sureda, Anna; Martinez-Vila, Clara; Sanchez de Torre, Ana; Cantini, Luca; Filetti, Marco; Rimassa, Lorenza; Chiudinelli, Lorenzo; Franchi, Michela; Krengli, Marco; Santoro, Armando; Prat, Aleix; Van Hemelrijck, Mieke; Diamantis, Nikolaos; Newsom-Davis, Thomas; Gennari, Alessandra; Cortellini, Alessio; OnCovid study group

Source: The Lancet. Oncology; Dec 2021; vol. 22 (no. 12); p. 1669-1680

Publication Date: Dec 2021

Publication Type(s): Clinical Trial Journal Article Multicenter Study Research Support, Non-u.s. Gov't

PubMedID: 34741822

Abstract:

BACKGROUND: The medium-term and long-term impact of COVID-19 in patients with cancer is not yet known. In this study, we aimed to describe the prevalence of COVID-19 sequelae and their impact on the survival of patients with cancer. We also aimed to describe patterns of resumption and modifications of systemic anti-cancer therapy following recovery from SARS-CoV-2 infection.

METHODS: OnCovid is an active European registry study enrolling consecutive patients aged 18 years or older with a history of solid or haematological malignancy and who had a diagnosis of RT-PCR confirmed SARS-CoV-2 infection. For this retrospective study, patients were enrolled from 35 institutions across Belgium, France, Germany, Italy, Spain, and the UK. Patients who were diagnosed with SARS-CoV-2 infection between Feb 27, 2020, and Feb 14, 2021, and entered into the registry at the point of data lock (March 1, 2021), were eligible for analysis. The present analysis was focused on COVID-19 survivors who underwent clinical reassessment at each participating institution. We documented prevalence of COVID-19 sequelae and described factors associated with their development and their association with post-COVID-19 survival, which was defined as the interval from post-COVID-19 reassessment to the patients' death or last follow-up. We also evaluated resumption of systemic anti-cancer therapy in patients treated within 4 weeks of COVID-19 diagnosis. The OnCovid study is registered in ClinicalTrials.gov, NCT04393974.

FINDINGS: 2795 patients diagnosed with SARS-CoV-2 infection between Feb 27, 2020, and Feb 14, 2021, were entered into the study by the time of the data lock on March 1, 2021. After the exclusion of ineligible patients, the final study population consisted of 2634 patients. 1557 COVID-19 survivors underwent a formal clinical reassessment after a median of 22·1 months (IQR 8·4-57·8) from cancer diagnosis and 44 days (28-329) from COVID-19 diagnosis. 234 (15·0%) patients reported COVID-19 sequelae, including respiratory symptoms (116 [49·6%]) and residual fatigue (96 [41·0%]). Sequelae were more common in men (vs women; p=0·041), patients aged 65 years or older (vs other age groups; p=0·048), patients with two or more comorbidities (vs one or none; p=0·0006), and patients with a history of smoking (vs no smoking history; p=0·0004). Sequelae were associated with hospitalisation for COVID-19 (p<0·0001), complicated COVID-19 (p<0·0001), and COVID-19 therapy (p=0·0002). With a median post-COVID-19 follow-up of 128 days (95% CI 113-148), COVID-19 sequelae were associated with an increased risk of death (hazard ratio [HR] 1·80 [95% CI 1·18-2·75]) after adjusting for time to post-COVID-19 reassessment, sex, age, comorbidity burden, tumour characteristics, anticancer therapy, and COVID-19 severity. Among 466 patients on systemic anti-cancer therapy, 70 (15·0%) permanently discontinued therapy, and 178 (38·2%) resumed treatment with a dose or regimen adjustment. Permanent treatment discontinuations were independently associated with an increased risk of death (HR 3·53 [95% CI 1·45-8·59]), but dose or regimen adjustments were not (0·84 [0·35-2·02]).

INTERPRETATION: Sequelae post-COVID-19 affect up to 15% of patients with cancer and adversely affect survival and oncological outcomes after recovery. Adjustments to systemic anti-cancer therapy can be safely pursued in treatment-eligible patients.

FUNDING: National Institute for Health Research Imperial Biomedical Research Centre and the Cancer Treatment and Research Trust.

Database: Medline

17. Long COVID a new derivative in the chaos of SARS-CoV-2 infection: The emergent pandemic?

Author(s): Fernandez-Lazaro D.; Sanchez-Serrano N.; Mielgo-Ayuso J.; Gonzalez-Bernal J.J.; Garcia-Hernandez J.L.; Seco-Calvo J.

Source: Journal of Clinical Medicine; Dec 2021; vol. 10 (no. 24)

Publication Date: Dec 2021

Publication Type(s): Review

Available at Journal of Clinical Medicine - from Europe PubMed Central - Open Access

Abstract: Coronavirus disease 2019 (COVID-19) is a multisystem illness caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), which can manifest with a multitude of symptoms in the setting of end-organ damage, though it is predominantly respiratory. However, various symptoms may remain after acute SARS-CoV-2 infection, and this condition is referred to as "Long COVID" (LC). Patients with LC may develop multi-organ symptom complex that remains 4-12 weeks after the acute phase of illness, with symptoms intermittently persisting over time. The main symptoms are fatigue, post-exertional malaise, cognitive dysfunction, and limitation of functional capacity.

Pediatric patients developed the main symptoms of LC like those described in adults, although there may be variable presentations of LC in children. The underlying mechanisms of LC are not clearly known, although they may involve pathophysiological changes generated by virus persistence, immunological alterations secondary to virus-host interaction, tissue damage of inflammatory origin and hyperactivation of coagulation. Risk factors for developing LC would be female sex, more than five early symptoms, early dyspnea, previous psychiatric disorders, and alterations in immunological, inflammatory and coagulation parameters. There is currently no specific treatment for LC, but it could include pharmacological treatments to treat symptoms, supplements to restore nutritional, metabolic, and gut flora balance, and functional treatments for the most disabling symptoms. In summary, this study aims to show the scientific community the current knowledge of LC.

Database: EMBASE

18. A model framework for projecting the prevalence and impact of Long-COVID in the UK

Author(s): Martin C.; Luteijn M.; Letton W.; Robertson J.; McDonald S.

Source: PLoS ONE; Dec 2021; vol. 16 (no. 12)

Publication Date: Dec 2021

Publication Type(s): Article

Available at PloS one - from Europe PubMed Central - Open Access

Available at PloS one - from Public Library of Science (PLoS)

Available at PloS one - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at PloS one - from EBSCO (MEDLINE Complete)

Available at PloS one - from ProQuest (Health Research Premium) - NHS Version

Abstract: The objective of this paper is to model lost Quality Adjusted Life Years (QALYs) from symptoms arising from COVID-19 disease in the UK population, including symptoms of 'longCOVID'. The scope includes QALYs lost to symptoms, but not deaths, due to acute COVID-19 and long-COVID. The prevalence of symptomatic COVID-19, encompassing acute symptoms and long-COVID symptoms, was modelled using a decay function. Permanent injury as a result of COVID-19 infection, was modelled as a fixed prevalence. Both parts were combined to calculate QALY loss due to COVID-19 symptoms. Assuming a 60% final attack rate for SARS-CoV-2 infection in the population, we modelled 299,730 QALYs lost within 1 year of infection (90% due to symptomatic COVID-19 and 10% permanent injury) and 557,764 QALYs lost within 10 years of infection (49% due to symptomatic COVID-19 and 51% due to permanent injury). The UK Government willingness-to-pay to avoid these QALY losses would be 17.9 billion and 32.2 billion, respectively. Additionally, 90,143 people were subject to permanent injury from COVID-19 (0.14% of the population). Given the ongoing development in information in this area, we present a model framework for calculating the health economic impacts of symptoms following SARS-CoV-2 infection. This model framework can aid in quantifying the adverse health impact of COVID-19, long-COVID and permanent injury following COVID-19 in society and assist the proactive management of risk posed to health. Further research is needed using standardised measures of patient reported outcomes relevant to long-COVID and applied at a population level.

Database: EMBASE

19. Persistent clotting protein pathology in Long COVID/Post-Acute Sequelae of COVID-19 (PASC) is accompanied by increased levels of antiplasmin

Author(s): Pretorius E.; Venter C.; Bezuidenhout J.A.; Steenkamp J.; Kell D.B.; Vlok M.; Laubscher G.J.

Source: Cardiovascular Diabetology; Dec 2021; vol. 20 (no. 1)

Publication Date: Dec 2021

Publication Type(s): Article

PubMedID: 34425843

Available at Cardiovascular diabetology - from BioMed Central

Available at Cardiovascular diabetology - from Europe PubMed Central - Open Access

Available at Cardiovascular diabetology - from ProQuest (Health Research Premium) - NHS Version

Available at Cardiovascular diabetology - from EBSCO (MEDLINE Complete)

Abstract:

Background: Severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2)-induced infection, the cause of coronavirus disease 2019 (COVID-19), is characterized by acute clinical pathologies, including various coagulopathies that may be accompanied by hypercoagulation and platelet hyperactivation. Recently, a new COVID-19 phenotype has been noted in patients after they have ostensibly recovered from acute COVID-19 symptoms. This new syndrome is commonly termed Long COVID/Post-Acute Sequelae of COVID-19 (PASC). Here we refer to it as Long COVID/PASC. Lingering symptoms persist for as much as 6 months (or longer) after acute infection, where COVID-19 survivors complain of recurring fatigue or muscle weakness, being out of breath, sleep difficulties, and anxiety or depression. Given that blood clots can block microcapillaries and thereby inhibit oxygen exchange, we here investigate if the lingering symptoms that individuals with Long COVID/PASC manifest might be due to the presence of persistent circulating plasma microclots that are resistant to fibrinolysis.

Method(s): We use techniques including proteomics and fluorescence microscopy to study plasma samples from healthy individuals, individuals with Type 2 Diabetes Mellitus (T2DM), with acute COVID-19, and those with Long COVID/PASC symptoms.

Result(s): We show that plasma samples from Long COVID/PASC still contain large anomalous (amyloid) deposits (microclots). We also show that these microclots in both acute COVID-19 and Long COVID/PASC plasma samples are resistant to fibrinolysis (compared to plasma from controls and T2DM), even after trypsinisation. After a second trypsinization, the persistent pellet deposits (microclots) were solubilized. We detected various inflammatory molecules that are substantially increased in both the supernatant and trapped in the solubilized pellet deposits of acute COVID-19 and Long COVID/PASC, versus the equivalent volume of fully digested fluid of the control samples and T2DM. Of particular interest was a substantial increase in alpha(2)-antiplasmin (alpha2AP), various fibrinogen chains, as well as Serum Amyloid A (SAA) that were trapped in the solubilized fibrinolytic-resistant pellet deposits.

Conclusion(s): Clotting pathologies in both acute COVID-19 infection and in Long COVID/PASC might benefit from following a regime of continued anticlotting therapy to support the fibrinolytic system function.

Database: EMBASE

20. Prevalence and predictors of Post-Acute COVID-19 Syndrome (PACS) after hospital discharge: A cohort study with 4 months median follow-up

Author(s): Tleyjeh I.M.; Berbari E.; Saddik B.; Halwani R.; Ramakrishnan R.K.; AlSwaidan N.; AlAnazi A.; Alhazmi D.; Aloufi A.; AlSumait F.

Source: PLoS ONE; Dec 2021; vol. 16 (no. 12)

Publication Date: Dec 2021

Publication Type(s): Article

Available at PLoS ONE - from Europe PubMed Central - Open Access

Available at PLoS ONE - from Public Library of Science (PLoS)

Abstract:

Background: Post-acute COVID-19 syndrome (PACS) is an emerging healthcare burden. The risk factors associated with PACS remain largely unclear. The aim of this study was to evaluate the frequency of new or persistent symptoms in COVID-19 patients post hospital discharge and identify associated risk factors.

Methods: Our prospective cohort comprised of PCR-confirmed COVID-19 patients admitted to King Fahad Medical City, Riyadh, Saudi Arabia between May and July 2020. The patients were interviewed through phone calls by trained physicians from 6 weeks up to 6 months post hospital discharge. Multivariate Cox proportional hazards and logistic regression models were used to examine for predictors associated with persistence of symptoms and nonreturn to baseline health.

Results: 222 COVID-19 patients responded to follow-up phone interviews after a median of 122 days post discharge. The majority of patients were men (77%) with mean age of 52.47 (+/- 13.95) years. 56.3% of patients complained of persistent symptoms; 66 (29.7%) experiencing them for >21 days and 64 (28.8%) reporting not having returned to their baseline health. Furthermore, 39 patients (17.6%) reported visiting an emergency room post discharge for COVID-19-related symptoms while 16 (7.2%) had required re-hospitalization. Shortness of breath (40.1%), cough (27.5%) and fatigue (29.7%) were the most frequently reported symptoms at follow-up. After multivariable adjustments, female gender, pre-existing hypertension and length of hospital stay were associated with an increased risk of new or persistent symptoms. Age, pre-existing lung disease and emergency room visits increased the likelihood of not fully recovering from acute COVID-19. Patients who were treated with interferon beta-1b based triple antiviral therapy during hospital stay were less likely to experience new or persistent symptoms and more likely to return to their baseline health.

Conclusions: COVID-19 survivors continued to suffer from dyspnea, cough and fatigue at 4 months post hospital discharge. Several risk factors could predict which patients are more likely to experience PACS and may benefit from individualized follow-up and rehabilitation programs.

Database: EMBASE

21. Navigating the social identity of long covid.

Author(s): Van de Vyver, Julie; Leite, Ana C; Alwan, Nisreen A

Source: BMJ (Clinical research ed.); Nov 2021; vol. 375 ; p. n2933

Publication Date: Nov 2021

Publication Type(s): Journal Article

PubMedID: 34836878

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

22. Long covid: new wine in need of new bottles.

Author(s): Banerjee, Amitava

Source: BMJ (Clinical research ed.); Nov 2021; vol. 375 ; p. n2736

Publication Date: Nov 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34753712

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

23. Long-Term Evolution of Malnutrition and Loss of Muscle Strength after COVID-19: A Major and Neglected Component of Long COVID-19.

Author(s): Gérard, Marine; Mahmutovic, Meliha; Malgras, Aurélie; Michot, Niasha; Scheyer, Nicolas; Jaussaud, Roland; Nguyen-Thi, Phi-Linh; Quilliot, Didier

Source: Nutrients; Nov 2021; vol. 13 (no. 11)

Publication Date: Nov 2021

Publication Type(s): Journal Article Observational Study

PubMedID: 34836219

Available at Nutrients - from Europe PubMed Central - Open Access

Available at Nutrients - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at Nutrients - from ProQuest (Health Research Premium) - NHS Version

Abstract: Post-acute consequences of COVID-19, also termed long COVID, include signs and symptoms persisting for more than 12 weeks with prolonged multisystem involvement; most often, however, malnutrition is ignored.

METHOD: The objective was to analyze persistent symptoms, nutritional status, the evolution of muscle strength and performance status (PS) at 6 months post-discharge in a cohort of COVID-19 survivors.

RESULTS: Of 549 consecutive patients hospitalized for COVID-19 between 1 March and 29 April 2020, 23.7% died and 288 patients were at home at D30 post-discharge. At this date, 136 of them (47.2%) presented persistent malnutrition, a significant decrease in muscle strength or a PS ≥ 2. These patients received dietary counseling, nutritional supplementation, adapted physical activity guidance or physiotherapy assistance, or were admitted to post-care facilities. At 6 months post-discharge, 91.0% of the 136 patients (n = 119) were evaluated and 36.0% had persistent malnutrition, 14.3% complained of a significant decrease in muscle strength and 14.9% had a performance status > 2. Obesity was more frequent in patients with impairment than in those without (52.8% vs. 31.0%; p = 0.0071), with these patients being admitted more frequently to ICUs (50.9% vs. 31.3%; p = 0.010). Among those with persistent symptoms, 10% had psychiatric co-morbidities (mood disorders, anxiety, or post-traumatic stress syndrome), 7.6% had prolonged pneumological symptoms and 4.2% had neurological symptoms.

CONCLUSIONS: Obese subjects as well as patients who have stayed in intensive care have a higher risk of functional loss or undernutrition 6 months after a severe COVID infection. Malnutrition and loss of muscle strength should be considered in the clinical assessment of these patients.

Database: Medline

24. Long COVID: Does It Exist? What Is It? We Can We Do For Sufferers?

Author(s): Hoffer, Edward P

Source: The American journal of medicine; Nov 2021; vol. 134 (no. 11); p. 1310-1311

Publication Date: Nov 2021

Publication Type(s): Editorial

PubMedID: 34237305

Available at The American journal of medicine - from Unpaywall

Database: Medline

25. Recommendations for the recognition, diagnosis, and management of long COVID: a Delphi study.

Author(s): Nurek, Martine; Rayner, Clare; Freyer, Anette; Taylor, Sharon; Järte, Linn; MacDermott, Nathalie; Delaney, Brendan C; Delphi panellists

Source: The British journal of general practice : the journal of the Royal College of General Practitioners; Nov 2021; vol. 71 (no. 712); p. e815

Publication Date: Nov 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34607799

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from EBSCO (MEDLINE Complete)

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from Unpaywall

Abstract:

BACKGROUND: In the absence of research into therapies and care pathways for long COVID, guidance based on 'emerging experience' is needed.

AIM: To provide a rapid expert guide for GPs and long COVID clinical services.

DESIGN AND SETTING: A Delphi study was conducted with a panel of primary and secondary care doctors.

METHOD: Recommendations were generated relating to the investigation and management of long COVID. These were distributed online to a panel of UK doctors (any specialty) with an interest in, lived experience of, and/or experience treating long COVID. Over two rounds of Delphi testing, panellists indicated their agreement with each recommendation (using a five-point Likert scale) and provided comments. Recommendations eliciting a response of 'strongly agree', 'agree', or 'neither agree nor disagree' from 90% or more of responders were taken as showing consensus.

RESULTS: Thirty-three clinicians representing 14 specialties reached consensus on 35 recommendations. Chiefly, GPs should consider long COVID in the presence of a wide range of presenting features (not limited to fatigue and breathlessness) and exclude differential diagnoses where appropriate. Detailed history and examination with baseline investigations should be conducted in primary care. Indications for further investigation and specific therapies (for myocarditis, postural tachycardia syndrome, mast cell disorder) include hypoxia/desaturation, chest pain, palpitations, and histamine-related symptoms. Rehabilitation should be individualised, with careful activity pacing (to avoid relapse) and multidisciplinary support.

CONCLUSION: Long COVID clinics should operate as part of an integrated care system, with GPs playing a key role in the multidisciplinary team. Holistic care pathways, investigation of specific complications, management of potential symptom clusters, and tailored rehabilitation are needed.

Database: Medline

26. Post-extubation dysphagia and dysphonia amongst adults with COVID-19 in the Republic of Ireland: A prospective multi-site observational cohort study.

Author(s): Regan, Julie; Walshe, Margaret; Lavan, Sarah; Horan, Eanna; Gillivan Murphy, Patricia; Healy, Anne; Langan, Caoimhe; Malherbe, Karen; Flynn Murphy, Breda; Cremin, Maria; Hilton, Denise; Cavaliere, Jenni; Whyte, Alice

Source: Clinical otolaryngology : official journal of ENT-UK ; official journal of Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery; Nov 2021; vol. 46 (no. 6); p. 1290-1299

Publication Date: Nov 2021

Publication Type(s): Journal Article Multicenter Study Observational Study

PubMedID: 34197688

Available at Clinical otolaryngology : official journal of ENT-UK ; official journal of Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery - from Wiley Online Library

Available at Clinical otolaryngology : official journal of ENT-UK ; official journal of Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery - from Unpaywall

Abstract:

OBJECTIVES: This study aims to (i) investigate post-extubation dysphagia and dysphonia amongst adults intubated with SARS-COV-2 (COVID-19) and referred to speech and language therapy (SLT) in acute hospitals across the Republic of Ireland (ROI) between March and June 2020; (ii) identify variables predictive of post-extubation oral intake status and dysphonia and (iii) establish SLT rehabilitation needs and services provided to this cohort.

DESIGN: A multi-site prospective observational cohort study.

PARTICIPANTS: One hundred adults with confirmed COVID-19 who were intubated across eleven acute hospital sites in ROI and who were referred to SLT services between March and June 2020 inclusive.

MAIN OUTCOME MEASURES: Oral intake status, level of diet modification and perceptual voice quality.

RESULTS: Based on initial SLT assessment, 90% required altered oral intake and 59% required tube feeding with 36% not allowed oral intake. Age (OR 1.064; 95% CI 1.018-1.112), proning (OR 3.671; 95% CI 1.128-11.943) and pre-existing respiratory disease (OR 5.863; 95% CI 1.521-11.599) were predictors of oral intake status post-extubation. Two-thirds (66%) presented with dysphonia post-extubation. Intubation injury (OR 10.471; 95% CI 1.060-103.466) and pre-existing respiratory disease (OR 24.196; 95% CI 1.609-363.78) were predictors of post-extubation voice quality. Thirty-seven per cent required dysphagia intervention post-extubation, whereas 20% needed intervention for voice. Dysphagia and dysphonia persisted in 27% and 37% cases, respectively, at hospital discharge.

DISCUSSION: Post-extubation dysphagia and dysphonia were prevalent amongst adults with COVID-19 across the ROI. Predictors included iatrogenic factors and underlying respiratory disease. Prompt evaluation and intervention is needed to minimise complications and inform rehabilitation planning.

Database: Medline

27. Care models for long COVID: A rapid systematic review

Author(s): Decary S.; Dugas M.; Stefan T.; Langlois L.; Bhereur A.; Skidmore B.; LeBlanc A.; Hastings S.; Manns B.; Saxinger L.

Source: ENG; Nov 2021

Publication Date: Nov 2021

Publication Type(s): Preprint

Abstract:

Context. More than 18M people worldwide (150K Canadians) are living with Long COVID resulting in debilitating sequalae and disabilities that impact their quality of life and capacity to return to work. A new care model is needed for persons living with this complex and multi-systemic disease.

Objective(s): What is the best-available evidence about care models for persons living with Long COVID?

Design: Rapid Living Systematic Review.

Method(s): We systematically searched seven electronic databases (MEDLINE, Embase, Web of Science, COVID-END, L-OVE, CDRS and WHO Ovid) on May 27th, 2021. Two independent reviewers screened titles, abstracts and full text. We included studies reporting on 1- persons living with Long COVID and 2- proposing a specific care model (i.e., dedicated clinic, care pathway). We extracted characteristic of studies (e.g., countries, study design, age group), referral pathways targeted (e.g., hospitalized, community), reporting of the care model implementation with number of patients, clinical settings of care model (e.g., primary care), healthcare professions included in the care model, care model principles (e.g., person-centred care) and care model components (e.g., standardized symptoms assessment). We used descriptive statistics and frequency count. Result(s): We screened 2181 citations, read 65 full text and included 12 eligible articles reporting on care models for Long COVID. Half studies were from the United Kingdom. 7 out of 12 models reported conceptual models without a description of implementation. All but one model was designed for discharge and long-term follow-up of hospitalized patients and half models were designed for non-hospitalized or patients who lived with the disease only in the community. Nine out of 12 care models included primary care, 8 out of 12 included specialized clinics and all studies included rehabilitation services. A total of 30 healthcare professions and medical specialties were proposed for staffing Long COVID services. More than half studies proposed multidisciplinary teams, integrated/coordination of care, evidence-based care and patient-centred care as key care model principles. Standardized symptom assessment, follow-up system and virtual care were the most frequent care model components.

Conclusion(s): The implementation of care models for Long COVID is underway in several countries. Care models need to include both hospitalized and non-hospitalized patients. A complete care model for this population appears to design a care pathway integrating primary care, rehabilitation services and specialized clinics for medical

assessment. The entry into care pathways is likely possible through a centralized referral system. It is possible to design sustainable and equitable care pathways for Long COVID in Canada integrated in current infrastructure.Copyright The copyright holder for this preprint is the author/funder, who has granted medRxiv a license to display the preprint in perpetuity. It is made available under a CC-BY-NC-ND 4.0 International license.

Database: EMBASE

28. Global prevalence of post-acute sequelae of COVID-19 (PASC) or long COVID: A meta-analysis and systematic review

Author(s): Chen C.; Haupert S.R.; Zimmermann L.; Shi X.; Fritsche L.G.; Mukherjee B.

Source: ENG; Nov 2021

Publication Date: Nov 2021

Publication Type(s): Preprint

Abstract:

Importance: As SARS-CoV-2 pervades worldwide, considerable focus has been placed on the longer lasting health effects of the virus on the human host and on the anticipated healthcare needs.

Objective: The primary aim of this study is to examine the prevalence of post-acute sequelae of COVID-19 (PASC), commonly known as long COVID, across the world and to assess geographic heterogeneities through a systematic review and meta-analysis. A second aim is to provide prevalence estimates for individual symptoms that have been commonly reported as PASC, based on the existing literature.

Data Sources: PubMed, Embase, and iSearch for preprints from medRxiv, bioRxiv, SSRN, and others, were searched on July 5, 2021 with verification extending to August 12, 2021. Study Selection Studies written in English that consider PASC (indexed as ailments persisting at least 28 days after diagnosis or recovery for SARS-CoV-2 infection) and that examine corresponding prevalence, risk factors, duration, or associated symptoms were included. A total of 40 studies were included with 9 from North America, 1 from South America, 17 from Europe, 11 from Asia, and 2 from other regions.

Data Extraction and Synthesis: Data extraction was performed and separately cross-validated on the following data elements: title, journal, authors, date of publication, outcomes, and characteristics related to the study sample and study design. Using a random effects framework for meta-analysis with DerSimonian-Laird pooled inverse-variance weighted estimator, we provide an interval estimate of PASC prevalence, globally, and across regions. This meta-analysis considers variation in PASC prevalence by hospitalization status during the acute phase of infection, duration of symptoms, and specific symptom categories.

Main Outcomes and Measures: Prevalence of PASC worldwide and stratified by regions. Results Global estimated pooled PASC prevalence derived from the estimates presented in 29 studies was 0.43 (95% confidence interval [CI]: 0.35, 0.63), with a higher pooled PASC prevalence estimate of 0.57 (95% CI: 0.45, 0.68), among those hospitalized during the acute phase of infection. Females were estimated to have higher pooled PASC prevalence than males (0.49 [95% CI: 0.35, 0.63] versus 0.37 [95% CI: 0.24, 0.51], respectively). Regional pooled PASC prevalence estimates in descending order were 0.49 (95% CI: 0.21, 0.42) for Asia, 0.44 (95% CI: 0.30, 0.59) for Europe, and 0.30 (95% CI: 0.32, 0.66) for North America. Global pooled PASC prevalence for 30, 60, 90, and 120 days after index test positive date were estimated to be 0.36 (95% CI: 0.25, 0.48), 0.24 (95% CI: 0.13, 0.39), 0.29 (95% CI: 0.12, 0.57) and 0.51 (95% CI: 0.42, 0.59), respectively. Among commonly reported PASC symptoms, fatigue and dyspnea were reported most frequently, with a prevalence of 0.23 (95% CI: 0.13, 0.38) and 0.13 (95% CI: 0.09, 0.19), respectively.

Conclusions and Relevance: The findings of this meta-analysis suggest that, worldwide, PASC comprises a significant fraction (0.43 [95% CI: 0.35, 0.63]) of COVID-19 tested positive cases and more than half of hospitalized COVID-19 cases, based on available literature as of August 12, 2021. Geographic differences appear to exist, as lowest to highest PASC prevalence is observed for North America (0.30 [95% CI: 0.32, 0.66]) to Asia (0.49 [95% CI: 0.21, 0.42]). The case-mix across studies, in terms of COVID-19 severity during the acute phase of infection and variation in the clinical definition of PASC, may explain some of these differences. Nonetheless, the health effects of COVID-19 appear to be prolonged and can exert marked stress on the healthcare system, with 237M reported COVID-19 cases worldwide as of October 12, 2021.Copyright The copyright holder for this preprint is the author/funder, who has

Database: EMBASE

29. Hyperbaric oxygen therapy for the treatment of long COVID: early evaluation of a highly promising intervention

Author(s): Robbins T.; Magar A.; Patel K.; Sankar S.; Kyrou I.; Ali A.; Randeva H.S.; Clark C.; Gonevski M.; Baitule S.; Sharma K.

Source: Clinical Medicine, Journal of the Royal College of Physicians of London; Nov 2021; vol. 21 (no. 6)

Publication Date: Nov 2021

Publication Type(s): Article

Abstract:

Background: Long COVID is a common occurrence following COVID-19 infection. The most common symptom reported is fatigue. Limited interventional treatment options exist. We report the first evaluation of hyperbaric oxygen therapy (HBOT) for long COVID treatment.

Methods: A total of 10 consecutive patients received 10 sessions of HBOT to 2.4 atmospheres over 12 days. Each treatment session lasted 105 minutes, consisting of three 30-minute exposures to 100% oxygen, interspersed with 5-minute air breaks. Validated fatigue and cognitive scoring assessments were performed at day 1 and 10. Statistical analysis was with Wilcoxon signed-rank testing reported alongside effect sizes.

Results: HBOT yielded a statistically significant improvement in the Chalder fatigue scale (p=0.0059; d=1.75 (very large)), global cognition (p=0.0137; d=-1.07 (large)), executive function (p=0.0039; d=-1.06 (large)), attention (p=0.0020; d=-1.2 (very large)), information processing (p=0.0059; d=-1.25 (very large)) and verbal function (p=0.0098; d=-0.92 (large)).

Conclusion: Long COVID-related fatigue can be debilitating, and may affect young people who were previously in economic employment. The results presented here suggest potential benefits of HBOT, with statistically significant results following 10 sessions.

Database: EMBASE

30. Kidney outcomes in long COVID

Author(s): Bowe B.; Xie Y.; Xu E.; Al-Aly Z.

Source: Journal of the American Society of Nephrology; Nov 2021; vol. 32 (no. 11); p. 2851-2862

Publication Date: Nov 2021

Publication Type(s): Article

PubMedID: 34470828

Abstract:

Background: COVID-19 is associated with increased risk of post-acute sequelae involving pulmonary and extrapulmonary organ systems-referred to as long COVID. However, a detailed assessment of kidney outcomes in long COVID is not yet available.

Methods: We built a cohort of 1,726,683 US Veterans identified from March 1, 2020 to March 15, 2021, including 89,216 patients who were 30-day survivors of COVID-19 and 1,637,467 non-infected controls. We examined risks of AKI, eGFR decline, ESKD, and major adverse kidney events (MAKE). MAKE was defined as eGFR decline >=50%, ESKD, or all-cause mortality. We used inverse probability-weighted survival regression, adjusting for predefined demographic and health characteristics, and algorithmically selected high-dimensional covariates, including diagnoses, medications, and laboratory tests. Linear mixed models characterized intra-individual eGFR trajectory. Results Beyond the acute illness, 30-day survivors of COVID-19 exhibited a higher risk of AKI (aHR, 1.94; 95% CI, 1.86 to 2.04), eGFR decline >=30% (aHR, 1.25; 95% CI, 1.14 to 1.37), eGFR decline >=40% (aHR, 1.44; 95% CI, 1.37 to 1.51),

eGFR decline >=50% (aHR, 1.62; 95% CI, 1.51 to 1.74), ESKD (aHR, 2.96; 95% CI, 2.49 to 3.51), and MAKE (aHR, 1.66; 95% CI, 1.58 to 1.74). Increase in risks of post-acute kidney outcomes was graded according to the severity of the acute infection (whether patients were non-hospitalized, hospitalized, or admitted to intensive care). Compared with non-infected controls, 30-day survivors of COVID-19 exhibited excess eGFR decline (95% CI) of 23.26 (23.58 to 22.94), 25.20 (26.24 to 24.16), and 27.69 (28.27 to 27.12) ml/min per 1.73 m2 per year, respectively, in non-hospitalized, hospitalized, and those admitted to intensive care during the acute phase of COVID-19 infection. Conclusions: Patients who survived COVID-19 exhibited increased risk of kidney outcomes in the postacute phase of the disease. Post-acute COVID-19 care should include attention to kidney disease.

Database: EMBASE

31. Long-COVID syndrome associated with COVID-19 pneumonia

Author(s): Furusho N.; Kozu Y.; Ozoe R.; Nakagawa T.; Jinno Y.; Yokota S.; Kurosawa Y.; Morita H.; Hirata A.; Yamada S.; Fukuda A.; Hikichi M.; Hiranuma H.; Ito R.; Maruoka S.; Gon Y.

Source: Respirology; Nov 2021; vol. 26 ; p. 105

Publication Date: Nov 2021

Publication Type(s): Conference Abstract

Available at Respirology - from Wiley Online Library

Abstract:

Purpose: It has been reported that patients suffering from COVID-19 develop various physical sequelae even 2months after the onset. This time, we investigated the effect of hospitalization for COVID-19 pneumonia on clinical symptoms after discharge.

Method(s): Among those admitted to our hospital due to COVID- 19 pneumonia, consent for clinical research was obtained. 36 cases, face-to-face medical examination 3 months after discharge, physical examination, imaging test, respiratory function test The COVID-19 sequelae were evaluated by examining, blood tests, and the presence or absence of subjective symptoms using a questionnaire.

Result(s): The average length of stay was 22 days +/- 9.5 days, COVID-19 moderate I 26 cases, moderate II 11 cases, and severe 1 case. The average age was 64 years old, and the male-female ratio was 25:13, which was a large proportion of males. According to the questionnaire, muscle weakness was the most common in 22 cases (61%), dyspnea in 14 cases (39%), thinking ability in 12 cases (33%), sputum in 12 cases (33%), and fatigue 10 cases. of the cases (28%), 81% had some symptoms. The frequency of these symptoms did not depend on the length of hospital stay, and there was no significant difference between the two groups, mild / moderate I and moderate II / severe.

Discussion(s): COVID-19 pneumonia was found to have various symptoms due to sequelae even 3 months after discharge. In addition, since clinical symptoms were observed regardless of the length of hospital stay and severity, it was considered to be related to individual patient factors such as underlying diseases and inadequate immune response in addition to pneumonia. Also. In particular, the frequency of muscle weakness was high, suggesting that face-to-face rehabilitation could not be performed under the COVID-19 epidemic.

Database: EMBASE

32. Clinical coding of long COVID in English primary care: a federated analysis of 58 million patient records in situ using OpenSAFELY

Author(s):

Source: The British journal of general practice : the journal of the Royal College of General Practitioners; Nov 2021; vol. 71 (no. 712); p. 495

Publication Date: Nov 2021

Publication Type(s): Letter

PubMedID: 34711574

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from EBSCO (MEDLINE Complete)

Database: EMBASE

33. Supporting patients with long COVID return to work

Author(s): Madan I.; Briggs T.; Graham C.C.

Source: British Journal of General Practice; Nov 2021; vol. 71 (no. 712); p. 508-509

Publication Date: Nov 2021

Publication Type(s): Note

PubMedID: 34711562

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from EBSCO (MEDLINE Complete)

Database: EMBASE

34. The health system response to long COVID in England at a critical juncture

Author(s): Marshall-Andon T.; Walsh S.; Fuld J.; Pari A.A.A.

Source: British Journal of General Practice; Nov 2021; vol. 71 (no. 712); p. 485-486

Publication Date: Nov 2021

Publication Type(s): Editorial

PubMedID: 34711556

Available at The British journal of general practice : the journal of the Royal College of General Practitioners - from EBSCO (MEDLINE Complete)

Database: EMBASE

35. A mixed-methods systematic review of postviral fatigue interventions: Are there lessons for long Covid?

Author(s): Fowler-Davis S.; Platts K.; Thelwell M.; Harrop D.; Woodward A.

Source: PLoS ONE; Nov 2021; vol. 16 (no. 11)

Publication Date: Nov 2021

Publication Type(s): Review

Available at PloS one - from Europe PubMed Central - Open Access

Available at PloS one - from Public Library of Science (PLoS)

Available at PloS one - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at PloS one - from EBSCO (MEDLINE Complete)

Available at PloS one - from ProQuest (Health Research Premium) - NHS Version

Abstract:

Objectives: Fatigue syndromes have been widely observed following post-viral infection and are being recognised because of Covid19. Interventions used to treat and manage fatigue have been widely researched and this study aims to synthesise the literature associated with fatigue interventions to investigate the outcomes that may be applicable to 'long Covid'.

Method: The study was registered with PROSPERO (CRD42020214209) in October 2020 and five electronic databases were searched. Papers were screened, critically appraised and data extracted from studies that reported outcomes

of fatigue interventions for post-viral syndromes. The narrative synthesis includes statistical analysis associated with effectiveness and then identifies the characteristics of the interventions, including identification of transferable learning for the treatment of fatigue in long Covid. An expert panel supported critical appraisal and data synthesis.

Results: Over 7,000 research papers revealed a diverse range of interventions and fatigue outcome measures. Forty papers were selected for data extraction after final screening. The effectiveness of all interventions was assessed according to mean differences (MD) in measured fatigue severity between each experimental group and a control following the intervention, as well as standardised mean differences as an overall measure of effect size. Analyses identified a range of effects-from most effective MD -39.0 [95% CI -51.8 to -26.2] to least effective MD 42.28 [95% CI 33.23 to 51.34]-across a range of interventions implemented with people suffering varying levels of fatigue severity. Interventions were multimodal with a range of supportive therapeutic methods and varied in intensity and requirements of the participants. Those in western medical systems tended to be based on self- management and education principles (i.e., group cognitive behavioural therapy (CBT).

Conclusion: Findings suggest that the research is highly focussed on a narrow participant demographic and relatively few methods are effective in managing fatigue symptoms. Selected literature reported complex interventions using self-rating fatigue scales that report effect. Synthesis suggests that long Covid fatigue management may be beneficial when a) physical and psychological support, is delivered in groups where people can plan their functional response to fatigue; and b) where strengthening rather than endurance is used to prevent deconditioning; and c) where fatigue is regarded in the context of an individual's lifestyle and homebased activities are used.

Database: EMBASE

36. Cardiovascular abnormalities and mental health difficulties result in a reduced quality of life in the post-acute covid-19 syndrome

Author(s): Giurgi-Oncu C.; Bredicean C.; Tudoran C.; Tudoran M.; Pop G.N.; Pescariu S.A.; Giurgiuca A.

Source: Brain Sciences; Nov 2021; vol. 11 (no. 11)

Publication Date: Nov 2021

Publication Type(s): Article

Available at Brain sciences - from Europe PubMed Central - Open Access

Abstract:

(1) Background: Post-acute COVID-19 syndrome, characterized by persisting symptoms up to 12 weeks after the acute illness, impairs numerous people's physical and mental health.

(2) Methods: 64 inpatients and 79 outpatients, aged under 55 years, with post-acute COVID-19, were evaluated by a transthoracic echocardiography (TTE), mental health examination, Quality of Life (QoL) questionnaire, post-COVID-19 functional status scale (PCFS) and Hospital Anxiety and Depression Scale (HADS).

(3) Results: all inpatients had mild/moderate pulmonary injury during acute COVID-19, in contrast to 37.97% of outpatients. Inpatients who reported an average of 5 persisting symptoms, had, predominantly, level 3 PCFS and a median QoL of 62, compared to outpatients, who reported an average of 3 symptoms, level 1 PCFS and a median QoL score of 70. Increased pulmonary artery pressure was detected in 28.11% of inpatients, compared to 17.72% of outpatients, while diastolic dysfunction was diagnosed in 28.12% of inpatients, in comparison with 20.25% of outpatients ($p = 0.02$). Abnormal systolic function was assessed in 9.37% of inpatients, and 7.58% of outpatients. According to the HADS depression subscale, 46.87% of inpatients and 27.84% of outpatients had clinical depression. Concomitantly, anxiety was detected in 34.37% of inpatients and 40.5% of outpatients

(4) Conclusion(s): cardiovascular and mental health difficulties were frequently detected in patients with post-acute symptoms of COVID-19, which correlated with the number and intensity of persisting symptoms and reduced QoL scores.

Database: EMBASE

37. Characterizing non-critically ill COVID-19 survivors with and without in-hospital rehabilitation.

Author(s): Musheyev, Benjamin; Janowicz, Rebeca; Borg, Lara; Matarlo, Michael; Boyle, Hayle; Hou, Wei; Duong, Tim Q

Source: Scientific reports; Oct 2021; vol. 11 (no. 1); p. 21039

Publication Date: Oct 2021

Publication Type(s): Comparative Study Journal Article

PubMedID: 34702883

Available at Scientific reports - from Europe PubMed Central - Open Access

Available at Scientific reports - from Nature (Open Access)

Available at Scientific reports - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at Scientific reports - from ProQuest (Health Research Premium) - NHS Version

Abstract:

This study investigated pre-COVID-19 admission dependency, discharge assistive equipment, discharge medical follow-up recommendation, and functional status at hospital discharge of non-critically ill COVID-19 survivors, stratified by those with (N = 155) and without (N = 162) in-hospital rehabilitation. "Mental Status", intensive-care-unit (ICU) Mobility, and modified Barthel Index scores were assessed at hospital discharge. Relative to the non-rehabilitation patients, rehabilitation patients were older, had more comorbidities, worse pre-admission dependency, were discharged with more assistive equipment and supplemental oxygen, spent more days in the hospital, and had more hospital-acquired acute kidney injury, acute respiratory failure, and more follow-up referrals ($p < 0.05$ for all). Cardiology, vascular medicine, urology, and endocrinology were amongst the top referrals. Functional scores of many non-critically ill COVID-19 survivors were abnormal at discharge ($p < 0.05$) and were associated with pre-admission dependency ($p < 0.05$). Some functional scores were negatively correlated with age, hypertension, coronary artery disease, chronic kidney disease, psychiatric disease, anemia, and neurological disorders ($p < 0.05$). In-hospital rehabilitation providing restorative therapies and assisting discharge planning were challenging in COVID-19 circumstances. Knowledge of the functional status, discharge assistive equipment, and follow-up medical recommendations at discharge could enable appropriate and timely post-discharge care. Follow-up studies of COVID-19 survivors are warranted as many will likely have significant post-acute COVID-19 sequela.

Database: Medline

38. Building back better: Imagining an occupational therapy for a post-COVID-19 world.

Author(s): Whalley Hammell, Karen

Source: Australian occupational therapy journal; Oct 2021; vol. 68 (no. 5); p. 444-453

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34296445

Available at Australian occupational therapy journal - from Wiley Online Library

Available at Australian occupational therapy journal - from Unpaywall

Abstract:

INTRODUCTION: The COVID-19 pandemic, which has disrupted occupations and lives of people around the world, has simultaneously exposed deeply rooted social inequities and structural injustices that have negated the facile claim that "we're all in this together." But the pandemic has also opened up opportunities to imagine other ways of living and doing in the future. This paper imagines some possibilities for shaping occupational therapy's future practices and seeks to illustrate why it is both timely and necessary to re-imagine occupational therapy in 2021.

METHODS: Drawing from epidemiological research, the paper explores the inequitable impacts of COVID-19, environmental degradation, and multiple social determinants on people's real opportunities for health, wellbeing, and occupational engagement.

FINDINGS: Evidence presented in this paper challenges occupational therapy's individualised approach towards wellbeing and contests the limited parameters of occupations "that matter" that are prioritised and promoted within the profession. In response, the paper seeks to expose the specific, political, economic, and ableist ideology that has effectively shaped the occupational therapy profession's assumptions, models, theories, and the practices these inform.

CONCLUSION: Drawing from the "Build back better" approach to post-disaster recovery-with its dual attentions to wellbeing, equity, and inclusivity and to physical, social, cultural, economic, and environmental vulnerabilities-this paper imagines an occupational therapy for a post-COVID-19 world; an occupational therapy that takes seriously the premise that occupations and people are inseparable from their environments; a profession that no longer colludes in individualising problems that are inherently social or in depoliticising the systemic social and economic inequalities that create stress and illness; an occupational therapy that no longer promotes the values of neoliberal ableism; and an occupational therapy dedicated to expanding people's just and equitable opportunities to engage in meaningful occupations that contribute positively to their own wellbeing and the wellbeing of their communities.

Database: Medline

39. 'I Live a Kind of Shadow Life': Individual Experiences of COVID-19 Recovery and the Impact on Physical Activity Levels.

Author(s): Shelley, James; Hudson, Joanne; Mackintosh, Kelly A; Saynor, Zoe L; Duckers, Jamie; Lewis, Keir E; Davies, Gwyneth A; Berg, Ronan M G; McNarry, Melitta A

Source: International journal of environmental research and public health; Oct 2021; vol. 18 (no. 21)

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34769934

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at International journal of environmental research and public health - from ProQuest (Health Research Premium) - NHS Version

Abstract: Understanding of strategies to support individuals recovering from coronavirus disease 2019 (COVID-19) is limited. 'Long COVID' is a multisystem disease characterised by a range of respiratory, gastrointestinal, cardiovascular, neurological, and musculoskeletal symptoms extending beyond 12 weeks. The aim of this study was to explore individuals' experiences of recovering from COVID-19 to provide a better understanding of the acute and long-term impact of the disease on physical activity (PA). Individualised semi-structured interviews were conducted with 48 adults recovering from COVID-19 at 6-11 months post-infection. An inductive thematic analysis approach was used, reaching saturation at 14 interviews (10 female; 47 ± 7 years). Four overarching themes were identified: (i) Living with COVID-19, including managing activities of daily living; (ii) Dealing with the Unknown and self-management strategies; (iii) Re-introducing physical activity; and (iv) Challenges of returning to work. The return to PA, whether through activities of daily living, work or exercise, is often associated with the exacerbation of symptoms, presenting a range of challenges for individuals recovering from COVID-19. Individually tailored support is therefore required to address the unique challenges posed by COVID-19.

Database: Medline

40. The impact of Post-COVID-Syndrome on functioning - results from a community survey in patients after mild and moderate SARS-CoV-2-infections in Germany.

Author(s): Lemhöfer, Christina; Sturm, Christian; Loudovici-Krug, Dana; Best, Norman; Gutenbrunner, Christoph

Source: Journal of occupational medicine and toxicology (London, England); Oct 2021; vol. 16 (no. 1); p. 45

Publication Date: Oct 2021

Publication Type(s): Journal Article

PubMedID: 34620202

Available at Journal of occupational medicine and toxicology (London, England) - from BioMed Central

Available at Journal of occupational medicine and toxicology (London, England) - from Europe PubMed Central - Open Access

Available at Journal of occupational medicine and toxicology (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract:

BACKGROUND: In COVID-19 survivors a relatively high number of long-term symptoms have been observed. Besides impact on quality of life, these symptoms (now called Post-COVID-Syndrome) may have an impact on functioning and may also hinder to participation in social life in affected people. However, little is known about developing such syndrome a for patients with mild and moderate COVID-19 who did not need hospitalization or intensive care.

METHODS: A cross-sectional study in 1027 patients with mild or moderate COVID-19 was performed in two communities in Bavaria, Germany. The Rehabilitation-Needs-Survey (RehabNeS) including the Short Form 36 Health Survey (SF-36) on health-related quality of life, was used. Descriptive statistics were calculated.

RESULTS: In all, 97.5% of patients reported one symptom in the infection stage, such as fatigue, respiratory problems, limitations of the senses of taste and smell, fear and anxiety and other symptoms. In this time period, 84.1% of the participants experienced activity limitations and participation restrictions such as carrying out daily routines, handling stress, getting household tasks done, caring for/supporting others, and relaxing and leisure concerns. In all, 61.9% of participants reported persisting symptoms more than 3 months after infection. These were fatigue, sleep disturbances, respiratory problems, pain, fear and anxiety, and restrictions in movement; 49% of the participants reported activity limitations and participation restrictions. Predominately, these were handling stress, carrying out daily routines, looking after one's health, relaxing and leisure activities and doing house work. The impacts on quality of life and vocational performance were rather low.

CONCLUSION: The results show that long-term symptoms after mild and moderate COVID-19 are common and lead to limitations of activities and participation. However, it seems that in most cases they are not severe and do not lead to frequent or serious issues with quality of life or work ability.

Database: Medline

41. Is tele-rehabilitation superior to home exercise program in COVID-19 survivors following discharge from intensive care unit? - A study protocol of a randomized controlled trial.

Author(s): Turan, Zeynep; Topaloglu, Mahir; Ozyemisci Taskiran, Ozden

Source: Physiotherapy research international : the journal for researchers and clinicians in physical therapy; Oct 2021; vol. 26 (no. 4); p. e1920

Publication Date: Oct 2021

Publication Type(s): Journal Article Clinical Trial Protocol

PubMedID: 34237184

Available at Physiotherapy research international : the journal for researchers and clinicians in physical therapy - from Unpaywall

Abstract:

BACKGROUND AND PURPOSE: Evaluating the patients with COVID-19 following discharge from intensive care unit for pulmonary rehabilitation is crucial. It could be difficult to participate rehabilitation program due to transportation problems and cautions for contagiousness. Tele-rehabilitation could serve as a favorable alternative. The primary aim of this study is to investigate whether supervised telerehabilitation is superior to home exercise program regarding walking distance and secondarily muscle strength, muscle endurance, quality of life, physical activity level and perceived respiratory disability.

METHODS: This is a randomized assessor blinded control trial with two groups; tele-rehabilitation and home exercise. One hundred twenty-two COVID-19 survivors following discharge from intensive care unit will be allocated into two groups. The tele-rehabilitation group will receive breathing, aerobic, posture, stretching, strengthening exercises at their home under remote supervision via Internet for 3 days/week for 10 weeks. Home exercise group will receive the same program at their home on their own and they will be called weekly. The patients will be evaluated at the beginning, at the end of the program, 6th and 12th months following the rehabilitation. The primary outcome is the change in 6-minute walking distance; the secondary outcomes are changes in quality of life, physical function, health status, dyspnea and muscle strength.

IMPACT STATEMENT: This detailed description of the rehabilitation protocol will guide to plan the rehabilitation program and help how to design an efficacy study comparing different models of rehabilitation in COVID-19 survivors following discharge from intensive care unit with evidence-based contribution to the literature.

Database: Medline

42. Community-Based Primary Care Management of 'Long COVID': A Center of Excellence Model at NYC Health + Hospitals.

Author(s): List ; Long, Theodore G.

Source: American Journal of Medicine; Oct 2021; vol. 134 (no. 10); p. 1232-1235

Publication Date: Oct 2021

Publication Type(s): Periodical

PubMedID: NLM34270990

Available at The American journal of medicine - from Unpaywall

Database: CINAHL

43. Long COVID-19: Implications for Acute and Community Nursing Care.

Author(s): Peters ; Maygers, Joyce M.; Lantz-Garnish, Melissa D.; Slater, Tammy

Source: Maryland Nurse; Oct 2021; vol. 23 (no. 1); p. 18-20

Publication Date: Oct 2021

Publication Type(s): Trade Publication

Available at Maryland Nurse - from ProQuest (Health Research Premium) - NHS Version

Available at Maryland Nurse - from EBSCO (CINAHL with Full Text)

Database: CINAHL

44. Pericarditis after sars-cov-2 infection: Another pebble in the mosaic of long covid?

Author(s): Carubbi F.; Alunno A.; Leone S.; Di Gregorio N.; Mancini B.; Viscido A.; Del Pinto R.; Grassi D.; Ferri C.; Cicogna S.

Source: Viruses; Oct 2021; vol. 13 (no. 10)

Publication Date: Oct 2021

Publication Type(s): Article

PubMedID: 34696427

Available at Viruses - from Europe PubMed Central - Open Access

Abstract: With the emerging success of the COVID-19 vaccination programs, the incidence of acute COVID-19 will decrease. However, given the high number of people who contracted SARS-CoV-2 infection and recovered, we will be faced with a significant number of patients with persistent symptoms even months after their COVID-19 infection. In this setting, long COVID and its cardiovascular manifestations, including pericarditis, need to become a top priority for healthcare systems as a new chronic disease process. Concerning the relationship between COVID-19 and pericardial diseases, pericarditis appears to be common in the acute infection but rare in the postacute period, while small pericardial effusions may be relatively common in the postacute period of COVID-19. Here, we reported a series of 7 patients developing pericarditis after a median of 20 days from clinical and virological recovery from SARS-CoV-2 infection. We excluded specific identifiable causes of pericarditis, hence we speculate that these cases can be contextualized within the clinical spectrum of long COVID . All our patients were treated with a combination of colchicine and either ASA or NSAIDs, but four of them did not achieve a clinical response. When switched to glucocorticoids, these four patients recovered with no recurrence during drug tapering. Based on this observation and on the latency of pericarditis occurrence (a median of 20 days after a negative nasopharyngeal swab), could be suggested that post-COVID pericarditis may be linked to ongoing inflammation sustained by the persistence of viral nucleic acid without virus replication in the pericardium. Therefore, glucocorticoids may be a suitable treatment option in patients not responding or intolerant to conventional therapy and who require to counteract the pericardial inflammatory component rather than direct an acute viral injury to the pericardial tissue.

Database: EMBASE

45. Long COVID among people with MS: A prospective and longitudinal observational study of the UK MS Register

Author(s): Garjani A.; Evangelou N.; Middleton R.M.; Nicholas R.

Source: Multiple Sclerosis Journal; Oct 2021; vol. 27 (no. 2); p. 321-322

Publication Date: Oct 2021

Publication Type(s): Conference Abstract

Abstract:

Introduction: Neurological symptoms of COVID-19 such as fatigue and cognitive and mental health problems constitute the most common long-lasting symptoms of the infection (long COVID) and are also prevalent in MS.

Objective(s): To assess the prevalence of and factors associated with long COVID in people with MS (pwMS).

Aim(s): To understand how pwMS are affected by long COVID.

Method(s): This is an ongoing prospective and longitudinal community- based observational study in a national cohort of pwMS who have been reporting whether they have had symptoms suggestive of COVID-19 using the online questionnaire-based platform of the UK MS Register (UKMSR) since 17/03/2020. PwMS with COVID-19 have been regularly followed up to update their recovery status. Here, we report the findings until 19/03/2021. The UKMSR holds demographic and clinical data of registered pwMS and their pre-COVID-19 web-based Expanded Disability Status Scale (web-EDSS) and Hospital Anxiety and Depression Scale (HADS) scores (HADS scores >=11 were considered as probable anxiety or depression), which allowed us to examine the effects of these variables on recovery from COVID-19 using multivariable Cox regression analysis. The results will be updated prior to ECTRIMS 2021.

Result(s): Out of 1,096 pwMS with COVID-19, 599 updated their recovery status (participants); their median (interquartile range) age was 50 (41-57) years and 462 (77.1%) were women. 458 participants (76.5%) reported full recovery and 141 participants (23.5%) had persistent symptoms at their last follow-up. At least 181 participants (31.1%) had persistent symptoms for >=4 weeks and 76 (13.1 %) for >=12 weeks. Participants with higher web- EDSS scores (adjusted Hazard Ratio: 95% Confidence Interval, 0.92: 0.86-0.98), participants with anxiety and/or depression (0.70: 0.53-0.92), and women (0.78: 0.63-0.97) were less likely to recover from COVID-19. Taking DMTs was not associated with recovery from COVID-19 (0.92: 0.74-1.14).

Conclusion(s): The prevalence of long COVID in pwMS appears to be higher than the general population (13.3% >=4 weeks and 2.3% >=12 weeks), and those with higher levels of pre-COVID-19 neurological impairment or mental health problems are at higher risk of long COVID. We have previously shown that COVID-19 can also lead to MS exacerbations. These observations indicates that pwMS require individualised pathways for the effective management of their post-COVID-19 rehabilitation.

Database: EMBASE

46. Evaluation of liver alterations in patients with post-acute covid-19 syndrome-a pilot study

Author(s): Bende F.; Sporea I.; Fofiu R.; Baldea V.; Cotrau R.; Moga T.V.; Ghiuchici A.M.; Dancu G.M.; Popescu A.; Sirli R.L.D.

Source: United European Gastroenterology Journal; Oct 2021; vol. 9 ; p. 890

Publication Date: Oct 2021

Publication Type(s): Conference Abstract

Available at United European Gastroenterology Journal - from Europe PubMed Central - Open Access

Abstract:

Introduction: Patients suffering from the novel coronavirus disease 2019 (COVID-19) could experience several extrapulmonary involvements, including liver injury. As the COVID-19 infection continues, and more and more people get infected, we must consider the long-term consequences of this disease since several studies reported persisting symptoms after the infection [1].

Aims & Methods: This study aims to evaluate the presence of liver injury in patients with post-acute COVID-19 syndrome using a liver elastography (LE) study. 70 subjects recovering from COVID-19, and attending the hospital's specialized outpatient clinic for persisting symptoms (fatigue, shortness of breath, chest discomfort, palpitations, reduced exercise capacity) at 3 to 12 weeks after the acute illness were included in this study. All patients had a basal COVID-19 assessment (clinical exam, laboratory findings, thoracic computer-tomography), and subsequently, a clinical evaluation, laboratory tests and LE study. LE study included liver fibrosis, steatosis and viscosity evaluation in the same session using the Aixplorer MACH 30 system: ShearWave Elastography (2D-SWE.PLUS), Sound Speed Plane-wave UltraSound (SSp.PLUS), Attenuation Plane-wave UltraSound (Att.PLUS), and Viscosity Plane-wave UltraSound (Vi.PLUS). Transient Elastography (TE) with Controlled Attenuation Parameter (CAP) (FibroScan) were performed in the same session. Patients treated with antiviral therapy known to induce liver injury, patients with known liver disease and with contraindications for liver elastography, were excluded.

Result(s): 70 subjects (mean age 43.5+/-10.3 y, 41% males) with confirmed COVID-19 infection were included. According to the presence and severity of the pulmonary injury assessed on TCT at the initial evaluation, study subjects were divided into 2 subgroups (with and without pulmonary involvement). LS mean values by TE, Vi PLUS (PaS) and CAP (db/m) values were significantly higher in subjects with pulmonary injury (n= 35) compared to those without (5.27+/-1.58 vs. 4.36+/-1.54 kPa, p=0.017; 1.77+/-0.28 vs. 1.62+/-0.24 PaS, p=0.018; 300.51+/-79.88 vs. 262.60+/-61.83 db/m, p=0.029), while no differences were found between LS by 2D-SWE PLUS and Att. PLUS values (5.27+/-0.99 vs.4.89+/-0.82 kPa, p=0.084; 0.47+/-0.11 vs. 0.44+/-0.10 dB/cm/mHz, p=0.236). According to the time elapsed from the COVID-19 diagnosis until liver elastography evaluation, subjects were divided into two subgroups: with assessments performed in the first 8 weeks-38 patients and within 9 to 12 weeks-32 subjects. LS mean values by TE and Vi PLUS values were significantly higher in subjects evaluated in weeks 9-12 after diagnosis, compared with those evaluated earlier (5.23+/-2.01 vs. 4.47+/-1.09 kPa, p=0.048 for TE and 1.78+/-0.30 vs. 1.60+/-0.19 PaS, p=0.008 for Vi PLUS, respectively), while no differences were found between LS by 2D-SWE PLUS (5.19+/-0.88 vs. 4.92+/-0.93, p=0.26).

Conclusion(s): In patients with post-acute COVID-19 syndrome, persisting symptoms could be explained by residual lesions, whose severity is greater in more severe COVID-19 forms. These patients may be at risk of developing liver fibrosis and should be investigated in this regard in the first 12 weeks after the onset of the infection.

Database: EMBASE

47. Covid-19: Long covid must be recognised as occupational disease, says BMA.

Author(s): Mahase, Elisabeth

Source: BMJ (Clinical research ed.); Sep 2021; vol. 374 ; p. n2258

Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34521686

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

48. Long covid: One in seven children may still have symptoms 15 weeks after infection, data show.

Author(s): Wise, Jacqui

Source: BMJ (Clinical research ed.); Sep 2021; vol. 374 ; p. n2157

Publication Date: Sep 2021

Publication Type(s): Journal Article

PubMedID: 34470745

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

49. Understanding the burden of interstitial lung disease post-COVID-19: the UK Interstitial Lung Disease-Long COVID Study (UKILD-Long COVID).

Author(s): Wild, Jim M; Porter, Joanna C; Molyneaux, Philip L; George, Peter M; Stewart, Iain; Allen, Richard James; Aul, Raminder; Baillie, John Kenneth; Barratt, Shaney L; Beirne, Paul; Bianchi, Stephen M; Blaikley, John F; Brooke, Jonathan; Chaudhuri, Nazia; Collier, Guilhem; Denneny, Emma K; Docherty, Annemarie; Fabbri, Laura; Gibbons, Michael A; Gleeson, Fergus V; Gooptu, Bibek; Hall, Ian P; Hanley, Neil A; Heightman, Melissa; Hillman, Toby E; Johnson, Simon R; Jones, Mark G; Khan, Fasihul; Lawson, Rod; Mehta, Puja; Mitchell, Jane A; Platé, Manuela; Poinasamy, Krisnah; Quint, Jennifer K; Rivera-Ortega, Pilar; Semple, Malcolm; Simpson, A John; Smith, Djf; Spears, Mark; Spencer, LIsa G; Stanel, Stefan C; Thickett, David R; Thompson, A A Roger; Walsh, Simon Lf; Weatherley, Nicholas D; Weeks, Mark Everard; Wootton, Dan G; Brightling, Chris E; Chambers, Rachel C; Ho, Ling-Pei; Jacob, Joseph; Piper Hanley, Karen; Wain, Louise V; Jenkins, R Gisli

Source: BMJ open respiratory research; Sep 2021; vol. 8 (no. 1)

Publication Date: Sep 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34556492

Available at BMJ open respiratory research - from BMJ Journals

Available at BMJ open respiratory research - from Europe PubMed Central - Open Access

Available at BMJ open respiratory research - from HighWire - Free Full Text

Available at BMJ open respiratory research - from ProQuest (Health Research Premium) - NHS Version

Abstract:

INTRODUCTION: The COVID-19 pandemic has led to over 100 million cases worldwide. The UK has had over 4 million cases, 400 000 hospital admissions and 100 000 deaths. Many patients with COVID-19 suffer long-term symptoms,

predominantly breathlessness and fatigue whether hospitalised or not. Early data suggest potentially severe long-term consequence of COVID-19 is development of long COVID-19-related interstitial lung disease (LC-ILD).

METHODS AND ANALYSIS: The UK Interstitial Lung Disease Consortium (UKILD) will undertake longitudinal observational studies of patients with suspected ILD following COVID-19. The primary objective is to determine ILD prevalence at 12 months following infection and whether clinically severe infection correlates with severity of ILD. Secondary objectives will determine the clinical, genetic, epigenetic and biochemical factors that determine the trajectory of recovery or progression of ILD. Data will be obtained through linkage to the Post-Hospitalisation COVID platform study and community studies. Additional substudies will conduct deep phenotyping. The Xenon MRI investigation of Alveolar dysfunction Substudy will conduct longitudinal xenon alveolar gas transfer and proton perfusion MRI. The POST COVID-19 interstitial lung DiseasE substudy will conduct clinically indicated bronchoalveolar lavage with matched whole blood sampling. Assessments include exploratory single cell RNA and lung microbiomics analysis, gene expression and epigenetic assessment.

ETHICS AND DISSEMINATION: All contributing studies have been granted appropriate ethical approvals. Results from this study will be disseminated through peer-reviewed journals.

CONCLUSION: This study will ensure the extent and consequences of LC-ILD are established and enable strategies to mitigate progression of LC-ILD.

Database: Medline

50. Patients' Experiences of "Long COVID" in the Community and Recommendations for Improving Services: A Quality Improvement Survey.

Author(s): Razai ; Al-Bedaery, Roaa; Anand, Laxmi; Fitch, Katherine; Okechukwu, Hannah; Saraki, Teniola M.; Oakeshott, Pippa

Source: Journal of Primary Care & Community Health; Sep 2021 ; p. 1-5

Publication Date: Sep 2021

Publication Type(s): Academic Journal

Abstract:

Introduction: "Long COVID" is a multisystem disease that lasts for 4 or more weeks following initial symptoms of COVID-19. In the UK, at least 10% of patient report symptoms at 12 weeks following a positive COVID-19 test. The aims of this quality improvement survey were to explore patients' acute and post-acute "long" COVID-19 symptoms, their experiences of community services and their recommendations for improving these services.

Methods: Seventy patients diagnosed with COVID were randomly selected from 2 large socially and ethnically diverse primary care practices. Of those contactable by telephone, 85% (41/48) agreed to participate in the quality improvement survey. They were interviewed by telephone using a semi-structured questionnaire about community services for COVID-19 patients. Interviews lasted 10 to 15 minutes.

Results: Forty-nine percent of patients reported at least 1 post-acute COVID-19 symptom. The most common were severe fatigue (45%), breathlessness (30%), neurocognitive difficulties (such as poor memory), poor concentration and "brain fog" (30%), headaches (20%), and joint pain (20%). Many patients felt isolated and fearful, with scant information about community resources and little safety netting advice. Patients also expected more from primary care with over half (56%) recommending regular phone calls and follow up from healthcare staff as the most important approach in their recovery.

Conclusions: In line with patients' requests for more support, the practices now routinely refer patients with long COVID to an on-site social prescriber who explores how they are getting on, refers them to the GP or practice nurse when required, and sign posts them to support services in the community.

Database: CINAHL

51. Assessment of overactive bladder symptoms in deconditioned patients recovering from post-acute COVID-19 syndrome

Author(s): Khaliq F.; Wills M.; Dhar N.; Bitar A.; Dhar S.; Komnenov D.; Chancellor M.; Timar R.; Lucas S.

Source: Journal of Urology; Sep 2021; vol. 206

Publication Date: Sep 2021

Publication Type(s): Conference Abstract

Abstract:

INTRODUCTION AND OBJECTIVE: SARS-CoV2 infection that results in coronavirus disease (COVID-19) manifests in multiple organ systems, including the respiratory, the heart and circulatory as well as the gastrointestinal systems. However, little is known about its impact on the genitourinary system. Preliminary reports indicate some patients may develop a so-called "post-acute COVID-19 Syndrome or Long COVID," in which they experience persistent symptoms after recovering from their initial illness. The objective of the present investigation was to determine such impact on bladder function in patients who were treated for COVID-19 in the acute care hospital and then transferred to inpatient rehabilitation at the Rehabilitation Institute of Michigan for long-term care of deconditioning secondary to the viral illness.

METHOD(S): We used AUA Urology Care Foundation Overactive Bladder (OAB) Assessment Tool to screen all recovering COVID- 19 patients at the Rehabilitation Institute of Michigan from 6/1/2020 to 12/31/2020. Primary outcomes include patient responses to 5 symptom and 4 quality-of-life questions (QOL). We reported median symptom scores, as well as quality-of-life scores, based on new or worsening urinary symptoms stratified by sex.

RESULT(S): We identified 25 patients with de novo and 20 patients with worsening OAB symptoms. In our cohort, 20 patients with pre-existing OAB experienced no change in their symptoms. In patients with new onset OAB symptoms, the median symptom score was 17. Patients with worsening OAB symptoms had a median pre-COVID-19 symptom score of 8 which was exacerbated post-COVID-19 as indicated by the median symptom score of 19. The median total QOL score for both men and women was 19. In patients with worsening OAB, median pre-COVID-19 QOL score was 9 compared to median post-COVID-19 QOL score of 19. Median age was 66 (range 41-82).

CONCLUSION(S): In a population of deconditioned patient recovering from the COVID-19 infection at an inpatient rehabilitation facility we noted that OAB symptoms either occurred de novo or worsened, and QOL scores declined in the majority of patients (45 out of 65). Urological manifestation may be an important part of Post- Acute COVID-19 Syndrome that may impact quality of life and hinders full recovery from COVID-19. More research is needed to raise awareness of urologic impact of Long COVID and to further delineate the pathophysiological mechanisms of de novo or worsening urological symptoms in Post-Acute COVID-19 Syndrome.

Database: EMBASE

52. Future Challenges for Physical Therapy during and after the COVID-19 Pandemic: A Qualitative Study on the Experience of Physical Therapists in Spain.

Author(s): Palacios-Ceña, Domingo; Fernández-de-Las-Peñas, César; Florencio, Lidiane L; Palacios-Ceña, María; de-la-Llave-Rincón, Ana I

Source: International journal of environmental research and public health; Aug 2021; vol. 18 (no. 16)

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34444118

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at International journal of environmental research and public health - from ProQuest (Health Research Premium) - NHS Version

Abstract: This qualitative exploratory study addressed the perspectives of Spanish physical therapists (PTs) regarding (a) the organization of their work during the first wave of the pandemic; (b) their role within the intensive care units (ICUs); (c) management of COVID-19 survivors; (d) potential future challenges identified for the physical therapy profession. Thirty PTs who had worked at a National Public Hospital in Madrid during the first COVID-19 outbreak were recruited by purposeful sampling and snowball techniques. In-depth interviews and researcher field notes were used to collect data. Interviews were transcribed verbatim. An inductive thematic analysis was used to identify emerging themes. After identifying 1110 codes, four themes emerged. Throughout the first wave of the pandemic, the role and work of PTs in hospitals experienced a change. These changes took place at their organizational level, affecting the distribution of PTs in the hospital, and the role of PTs in front-line COVID units such as ICUs, as well as direct management of outpatients at the onset of the pandemic, and after discharge from the ICUs. This situation has led to PTs foreseeing challenges and developing new expectations concerning their role and the physical therapy profession in the future.

Database: Medline

53. 1-year outcomes in hospital survivors with COVID-19: a longitudinal cohort study.

Author(s): Huang, Lixue; Yao, Qun; Gu, Xiaoying; Wang, Qiongya; Ren, Lili; Wang, Yeming; Hu, Ping; Guo, Li; Liu, Min; Xu, Jiuyang; Zhang, Xueyang; Qu, Yali; Fan, Yanqing; Li, Xia; Li, Caihong; Yu, Ting; Xia, Jiaan; Wei, Ming; Chen, Li; Li, Yanping; Xiao, Fan; Liu, Dan; Wang, Jianwei; Wang, Xianguang; Cao, Bin

Source: Lancet (London, England); Aug 2021; vol. 398 (no. 10302); p. 747-758

Publication Date: Aug 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34454673

Available at Lancet (London, England) - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at Lancet (London, England) - from ProQuest (Health Research Premium) - NHS Version

Abstract:

BACKGROUND: The full range of long-term health consequences of COVID-19 in patients who are discharged from hospital is largely unclear. The aim of our study was to comprehensively compare consequences between 6 months and 12 months after symptom onset among hospital survivors with COVID-19.

METHODS: We undertook an ambidirectional cohort study of COVID-19 survivors who had been discharged from Jin Yin-tan Hospital (Wuhan, China) between Jan 7 and May 29, 2020. At 6-month and 12-month follow-up visit, survivors were interviewed with questionnaires on symptoms and health-related quality of life (HRQoL), and received a physical examination, a 6-min walking test, and laboratory tests. They were required to report their health-care use after discharge and work status at the 12-month visit. Survivors who had completed pulmonary function tests or had lung radiographic abnormality at 6 months were given the corresponding tests at 12 months. Non-COVID-19 participants (controls) matched for age, sex, and comorbidities were interviewed and completed questionnaires to assess prevalent symptoms and HRQoL. The primary outcomes were symptoms, modified British Medical Research Council (mMRC) score, HRQoL, and distance walked in 6 min (6MWD). Multivariable adjusted logistic regression models were used to evaluate the risk factors of 12-month outcomes.

FINDINGS: 1276 COVID-19 survivors completed both visits. The median age of patients was 59·0 years (IQR 49·0-67·0) and 681 (53%) were men. The median follow-up time was 185·0 days (IQR 175·0-198·0) for the 6-month visit and 349·0 days (337·0-361·0) for the 12-month visit after symptom onset. The proportion of patients with at least one sequelae symptom decreased from 68% (831/1227) at 6 months to 49% (620/1272) at 12 months (p<0·0001). The proportion of patients with dyspnoea, characterised by mMRC score of 1 or more, slightly increased from 26% (313/1185) at 6-month visit to 30% (380/1271) at 12-month visit (p=0·014). Additionally, more patients had anxiety or depression at 12-month visit (26% [331/1271] at 12-month visit vs 23% [274/1187] at 6-month visit; p=0·015). No significant difference on 6MWD was observed between 6 months and 12 months. 88% (422/479) of patients who were employed before COVID-19 had returned to their original work at 12 months. Compared with men, women had an odds ratio of 1·43 (95% CI 1·04-1·96) for fatigue or muscle weakness, 2·00 (1·48-2·69) for anxiety or depression,

and 2·97 (1·50-5·88) for diffusion impairment. Matched COVID-19 survivors at 12 months had more problems with mobility, pain or discomfort, and anxiety or depression, and had more prevalent symptoms than did controls.

INTERPRETATION: Most COVID-19 survivors had a good physical and functional recovery during 1-year follow-up, and had returned to their original work and life. The health status in our cohort of COVID-19 survivors at 12 months was still lower than that in the control population.

FUNDING: Chinese Academy of Medical Sciences Innovation Fund for Medical Sciences, the National Natural Science Foundation of China, the National Key Research and Development Program of China, Major Projects of National Science and Technology on New Drug Creation and Development of Pulmonary Tuberculosis, the China Evergrande Group, Jack Ma Foundation, Sino Biopharmaceutical, Ping An Insurance (Group), and New Sunshine Charity Foundation.

Database: Medline

54. Long covid clinics should be run as research hubs.

Author(s): McCartney, Margaret; Byng, Richard

Source: BMJ (Clinical research ed.); Aug 2021; vol. 374 ; p. n1996

Publication Date: Aug 2021

Publication Type(s): Editorial

PubMedID: 34417203

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Database: Medline

55. Risk-factors for re-admission and outcome of patients hospitalized with confirmed COVID-19.

Author(s): Green, Hefziba; Yahav, Dafna; Eliakim-Raz, Noa; Karny-Epstein, Nitzan; Kushnir, Shiri; Shochat, Tzippy; Tadmor, Boaz; Grossman, Alon

Source: Scientific reports; Aug 2021; vol. 11 (no. 1); p. 17416

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34465827

Available at Scientific reports - from Europe PubMed Central - Open Access

Available at Scientific reports - from Nature (Open Access)

Available at Scientific reports - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at Scientific reports - from ProQuest (Health Research Premium) - NHS Version

Abstract: Burden of COVID-19 on Hospitals across the globe is enormous and has clinical and economic implications. In this retrospective study including consecutive adult patients with confirmed SARS-CoV-2 who were admitted between 3/2020 and 30/9/20, we aimed to identify post-discharge outcomes and risk factors for re-admission among COVID-19 hospitalized patients. Mortality and re-admissions were documented for a median post discharge follow up of 59 days (interquartile range 28,161). Univariate and multivariate analyses of risk factors for re-admission were performed. Overall, 618 hospitalized COVID-19 patients were included. Of the 544 patient who were discharged, 10 patients (1.83%) died following discharge and 50 patients (9.2%) were re-admitted. Median time to re-admission was 7 days (interquartile range 3, 24). Oxygen saturation or treatment prior to discharge were not associated with re-admissions. Risk factors for re-admission in multivariate analysis included solid organ transplantation (hazard ratio [HR] 3.37, 95% confidence interval [CI] 2.73-7.5, p = 0.0028) and higher Charlson comorbidity index (HR 1.34, 95% CI 1.23-1.46, p < 0.0001). Mean age of post discharge mortality cases was 85.0 (SD 9.98), 80% of them had cognitive decline or needed help in ADL at baseline. In conclusion, re-admission rates of

hospitalized COVID-19 are fairly moderate. Predictors of re-admission are non-modifiable, including baseline comorbidities, rather than COVID-19 severity or treatment.

Database: Medline

56. Preexisting cardiorespiratory comorbidity does not preclude the success of multidisciplinary rehabilitation in post-COVID-19 patients.

Author(s): Maniscalco, Mauro; Fuschillo, Salvatore; Ambrosino, Pasquale; Martucci, Michele; Papa, Antimo; Matera, Maria Gabriella; Cazzola, Mario

Source: Respiratory medicine; Aug 2021; vol. 184 ; p. 106470

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34022502

Available at Respiratory medicine - from Unpaywall

Abstract: Patients recovering from coronavirus disease 2019 (COVID-19) may not return to a pre-COVID functional status and baseline levels of healthcare needs after discharge from acute care hospitals. Since the long-term outcomes of COVID-19 can be more severe in patients with underlying cardiorespiratory diseases, we aimed at verifying the impact of a preexisting cardiorespiratory comorbidity on multidisciplinary rehabilitation in post-COVID-19 patients. We enrolled 95 consecutive patients referring to the Pulmonary Rehabilitation Unit of Istituti Clinici Scientifici Maugeri Spa SB, IRCCS of Telese Terme, Benevento, Italy after being discharged from the COVID-19 acute care ward and after recovering from acute COVID-19 pneumonia. Forty-nine of them were not suffering from underlying comorbidities, while 46 had a preexisting cardiorespiratory disease. Rehabilitation induced statistically significant improvements in respiratory function, blood gases and the ability to exercise both in patients without any preexisting comorbidities and in those with an underlying cardiorespiratory disease. Response to the rehabilitation cycle tended to be greater in those without preexisting comorbidities, but DLco%-predicted was the only parameter that showed a significant greater improvement when compared to the response in the group of patients with underlying cardiorespiratory comorbidity. This study suggests that multidisciplinary rehabilitation may be useful in post-COVID-19 patients regardless of the presence of preexisting cardiorespiratory comorbidities.

Database: Medline

57. Diaphragm dysfunction in severe COVID-19 as determined by neuromuscular ultrasound.

Author(s): Farr, Ellen; Wolfe, Alexis R; Deshmukh, Swati; Rydberg, Leslie; Soriano, Rachna; Walter, James M; Boon, Andrea J; Wolfe, Lisa F; Franz, Colin K

Source: Annals of clinical and translational neurology; Aug 2021; vol. 8 (no. 8); p. 1745-1749

Publication Date: Aug 2021

Publication Type(s): Journal Article

PubMedID: 34247452

Available at Annals of clinical and translational neurology - from Europe PubMed Central - Open Access

Available at Annals of clinical and translational neurology - from ProQuest (Health Research Premium) - NHS Version

Available at Annals of clinical and translational neurology - from Unpaywall

Abstract: Many survivors from severe coronavirus disease 2019 (COVID-19) suffer from persistent dyspnea and fatigue long after resolution of the active infection. In a cohort of 21 consecutive severe post-COVID-19 survivors admitted to an inpatient rehabilitation hospital, 16 (76%) of them had at least one sonographic abnormality of diaphragm muscle structure or function. This corresponded to a significant reduction in diaphragm muscle contractility as represented by thickening ratio (muscle thickness at maximal inspiration/end-expiration) for the post-COVID-19 compared to non-COVID-19 cohorts. These findings may shed new light on neuromuscular

respiratory dysfunction as a contributor to prolonged functional impairments after hospitalization for post-COVID-19.

Database: Medline

58. Characterizing "long-COVID" using real world data: Post-discharge clinical course among patients initially hospitalized for COVID-19

Author(s): Eldridge E.; Corbett E.; Jones J.; Mahmood S.; Lin N.D.

Source: Pharmacoepidemiology and Drug Safety; Aug 2021; vol. 30 ; p. 165

Publication Date: Aug 2021

Publication Type(s): Conference Abstract

Available at Pharmacoepidemiology and Drug Safety - from Wiley Online Library

Abstract:

Background: Emerging evidence suggests that a growing number of patients experience long-term adverse effects from COVID-19. However, clinical characteristics of these late sequelae remain ill-defined. The increasing aggregation of real-world data (RWD) including electronic medical records (EMR) from multiple health systems represents an opportunity to characterize at scale the range of medically attended disease processes, symptoms, and predisposing factors that may benefit from treatment.

Objective(s): Among patients initially hospitalized for COVID-19, describe post-discharge clinical course including: (1) incidence and reason for readmission, (2) death, and (3) other health care utilization (COVID-19 testing and results, ambulatory encounters, pharmacotherapy course).

Method(s): This retrospective cohort analysis uses data from Health Catalyst's COVID-19 EMR Database, a longitudinal patient-level database containing data from 18 U.S. provider systems, containing >400,000 patients (as of 01/10/2021) with COVID-19 confirmed by lab test or ICD-10 diagnosis. We identified hospitalized patients with a primary discharge diagnosis of U07.1 who were discharged alive between 01/01/2020 - 09/10/2020. Eligible patients were followed for up to 90 days post-discharge. Associations between patient characteristics at index hospitalization and selected outcomes (readmission, death) were evaluated using proportional hazards regression.

Result(s): Among 10,315 patients hospitalized with COVID-19, 39.7% had a subsequent hospital-based interaction (12.4% readmitted; 27.3% with other hospital-based care) and 4.3% expired within 90 days post-discharge. Of patients readmitted, 41.7% were readmitted within 7 days, 32.4% within 8-30 days, and 26.0% within 31-90 days. Overall, compared with patients with no readmission, patients readmitted were older (mean: 65 vs 59 years) and more likely to be Black or African American (16.7% vs. 13.5%). Common ICD-10 diagnoses (at 3-digit level) at readmit included: Z79 Long-term drug therapy (70.8%), U07 COVID-19 (55.3%), E78 Disorders of lipoprotein metabolism (46.4%), D6* Anemias and Coagulation defects (47.3%), J96 Respiratory failure (44.9%), and J12 Viral pneumonia (35.8%).

Conclusion(s): Our findings illustrate that EMR-sourced RWD can be leveraged to characterize longitudinal impact of rapidly evolving emergent infectious diseases like COVID-19. Future work will expand to report on comparator series and identify subgroups at highest risk for long-term sequelae of COVID-19.

Database: EMBASE

59. Long COVID and the mental and physical health of children and young people: National matched cohort study protocol (the CLoCk study)

Author(s): Stephenson T.; Shafran R.; De Stavola B.; Rojas N.; Consortium C.; Aiano F.; Amin-Chowdhury Z.; McOwat K.; Simmons R.; Zavala M.; Ladhani S.N.

Source: BMJ Open; Aug 2021; vol. 11 (no. 8)

Publication Date: Aug 2021

Publication Type(s): Article

PubMedID: 34446502

Available at BMJ open - from BMJ Journals

Available at BMJ open - from Europe PubMed Central - Open Access

Available at BMJ open - from HighWire - Free Full Text

Available at BMJ open - from ProQuest (Health Research Premium) - NHS Version

Abstract:

Introduction: There is uncertainty surrounding the diagnosis, prevalence, phenotype, duration and treatment of Long COVID. This study aims to (A) describe the clinical phenotype of post-COVID symptomatology in children and young people (CYP) with laboratory-confirmed SARS-CoV-2 infection compared with test-negative controls, (B) produce an operational definition of Long COVID in CYP, and (C) establish its prevalence in CYP.

Methods and analysis: A cohort study of SARS-CoV-2-positive CYP aged 11-17 years compared with age, sex and geographically matched SARS-CoV-2 test-negative CYP. CYP aged 11-17 testing positive and negative for SARS-CoV-2 infection will be identified and contacted 3, 6, 12 and 24 months after the test date. Consenting CYP will complete an online questionnaire. We initially planned to recruit 3000 test positives and 3000 test negatives but have since extended our target. Data visualisation techniques will be used to examine trajectories over time for symptoms and variables measured repeatedly, separately by original test status. Summary measures of fatigue and mental health dimensions will be generated using dimension reduction methods such as latent variables/latent class/principal component analysis methods. Cross-tabulation of collected and derived variables against test status and discriminant analysis will help operationalise preliminary definitions of Long COVID. Ethics and dissemination Research Ethics Committee approval granted. Data will be stored in secure Public Health England servers or University College London's Data Safe Haven. Risks of harm will be minimised by providing information on where to seek support. Results will be published on a preprint server followed by journal publication, with reuse of articles under a CC BY licence. Data will be published with protection against identification when there are small frequencies involved. Trial registration number ISRCTN34804192; Pre-results. Copyright © Author(s) (or their employer(s)) 2021. Re-use permitted under CC BY. Published by BMJ.

Database: EMBASE

60. Swiss Recommendations for the Follow-Up and Treatment of Pulmonary Long COVID

Author(s): Funke-Chambour M.; Bridevaux P.-O.; Soccal P.M.; Clarenbach C.F.; Nicod L.P.; Von Garnier C.

Source: Respiration; Aug 2021; vol. 100 (no. 8); p. 826-841

Publication Date: Aug 2021

Publication Type(s): Review

PubMedID: 34091456

Available at Respiration; international review of thoracic diseases - from Unpaywall

Abstract:

Introduction: Emerging evidence suggests that long-term pulmonary symptoms and functional impairment occurs in a proportion of individuals following SARS-CoV-2 infection. Although the proportion of affected patients remains to be determined, physicians are increasingly being confronted with patients reporting respiratory symptoms and impairment beyond the acute phase of COVID-19. In face of limited evidence, the Swiss Society for Pulmonology established a working group to address this area of unmet need and formulated diagnostic and treatment recommendations for the care of patients with pulmonary long COVID (LC).

Method(s): The Swiss COVID Lung Study group and Swiss Society for Pulmonology (SSP) formulated 13 questions addressing the diagnosis and treatment of pulmonary LC. A survey within the SSP special interest groups involved in care of LC patients was conducted in Switzerland. A CORE process/Delphi-like process was used to formulate recommendations. Forty experienced pulmonologists replied to the first survey and 22 completed the second follow-up survey. Agreement of >=70% consensus led to formulation of a recommendation.

Result(s): The participants in the survey reached consensus and formulated a strong recommendation for regarding the following points. Patients hospitalized for COVID-19 should have a pulmonary assessment including pulmonary function tests. Symptomatic subjects affected by COVID-19, including those with mild disease, should benefit from a pulmonary follow-up. Persistent respiratory symptoms after COVID-19 should be investigated by a pulmonary follow-up including plethysmography, diffusion capacity measurement, and blood gases analysis. Individuals having suffered from COVID-19 and who present with persistent respiratory symptoms should be offered a rehabilitation. Additional questions were given moderateor weak recommendations for. The panel did not reach sufficient consensus for pharmacological therapy (e.g., therapy specifically targeting lung fibrosis) to formulate recommendations for LC drug treatment.

Conclusion(s): The formulated recommendations should serve as an interim guidance to facilitate diagnosis and treatment of patients with pulmonary LC. As new evidence emerges, these recommendations may need to be adapted.

Database: EMBASE

61. Role of the renin-angiotensin-aldosterone and kinin-kallikrein systems in the cardiovascular complications of COVID-19 and long COVID

Author(s): Cooper S.L.; Hill S.J.; Woolard J.; Boyle E.; Jefferson S.R.; Heslop C.R.A.; Mohan P.; Mohanraj G.G.J.; Sidow H.A.; Tan R.C.P.

Source: International Journal of Molecular Sciences; Aug 2021; vol. 22 (no. 15)

Publication Date: Aug 2021

Publication Type(s): Review

PubMedID: 34361021

Available at International journal of molecular sciences - from Europe PubMed Central - Open Access

Available at International journal of molecular sciences - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at International journal of molecular sciences - from ProQuest (Health Research Premium) - NHS Version

Available at International journal of molecular sciences - from Unpaywall

Abstract: Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is the virus responsible for the COVID-19 pandemic. Patients may present as asymptomatic or demonstrate mild to severe and life-threatening symptoms. Although COVID-19 has a respiratory focus, there are major cardiovascular complications (CVCs) associated with infection. The reported CVCs include myocarditis, heart failure, arrhythmias, thromboembolism and blood pressure abnormalities. These occur, in part, because of dysregulation of the Renin-Angiotensin-Aldosterone System (RAAS) and Kinin-Kallikrein System (KKS). A major route by which SARS-CoV-2 gains cellular entry is via the docking of the viral spike (S) protein to the membrane-bound angiotensin converting enzyme 2 (ACE2). The roles of ACE2 within the cardiovascular and immune systems are vital to ensure homeostasis. The key routes for the development of CVCs and the recently described long COVID have been hypothesised as the direct consequences of the viral S protein/ACE2 axis, downregulation of ACE2 and the resulting damage inflicted by the immune response. Here, we review the impact of COVID-19 on the cardiovascular system, the mechanisms by which dysregulation of the RAAS and KKS can occur following virus infection and the future implications for pharmacological therapies.

Database: EMBASE

62. Persistent Symptoms and Disability After COVID-19 Hospitalization: Data From a Comprehensive Telerehabilitation Program.

Author(s): Leite, Victor Figueiredo; Rampim, Danielle Bianchini; Jorge, Valeria Conceição; de Lima, Maria do Carmo Correia; Cezarino, Leandro Gonçalves; da Rocha, Cleber Nunes; Esper, Rodrigo Barbosa; Prevent Senior COVID-19 Rehabilitation Study

Source: Archives of physical medicine and rehabilitation; Jul 2021; vol. 102 (no. 7); p. 1308-1316

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 33711279

Available at Archives of physical medicine and rehabilitation - from Unpaywall

Abstract:

OBJECTIVE: To report symptoms, disability, and rehabilitation referral rates after coronavirus disease 2019 (COVID-19) hospitalization in a large, predominantly older population.

DESIGN: Cross-sectional study, with postdischarge telemonitoring of individuals hospitalized with confirmed COVID-19 at the first month after hospital discharge, as part of a comprehensive telerehabilitation program.

SETTING: Private verticalized health care network specialized in the older population.

PARTICIPANTS: Individuals hospitalized because of COVID-19. We included 1696 consecutive patients, aged 71.8±13.0 years old and 56.1% female. Comorbidities were present in 82.3% of the cases (N=1696).

INTERVENTIONS: Not applicable.

MAIN OUTCOME MEASURES: Dependence for basic activities of daily living (ADL) and instrumental activities of daily living (IADL) using the Barthel Index and Lawton's Scale. We compared the outcomes between participants admitted to the intensive care unit (ICU) vs those admitted to the ward.

RESULTS: Participant were followed up for 21.8±11.7 days after discharge. During postdischarge assessment, independence for ADL was found to be lower in the group admitted to the ICU than the ward group (61.1% [95% confidence interval (CI), 55.8%-66.2%] vs 72.7% [95% CI, 70.3%-75.1%], P<.001). Dependence for IADL was also more frequent in the ICU group (84.6% [95% CI, 80.4%-88.2%] vs 74.5%, [95% CI, 72.0%-76.8%], P<.001). Individuals admitted to ICU required more oxygen therapy (25.5% vs 12.6%, P<.001), presented more shortness of breath during routine (45.2% vs 34.5%, P<.001) and nonroutine activities (66.3% vs 48.2%, P<.001), and had more difficulty standing up for 10 minutes (49.3% vs 37.9% P<.001). The rehabilitation treatment plan consisted mostly of exercise booklets, which were offered to 65.5% of participants. The most referred rehabilitation professionals were psychologists (11.8%), physical therapists (8.0%), dietitians (6.8%), and speech-language pathologists (4.6%).

CONCLUSIONS: Individuals hospitalized because of COVID-19 present high levels of disability, dyspnea, dysphagia, and dependence for both ADL and IADL. Those admitted to the ICU presented more advanced disability parameters.

Database: Medline

63. Return-to-work, disabilities and occupational health in the age of COVID-19.

Author(s): Godeau, Diane; Petit, Audrey; Richard, Isabelle; Roquelaure, Yves; Descatha, Alexis

Source: Scandinavian journal of work, environment & health; Jul 2021; vol. 47 (no. 5); p. 408-409

Publication Date: Jul 2021

Publication Type(s): Letter Comment

PubMedID: 34003294

Available at Scandinavian journal of work, environment & health - from EBSCO (MEDLINE Complete)

Available at Scandinavian journal of work, environment & health - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at Scandinavian journal of work, environment & health - from ProQuest (Health Research Premium) - NHS Version

Available at Scandinavian journal of work, environment & health - from Unpaywall

Abstract: We have read with great interest the two editorials by Burdorf et al: "The COVID-19 pandemic: one year later - an occupational perspective" (1) and "The COVID-19 (Coronavirus) pandemic: consequences for occupational health" (2). The authors highlight the importance of the societal consequences of the outbreak and changes in the world of work to manage occupational health. The key points identified - such as individual socio-economic factors, psychological effects and occupations with highest risk of contamination - modify return-to-work approaches. It is

estimated that around 800 million people of working age worldwide were living with disabilities before the SARS-CoV-2 pandemic. In early January 2021, the cumulative COVID-19 hospitalisation rate reached 207.4/100 000 (18-49-year-olds) and 505.7/100 000 (50-64-year-olds), respectively, in the United States (3). In France, the hospitalisation rate was 411.5/100 000 across all ages (4). A recent cohort study of working-age men who were hospitalised for COVID-19 highlighted the long-term health consequences of such a disease (5). The SARS-CoV-2 pandemic creates new challenges for occupational health, shifting attention away from return-to-work after health problems to resuming work during an outbreak, dealing with lockdown, and taking special account of workers with vulnerabilities (6, 7). We recommend considering three different aspects of occupational medicine during a pandemic. Firstly, for most workers at high-risk of severe COVID-19, the issues of work disability and resuming work had never occurred before the epidemic. Recommendations such as physical and social distancing and wearing a facemask are highly advisable to protect against infection but may not be enough to enable some individuals to resume work. Therefore, decision-making requires individual comprehensive assessments of the underlying medical condition, the SARS-CoV-2 contamination risk associated with either regular work or teleworking, and vaccination opportunities. The second situation concerns workers who have suffered from COVID-19. Preliminary studies suggest that long recovery duration is related to high severity (7), but this is still a matter of debate for patients suffering from "long COVID-19" (5, 8, 9), a condition for which the long-term effects remain unknown. Any long-running recovery must be considered to be a potential sign of long COVID-19. These long-lasting syndromes occur among patients with severe symptoms but have also been reported independently of acute phase severity, hospitalisation and receiving medical oxygen (8, 9). Researchers worldwide are currently investigating such syndromes. Strategies promoting return to work for these workers will need to be implemented and could be similar to programmes developed for other chronic conditions. Moreover, numerous more serious sequelae following critical illness suggest the need for enhanced support by rehabilitation and occupational health specialists. Finally, the consequences of the epidemic must be evaluated over time for people who suffered from functional limitations before COVID-19 as their physical and mental condition may be modified by the epidemic and, specifically, the consequences of lockdown (10). In all of these situations, medical, social, financial and working contexts are key elements. In addition to a medical assessment, the use of scales such as the Work Ability Index (WAI) (11) or the Work Productivity and Activity Impairment (WPAI) (12) can help perform long-term follow-up and provide information about work capacity and workload. It also gives a "back to basics" perspective, urging politicians to move towards a `decent-work-for-all` policy, as advocated by the United Nation`s Sustainable Development Goal (SDG) 8, which the WHO has endorsed (13). References 1. Burdorf A, Porru F, Rugulies R. The COVID-19 pandemic: one year later - an occupational perspective. Scand J Work Environ Health - online first. https://doi.org/10.5271/sjweh.3956 2. Burdorf A, Porru F, Rugulies R. The COVID-19 (Coronavirus) pandemic: consequences for occupational health. Scand J Work Environ Health. 2020;46(3):229-230. https://doi:org/10.5271/sjweh.3893. 3. COVID-19 Hospitalizations [Internet]. Available from: https://gis.cdc.gov/grasp/COVIDNet/COVID19_3.html 4. COVID-19 in France, vaccine and allergy management in occupational setting. Descatha A et al. Arch Mal Prof Environ 2021. Accepted for publication. 5. Huang C, Huang L, Wang Y, Li X, Ren L, Gu X, et al. 6-month consequences of COVID-19 in patients discharged from hospital: a cohort study. Lancet 2021;397(10270):220-32 https://doi.org/10.1016/S0140-6736(20)32656-8 6. Shaw WS, Main CJ, Findley PA, Collie A, Kristman VL, Gross DP. Opening the Workplace After COVID-19: What Lessons Can be Learned from Return-to-Work Research? J Occup Rehabil. 2020;30(3):299-302. https://doi.org/10.1007/s10926-020-09908-9 7. Taylor T, Das R, Mueller K, Pransky G, Christian J, Orford R, et al. Safely Returning America to Work: Part I: General Guidance for Employers. J Occup Environ Med. 2020;62(9):771-9. https://doi.org/10.1097/JOM.0000000000001984 8. Carfì A, Bernabei R, Landi F, Gemelli Against COVID-19 Post-Acute Care Study Group. Persistent Symptoms in Patients After Acute COVID-19. JAMA. 2020;324(6):603-5. https://doi.org/10.1001/jama.2020.12603 9. Tenforde MW, Kim SS, Lindsell CJ, Billig Rose E, Shapiro NI, Files DC, et al. Symptom Duration and Risk Factors for Delayed Return to Usual Health Among Outpatients with COVID-19 in a Multistate Health Care Systems Network - United States, March-June 2020. MMWR Morb Mortal Wkly. 2020;69(30):993-8. https://doi.org/10.15585/mmwr.mm6930e1 10. Chudasama YV, Gillies CL, Zaccardi F, Coles B, Davies MJ, Seidu S, et al. Impact of COVID-19 on routine care for chronic diseases: A global survey of views from healthcare professionals. Diabetes Metab Syndr. 2020;14(5):965-7. https://doi.org/10.1016/j.dsx.2020.06.042 11. Tuomi K. Eleven-year follow-up of aging workers. Scand J Work Environ Health. 1997;23(1):1-71. 12. Reilly MC, Zbrozek AS, Dukes EM. The validity and reproducibility of a work productivity and activity impairment instrument. PharmacoEconomics. 1993;4(5):353-65. https://doi.org/10.2165/00019053-199304050-00006 13. Organization WH. Health in the 2030 agenda for sustainable development. Sixty-Ninth World Health Assembly. Document A. 2016, p69.

Database: Medline

64. A Global Overview of COVID-19 Research in the Pediatric Field: Bibliometric Review.

Author(s): Monzani, Alice; Tagliaferri, Francesco; Bellone, Simonetta; Genoni, Giulia; Rabbone, Ivana

Source: JMIR pediatrics and parenting; Jul 2021; vol. 4 (no. 3); p. e24791

Publication Date: Jul 2021

Publication Type(s): Review Journal Article

PubMedID: 34081597

Available at JMIR pediatrics and parenting - from ProQuest (Health Research Premium) - NHS Version

Available at JMIR pediatrics and parenting - from Unpaywall

Abstract:

BACKGROUND: Since the beginning of the COVID-19 pandemic, a great number of papers have been published in the pediatric field.

OBJECTIVE: We aimed to assess research around the globe on COVID-19 in the pediatric field by bibliometric analysis, identifying publication trends and topic dissemination and showing the relevance of publishing authors, institutions, and countries.

METHODS: The Scopus database was comprehensively searched for all indexed documents published between January 1, 2020, and June 11, 2020, dealing with COVID-19 in the pediatric population (0-18 years). A machine learning bibliometric methodology was applied to evaluate the total number of papers and citations, journal and publication types, the top productive institutions and countries and their scientific collaboration, and core keywords.

RESULTS: A total of 2301 papers were retrieved, with an average of 4.8 citations per article. Of this, 1078 (46.9%) were research articles, 436 (18.9%) were reviews, 363 (15.8%) were letters, 186 (8.1%) were editorials, 7 (0.3%) were conference papers, and 231 (10%) were categorized as others. The studies were published in 969 different journals, headed by The Lancet. The retrieved papers were published by a total of 12,657 authors from 114 countries. The most productive countries were the United States, China, and Italy. The four main clusters of keywords were pathogenesis and clinical characteristics (keyword occurrences: n=2240), public health issues (n=352), mental health (n=82), and therapeutic aspects (n=70).

CONCLUSIONS: In the pediatric field, a large number of articles were published within a limited period on COVID-19, testifying to the rush to spread new findings on the topic in a timely manner. The leading authors, countries, and institutions evidently belonged to the most impacted geographical areas. A focus on the pediatric population was often included in general articles, and pediatric research about COVID-19 mainly focused on the clinical features, public health issues, and psychological impact of the disease.

Database: Medline

65. Long covid-mechanisms, risk factors, and management.

Author(s): Crook, Harry; Raza, Sanara; Nowell, Joseph; Young, Megan; Edison, Paul

Source: BMJ (Clinical research ed.); Jul 2021; vol. 374 ; p. n1648

Publication Date: Jul 2021

Publication Type(s): Review Journal Article

PubMedID: 34312178

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from Unpaywall

Abstract: Since its emergence in Wuhan, China, covid-19 has spread and had a profound effect on the lives and health of people around the globe. As of 4 July 2021, more than 183 million confirmed cases of covid-19 had been recorded worldwide, and 3.97 million deaths. Recent evidence has shown that a range of persistent symptoms can

remain long after the acute SARS-CoV-2 infection, and this condition is now coined long covid by recognized research institutes. Studies have shown that long covid can affect the whole spectrum of people with covid-19, from those with very mild acute disease to the most severe forms. Like acute covid-19, long covid can involve multiple organs and can affect many systems including, but not limited to, the respiratory, cardiovascular, neurological, gastrointestinal, and musculoskeletal systems. The symptoms of long covid include fatigue, dyspnea, cardiac abnormalities, cognitive impairment, sleep disturbances, symptoms of post-traumatic stress disorder, muscle pain, concentration problems, and headache. This review summarizes studies of the long term effects of covid-19 in hospitalized and non-hospitalized patients and describes the persistent symptoms they endure. Risk factors for acute covid-19 and long covid and possible therapeutic options are also discussed.

Database: Medline

66. Long-term Symptoms After SARS-CoV-2 Infection in Children and Adolescents.

Author(s): Radtke, Thomas; Ulyte, Agne; Puhan, Milo A; Kriemler, Susi

Source: JAMA; Jul 2021

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34264266

Available at JAMA - from EBSCO (MEDLINE Complete)

Available at JAMA - from Unpaywall

Database: Medline

67. Covid-19: Long covid cases are underreported in GP records, research suggests.

Author(s): Wise, Jacqui

Source: BMJ (Clinical research ed.); Jul 2021; vol. 374 ; p. n1685

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34215626

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from Unpaywall

Database: Medline

68. The road to addressing Long Covid.

Author(s): Alwan, Nisreen A

Source: Science (New York, N.Y.); Jul 2021; vol. 373 (no. 6554); p. 491-493

Publication Date: Jul 2021

Publication Type(s): Journal Article Research Support, Non-u.s. Gov't

PubMedID: 34326224

Available at Science (New York, N.Y.) - from Unpaywall

Database: Medline

69. Interventions for the treatment of persistent post-COVID-19 olfactory dysfunction.

Author(s): O'Byrne, Lisa; Webster, Katie E; MacKeith, Samuel; Philpott, Carl; Hopkins, Claire; Burton, Martin J

Source: The Cochrane database of systematic reviews; Jul 2021; vol. 7 ; p. CD013876

Publication Date: Jul 2021

Publication Type(s): Journal Article Systematic Review Research Support, Non-u.s. Gov't

PubMedID: 34291813

Available at The Cochrane database of systematic reviews - from Cochrane Collaboration (Wiley)

Abstract:

BACKGROUND: Olfactory dysfunction is an early and sensitive marker of COVID-19 infection. Although self-limiting in the majority of cases, when hyposmia or anosmia persists it can have a profound effect on quality of life. Little guidance exists on the treatment of post-COVID-19 olfactory dysfunction, however several strategies have been proposed from the evidence relating to the treatment of post-viral anosmia (such as medication or olfactory training).

OBJECTIVES: To assess the effects (benefits and harms) of interventions that have been used, or proposed, to treat persisting olfactory dysfunction due to COVID-19 infection. A secondary objective is to keep the evidence up-to-date, using a living systematic review approach.

SEARCH METHODS: The Cochrane ENT Information Specialist searched the Cochrane COVID-19 Study Register; Cochrane ENT Register; CENTRAL; Ovid MEDLINE; Ovid Embase; Web of Science; ClinicalTrials.gov; ICTRP and additional sources for published and unpublished studies. The date of the search was 16 December 2020.

SELECTION CRITERIA: Randomised controlled trials including participants who had symptoms of olfactory disturbance following COVID-19 infection. Only individuals who had symptoms for at least four weeks were included in this review. Studies compared any intervention with no treatment or placebo.

DATA COLLECTION AND ANALYSIS: We used standard Cochrane methodological procedures. Primary outcomes were the recovery of sense of smell, disease-related quality of life and serious adverse effects. Secondary outcomes were the change in sense of smell, general quality of life, prevalence of parosmia and other adverse effects (including nosebleeds/bloody discharge). We used GRADE to assess the certainty of the evidence for each outcome.

MAIN RESULTS: We included one study with 18 participants, which compared the use of a 15-day course of oral steroids combined with nasal irrigation (consisting of an intranasal steroid/mucolytic/decongestant solution) with no intervention. Psychophysical testing was used to assess olfactory function at baseline, 20 and 40 days. Systemic corticosteroids plus intranasal steroid/mucolytic/decongestant compared to no intervention Recovery of sense of smell was assessed after 40 days (25 days after cessation of treatment) using the Connecticut Chemosensory Clinical Research Center (CCCRC) score. This tool has a range of 0 to 100, and a score of ≥ 90 represents normal olfactory function. The evidence is very uncertain about the effect of this intervention on recovery of the sense of smell at one to three months (5/9 participants in the intervention group scored ≥ 90 compared to 0/9 in the control group; risk ratio (RR) 11.00, 95% confidence interval (CI) 0.70 to 173.66; 1 study; 18 participants; very low-certainty evidence). Change in sense of smell was assessed using the CCCRC score at 40 days. This study reported an improvement in sense of smell in the intervention group from baseline (median improvement in CCCRC score 60, interquartile range (IQR) 40) compared to the control group (median improvement in CCCRC score 30, IQR 25) (1 study; 18 participants; very low-certainty evidence). Serious adverse events andother adverse events were not identified in any participants of this study; however, it is unclear how these outcomes were assessed and recorded (1 study; 18 participants; very low-certainty evidence).

AUTHORS' CONCLUSIONS: There is very limited evidence available on the efficacy and harms of treatments for persistent olfactory dysfunction following COVID-19 infection. However, we have identified other ongoing trials in this area. As this is a living systematic review we will update the data regularly, as new results become available. For this (first) version of the living review we identified only one study with a small sample size, which assessed systemic steroids and nasal irrigation (intranasal steroid/mucolytic/decongestant). However, the evidence regarding the benefits and harms from this intervention to treat persistent post-COVID-19 olfactory dysfunction is very uncertain.

Database: Medline

70. Dynamic changes of functional fitness, antibodies to SARS-CoV-2 and immunological indicators within 1 year after discharge in Chinese health care workers with severe COVID-19: a cohort study.

Author(s): Xiong, Lijuan; Li, Qian; Cao, Xiongjing; Xiong, Huangguo; Huang, Ming; Yang, Fengwen; Liu, Qingquan; Meng, Daquan; Zhou, Mei; Wang, Gang; Tong, Jun; Chen, Tengfei; Zhang, Yanzhao; He, Xinliang; Fan, Yunzhou; Zhang, Yupeng; Tang, Liang; Jin, Yang; Xia, Jiahong; Hu, Yu

Source: BMC medicine; Jul 2021; vol. 19 (no. 1); p. 163

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34256745

Available at BMC medicine - from BioMed Central

Available at BMC medicine - from Europe PubMed Central - Open Access

Available at BMC medicine - from ProQuest (Health Research Premium) - NHS Version

Available at BMC medicine - from EBSCO (MEDLINE Complete)

Available at BMC medicine - from Unpaywall

Abstract:

BACKGROUND: Few studies had described the health consequences of patients with coronavirus disease 2019 (COVID-19) especially in those with severe infections after discharge from hospital. Moreover, no research had reported the health consequences in health care workers (HCWs) with COVID-19 after discharge. We aimed to investigate the health consequences in HCWs with severe COVID-19 after discharge from hospital in Hubei Province, China.

METHODS: We conducted an ambidirectional cohort study in "Rehabilitation Care Project for Medical Staff Infected with COVID-19" in China. The participants were asked to complete three physical examinations (including the tests of functional fitness, antibodies to SARS-CoV-2 and immunological indicators) at 153.4 (143.3, 164.8), 244.3 (232.4, 259.1), and 329.4 (319.4, 339.3) days after discharge, respectively. Mann-Whitney U test, Kruskal-Wallis test, t test, one-way ANOVA, χ2, and Fisher's exact test were used to assess the variance between two or more groups where appropriate.

RESULTS: Of 333 HCWs with severe COVID-19, the HCWs' median age was 36.0 (31.0, 43.0) years, 257 (77%) were female, and 191 (57%) were nurses. Our research found that 70.4% (114/162), 48.9% (67/137), and 29.6% (37/125) of the HCWs with severe COVID-19 were considered to have not recovered their functional fitness in the first, second, and third functional fitness tests, respectively. The HCWs showed improvement in muscle strength, flexibility, and agility/dynamic balance after discharge in follow-up visits. The seropositivity of IgM (17.0% vs. 6.6%) and median titres of IgM (3.0 vs. 1.4) and IgG (60.3 vs. 45.3) in the third physical examination was higher than that in the first physical examination. In the third physical examination, there still were 42.1% and 45.9% of the HCWs had elevated levels of IL-6 and TNF-α, and 11.9% and 6.3% of the HCWs had decreased relative numbers of CD3+ T cells and CD4+ T cells.

CONCLUSION: The HCWs with severe COVID-19 showed improvement in functional fitness within 1 year after discharge, active intervention should be applied to help their recovery if necessary. It is of vital significance to continue monitoring the functional fitness, antibodies to SARS-CoV-2 and immunological indicators after 1 year of discharge from hospital in HCWs with severe COVID-19.

Database: Medline

71. Use of the Barthel Index to Assess Activities of Daily Living before and after SARS-COVID 19 Infection of Institutionalized Nursing Home Patients.

Author(s): Trevissón-Redondo, Bibiana; López-López, Daniel; Pérez-Boal, Eduardo; Marqués-Sánchez, Pilar; Liébana-Presa, Cristina; Navarro-Flores, Emmanuel; Jiménez-Fernández, Raquel; Corral-Liria, Inmaculada; Losa-Iglesias, Marta; Becerro-de-Bengoa-Vallejo, Ricardo

Source: International journal of environmental research and public health; Jul 2021; vol. 18 (no. 14)

Publication Date: Jul 2021

Publication Type(s): Journal Article

PubMedID: 34299709

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from Unpaywall

Abstract: The objective of the present study was to evaluate the activities of daily living (ADLs) using the Barthel Index before and after infection with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and also to determine whether or not the results varied according to gender. The ADLs of 68 cohabiting geriatric patients, 34 men and 34 women, in two nursing homes were measured before and after SARS-CoV-2 (Coronavirus 2019 (COVID-19)) infection. COVID-19 infection was found to affect the performance of ADLs in institutionalized elderly in nursing homes, especially in the more elderly subjects, regardless of sex. The COVID-19 pandemic, in addition to having claimed many victims, especially in the elderly population, has led to a reduction in the abilities of these people to perform their ADLs and caused considerable worsening of their quality of life even after recovering from the disease.

Database: Medline

72. Follow-up of functional exercise capacity in patients with COVID-19: It is improved by telerehabilitation.

Author(s): Martin, Ines; Braem, Fred; Baudet, Lia; Poncin, William; Fizaine, Stéphane; Aboubakar, Frank; Froidure, Antoine; Pilette, Charles; Liistro, Giuseppe; De Greef, Julien; Yildiz, Halil; Pothen, Lucie; Yombi, Jean-Cyr; Belkhir, Leïla; Reychler, Gregory

Source: Respiratory medicine; Jul 2021; vol. 183 ; p. 106438

Publication Date: Jul 2021

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article Observational Study

PubMedID: 33964817

Available at Respiratory medicine - from Unpaywall

Abstract:

BACKGROUND: The impact of the COVID-19 pandemic on functional exercise capacity seemed quickly clinically evident. The objective of this study was to assess the functional exercise capacity of patients with severe COVID-19 and to evaluate the effect of a telerehabilitation program in the specific context of the COVID-19 pandemic.

METHOD: Patients hospitalized for severe or critical COVID-19 were recruited. The functional exercise capacity (1-min sit-to-stand test (STST)) was prospectively quantified at discharge. A telerehabilitation program was then proposed. A control group was composed with the patients refusing the program.

RESULTS: At discharge, none of the 48 recruited patients had a STST higher than the 50th percentile and 77% of them were below the 2.5th percentile. SpO2 was 92.6 ± 3.0% after STST and 15 patients had oxygen desaturation. After 3-months of follow-up, the number of repetitions during STST significantly increased either in telerehabilitation ($n = 14$) ($p < 0.001$) or in control groups ($n = 13$) ($p = 0.002$) but only one patient had a result higher than the 50th percentile (in Telerehabilitation group) and 37% of them were still under the 2.5th percentile for this result. The improvement was significantly and clinically greater after the telerehabilitation program ($p = 0.005$). No adverse events were reported by the patients during the program.

CONCLUSIONS: Patients hospitalized for COVID-19 have a low functional exercise capacity at discharge and the recovery after three months is poor. The feasibility and the effect of a simple telerehabilitation program were verified, this program being able to substantially improve the functional recovery after three months.

Database: Medline

73. Serum Metabolic Profile in Patients With Long-Covid (PASC) Syndrome: Clinical Implications

Author(s): Pasini E.; Corsetti G.; Romano C.; Scarabelli T.M.; Chen-Scarabelli C.; Saravolatz L.; Dioguardi F.S.

Source: Frontiers in Medicine; Jul 2021; vol. 8

Publication Date: Jul 2021

Publication Type(s): Article

Available at Frontiers in medicine - from Europe PubMed Central - Open Access

Available at Frontiers in medicine - from Unpaywall

Abstract:

Background: Many patients who have been suffering by Covid-19 suffer of long-Covid syndrome, with symptoms of fatigue and muscular weakness that characterize post-acute sequelae SARS-CoV-2 infection (PASC). However, there is limited knowledge about the molecular pathophysiology, and about the serum profile of these patients.

Method(s): We studied the blood serum profile of 75 selected patients, with previous confirmed Covid-19, 2 months after hospital discharge, who reported new-onset fatigue, muscle weakness and/or dyspnea not present prior to the virus infection and independently from concomitant diseases and/or clinical conditions.

Result(s): All patients had very high serum concentrations of ferritin and D-Dimer. 87 and 72% of patients had clinically significant low levels of hemoglobin and albumin, respectively. Seventy three percentage had elevations in erythrocyte sedimentation rate and CRP. Twenty seven percentage had elevations in LDH.

Conclusion(s): The co-existence of patient symptoms along with blood markers of coagulation, protein disarrangement and inflammation suggests ongoing alterations in the metabolism, promoting an inflammatory/hypercatabolic state which maintains a vicious circles implicated in the persistence of PASC. The persistence of altered D-Dimer levels raises the possibility of long-term risks of thromboembolic disease. All these markers levels should be accurately evaluated in the long-term follow-up, with individualized consideration for prophylactic nutritional, anti-inflammatory and/or anticoagulant therapy if indicated.© Copyright © 2021 Pasini, Corsetti, Romano, Scarabelli, Chen-Scarabelli, Saravolatz and Dioguardi.

Database: EMBASE

74. Long COVID - metabolic risk factors and novel therapeutic management

Author(s): Khunti K.; Davies M.J.; Kosiborod M.N.; Nauck M.A.

Source: Nature Reviews Endocrinology; Jul 2021; vol. 17 (no. 7); p. 379-380

Publication Date: Jul 2021

Publication Type(s): Note

PubMedID: 33875855

Available at Nature reviews. Endocrinology - from Unpaywall

Database: EMBASE

75. Outcomes of a COVID-19 recovery program for patients hospitalized with SARS-CoV-2 infection in New York City: A prospective cohort study.

Author(s): Hameed, Farah; Palatulan, Eugene; Jaywant, Abhishek; Said, Rami; Lau, Corinna; Sood, Vandana; Layton, Aimee; Gellhorn, Alfred

Source: PM & R : the journal of injury, function, and rehabilitation; Jun 2021; vol. 13 (no. 6); p. 609-617

Publication Date: Jun 2021

Publication Type(s): Journal Article

PubMedID: 33599057

Available at PM & R : the journal of injury, function, and rehabilitation - from Unpaywall

Abstract:

BACKGROUND: In the spring of 2020, New York City was an epicenter of coronavirus disease 2019 (COVID-19). The post-hospitalization needs of COVID-19 patients were not understood and no outpatient rehabilitation programs had been described.

OBJECTIVE: To evaluate whether a virtual rehabilitation program would lead to improvements in strength and cardiopulmonary endurance when compared with no intervention in patients discharged home with persistent COVID-19 symptoms.

DESIGN: Prospective cohort study.

SETTING: Academic medical center.

PATIENTS: Between April and July 2020, 106 patients discharged home with persistent COVID-19 symptoms were treated. Forty-four patients performed virtual physical therapy (VPT); 25 patients performed home physical therapy (HPT); 17 patients performed independent exercise program (IE); and 20 patients did not perform therapy.

INTERVENTIONS: All patients were assessed by physiatry. VPT sessions were delivered via secure Health Insurance Portability and Accountability Act compliant telehealth platform 1-2 times/week. Patients were asked to follow up 2 weeks after initial evaluation.

MAIN OUTCOME MEASURES: Primary study outcome measures were the change in lower body strength, measured by the 30-second sit-to-stand test; and the change in cardiopulmonary endurance, measured by the 2-minute step test.

RESULTS: At the time of follow-up, 65% of patients in the VPT group and 88% of patients in the HPT group met the clinically meaningful difference for improvement in sit-to-stand scores, compared with 50% and 17% of those in the IE group and no-exercise group (P = .056). The clinically meaningful difference for improvement in the step test was met by 74% of patients in the VPT group and 50% of patients in the HPT, IE, and no-exercise groups (P = .12).

CONCLUSIONS: Virtual outpatient rehabilitation for patients recovering from COVID-19 improved lower limb strength and cardiopulmonary endurance, and an HPT program improved lower limb strength. Virtual rehabilitation seems to be an efficacious method of treatment delivery for recovering COVID-19 patients.

Database: Medline

76. Swallowing and Voice Outcomes in Patients Hospitalized With COVID-19: An Observational Cohort Study.

Author(s): Archer, Sally K; Iezzi, Christina M; Gilpin, Louisa

Source: Archives of physical medicine and rehabilitation; Jun 2021; vol. 102 (no. 6); p. 1084-1090

Publication Date: Jun 2021

Publication Type(s): Journal Article Observational Study

PubMedID: 33529610

Available at Archives of physical medicine and rehabilitation - from Unpaywall

Abstract:

OBJECTIVE: To evaluate the presentations and outcomes of inpatients with coronavirus disease 2019 (COVID-19) presenting with dysphonia and dysphagia to investigate trends and inform potential pathways for ongoing care.

DESIGN: Observational cohort study.

SETTING: An inner-city National Health Service Hospital Trust in London, United Kingdom.

PARTICIPANTS: All adult inpatients hospitalized with COVID-19 (N=164) who were referred to Speech and Language Therapy (SLT) for voice and/or swallowing assessment for 2 months starting in April 2020.INTERVENTIONSSLT assessment, advice, and therapy for dysphonia and dysphagia.

MAIN OUTCOME MEASURES: Evidence of delirium, neurologic presentation, intubation, tracheostomy, and proning history were collected, along with type of SLT provided and discharge outcomes. Therapy outcome measures were recorded for swallowing and tracheostomy pre- and post-SLT intervention and Grade Roughness Breathiness Asthenia Strain Scale for voice.

RESULTS: Patients (N=164; 104 men) aged 56.8±16.7 years were included. Half (52.4%) had a tracheostomy, 78.7% had been intubated (mean, 15±6.6d), 13.4% had new neurologic impairment, and 69.5% were delirious. Individualized compensatory strategies were trialed in all and direct exercises with 11%. Baseline assessments showed marked impairments in dysphagia and voice, but there was significant improvement in all during the study (P<.0001). On average, patients started some oral intake 2 days after initial SLT assessment (interquartile range [IQR], 0-8) and were eating and drinking normally on discharge, but 29.3% (n=29) of those with dysphagia and 56.1% (n=37) of those with dysphonia remained impaired at hospital discharge. A total of 70.9% tracheostomized patients were decannulated, and the median time to decannulation was 19 days (IQR, 16-27). Among the 164 patients, 37.3% completed SLT input while inpatients, 23.5% were transferred to another hospital, 17.1% had voice, and 7.8% required community follow-up for dysphagia.

CONCLUSIONS: Inpatients with COVID-19 present with significant impairments of voice and swallowing, justifying responsive SLT. Prolonged intubations and tracheostomies were the norm, and a minority had new neurologic presentations. Patients typically improved with assessment that enabled treatment with individualized compensatory strategies. Services preparing for COVID-19 should target resources for tracheostomy weaning and to enable responsive management of dysphagia and dysphonia with robust referral pathways.

Database: Medline

77. Patient commentary: How power imbalances in the narratives, research, and publications around long covid can harm patients.

Author(s): Lokugamage, Amali U; Simpson, Frances K; Chew-Graham, Carolyn A

Source: BMJ (Clinical research ed.); Jun 2021; vol. 373 ; p. n1579

Publication Date: Jun 2021

Publication Type(s): Journal Article

PubMedID: 34172475

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from Unpaywall

Database: Medline

78. Covid-19: Third of people infected have long term symptoms.

Author(s): O'Dowd, Adrian

Source: BMJ (Clinical research ed.); Jun 2021; vol. 373 ; p. n1626

Publication Date: Jun 2021

Publication Type(s): Journal Article

PubMedID: 34168002

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from Unpaywall

Database: Medline

79. Chronic fatigue syndrome and long covid: moving beyond the controversy.

Author(s): Newman, Melanie

Source: BMJ (Clinical research ed.); Jun 2021; vol. 373 ; p. n1559

Publication Date: Jun 2021

Publication Type(s): Journal Article

PubMedID: 34162532

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from BMJ Journals

Available at BMJ (Clinical research ed.) - from Unpaywall

Database: Medline

80. Safety and efficacy of Ayurvedic interventions and Yoga on long term effects of COVID-19: A structured summary of a study protocol for a randomized controlled trial.

Author(s): Yadav, Babita; Rai, Amit; Mundada, Pallavi Suresh; Singhal, Richa; Rao, B C S; Rana, Rakesh; Srikanth, Narayanam

Source: Trials; Jun 2021; vol. 22 (no. 1); p. 378

Publication Date: Jun 2021

Publication Type(s): Letter Clinical Trial Protocol

PubMedID: 34082792

Available at Trials - from BioMed Central

Available at Trials - from Europe PubMed Central - Open Access

Available at Trials - from EBSCO (MEDLINE Complete)

Available at Trials - from Unpaywall

Abstract:

OBJECTIVES:

Primary Objective • To assess the efficacy of Ayurveda interventions and Yoga in rehabilitation of COVID-19 cases suffering with long term effects of COVID 19 as compared to WHO Rehabilitation Self-Management after COVID-19-Related Illness.

Secondary Objective • To assess the safety of Ayurvedic interventions in cases suffering with long term effects of COVID 19

TRIAL DESIGN: Multi-centric, randomized, controlled, parallel group, open-label, exploratory study. The study duration is 9 months and the intervention period is 90 days from the day of enrolment of the participant.

PARTICIPANTS: Patients of either sex between 18 to 60 years, ambulatory, willing to participate, with history (not more than 4 weeks) of positive RT-PCR for COVID-19 or IgM antibodies positivity for SARS CoV-2, but having negative RT-PCR for COVID-19 at the time of screening will be considered eligible for enrolment in the study. Critically ill patients with ARDS (acute respiratory distress syndrome), requiring invasive respiratory support in the intensive care unit, known case of any malignancy, immune-compromised state (e.g. HIV), diabetes mellitus, active pulmonary tuberculosis, past history of any chronic respiratory disease, motor neuron disease, multiple sclerosis, stroke, impaired cognition, atrial fibrillation, acute coronary syndrome, myocardial infarction, severe arrhythmia, concurrent serious hepatic disease or renal disease, pregnant or lactating women, patients on immunosuppressive medications, history of hypersensitivity to the trial drugs or their ingredients, depressive illness (before COVID-19), diagnosed psychotic illnesses, substance dependence or alcoholism will be excluded. The trial will be conducted at two medical colleges in Maharashtra, India.

INTERVENTION AND COMPARATOR: Intervention Arm (Group-I): Ayurveda interventions including Agastya Haritaki six gram and Ashwagandha tablet 500 mg twice daily orally after meals with warm water and two sessions of yoga (morning 30 minutes and evening 15 minutes) daily for 90 days, as per the post-COVID-19 care protocol provided in National Clinical Management Protocol based on Ayurveda and Yoga for management of COVID-19 published by Ministry of AYUSH, Government of India. Comparator Arm (Group-II): WHO Rehabilitation Self-Management after

COVID-19 related illness for 90 days. The trial drugs are being procured from a GMP certified pharmaceutical company.

MAIN OUTCOMES: Primary Outcome: Change in respiratory function to be assessed by San Diego shortness of breath Questionnaire, 6-minutes walk test and pulmonary function test.

SECONDARY OUTCOMES: Change in High-resolution Computed Tomography (HRCT) Chest Change in Fatigue score assessed by Modified Fatigue Impact Scale Change in Anxiety score assessed by Hospital Anxiety and Depression Scale Score Change in Sleep Quality assessed by Pittsburgh Sleep Quality Index Change in the quality of life assessed by COV19-QoL scale Safety of the interventions will be assessed by comparing hematological and biochemical investigations before and after the intervention period and Adverse Event/ Adverse drug reaction

TIMELINES FOR OUTCOME ASSESSMENT: Subjective parameters and clinical assessment will be assessed at baseline, 15th day, 30th day, 60th day and 90th day. Laboratory parameters (CBC, LFT, KFT, HbA1c, Hs-CRP, D-dimer), Pulmonary function test and HRCT Chest will be done at baseline and after completion of study period i.e. 90th day.

RANDOMISATION: Statistical package for Social Sciences (SPSS) version 15.0 is used to generate the random number sequences. The participants will be randomized to two study groups in the ratio of 1:1.

BLINDING (MASKING)The study is open-label design. However, the outcome assessor will be kept blinded regarding the study group allocation of the participants.

NUMBERS TO BE RANDOMISED (SAMPLE SIZE) SAMPLE SIZE: The sample size for the study is calculated assuming improvement in 6-minutes walk test by 40 meter in Group I and a change of 10 meter in Group II with a standard deviation of 50 meter based on the results of the previous studies, with 95% Confidence Level ($\alpha = 0.05$) and 80% power and expecting a dropout rate of 20%. The number of participants to be enrolled in the study should be approximately 55 in each group. Hence, a total of 110 participants will be enrolled in the trial at each study site.

TRIAL STATUS: Participants' recruitment started on 1st May 2021. Anticipated end of recruitment is August 2021. Protocol number: CCRAS-01 Protocol version number: 1.1, 13th January 2021.TRIAL REGISTRATIONThe trial is prospectively registered with the Clinical Trial Registry of India (CTRI) on 03rd March 2021 [CTRI/2021/03/031686].FULL PROTOCOLThe full protocol is attached as an additional file, accessible from the Journal website (Additional file 1). This communication serves as a summary of the key elements of the full protocol.

Database: Medline

81. The Impact of Post-COVID-19 Syndrome on Self-Reported Physical Activity.

Author(s): Delbressine, Jeannet M; Machado, Felipe V C; Goërtz, Yvonne M J; Van Herck, Maarten; Meys, Roy; Houben-Wilke, Sarah; Burtin, Chris; Franssen, Frits M E; Spies, Yvonne; Vijlbrief, Herman; van 't Hul, Alex J; Janssen, Daisy J A; Spruit, Martijn A; Vaes, Anouk W

Source: International journal of environmental research and public health; Jun 2021; vol. 18 (no. 11)

Publication Date: Jun 2021

Publication Type(s): Research Support, Non-u.s. Gov't Journal Article

PubMedID: 34205086

Available at International journal of environmental research and public health - from Europe PubMed Central - Open Access

Available at International journal of environmental research and public health - from EBSCO (MEDLINE Complete)

Available at International journal of environmental research and public health - from ProQuest (MEDLINE with Full Text) - NHS Version

Available at International journal of environmental research and public health - from ProQuest (Health Research Premium) - NHS Version

Available at International journal of environmental research and public health - from Unpaywall

Abstract:

Background: A subgroup of patients recovering from COVID-19 experience persistent symptoms, decreased quality of life, increased dependency on others for personal care and impaired performance of activities of daily living.

However, the long-term effects of COVID-19 on physical activity (PA) in this subgroup of patients with persistent symptoms remain unclear.

Methods: Demographics, self-reported average time spent walking per week, as well as participation in activities pre-COVID-19 and after three and six months of follow-up were assessed in members of online long-COVID-19 peer support groups.

Results: Two hundred thirty-nine patients with a confirmed COVID-19 diagnosis were included (83% women, median (IQR) age: 50 (39-56) years). Patients reported a significantly decreased weekly walking time after three months of follow-up (three months: 60 (15-120) min. vs. pre-COVID-19: 120 (60-240) min./week; $p < 0.05$). Six months after the onset of symptoms walking time was still significantly lower compared to pre-COVID-19 but significantly increased compared to three months of follow-up (three months: 60 (15-120) min. vs. six months: 90 (30-150) min.; $p < 0.05$). Conclusions: Patients who experience persistent symptoms after COVID-19 may still demonstrate a significantly decreased walking time six months after the onset of symptoms. More research is needed to investigate long-term consequences and possible treatment options to guide patients during the recovery fromCOVID-19.

Database: Medline

82. Long COVID or Post-acute Sequelae of COVID-19 (PASC): An Overview of Biological Factors That May Contribute to Persistent Symptoms

Author(s): Proal A.D.; VanElzakker M.B.

Source: Frontiers in Microbiology; Jun 2021; vol. 12

Publication Date: Jun 2021

Publication Type(s): Review

Available at Frontiers in Microbiology - from Europe PubMed Central - Open Access

Available at Frontiers in Microbiology - from Unpaywall

Abstract: The novel virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has caused a pandemic of coronavirus disease 2019 (COVID-19). Across the globe, a subset of patients who sustain an acute SARS-CoV-2 infection are developing a wide range of persistent symptoms that do not resolve over the course of many months. These patients are being given the diagnosis Long COVID or Post-acute sequelae of COVID-19 (PASC). It is likely that individual patients with a PASC diagnosis have different underlying biological factors driving their symptoms, none of which are mutually exclusive. This paper details mechanisms by which RNA viruses beyond just SARS-CoV-2 have be connected to long-term health consequences. It also reviews literature on acute COVID-19 and other virus-initiated chronic syndromes such as post-Ebola syndrome or myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) to discuss different scenarios for PASC symptom development. Potential contributors to PASC symptoms include consequences from acute SARS-CoV-2 injury to one or multiple organs, persistent reservoirs of SARS-CoV-2 in certain tissues, re-activation of neurotrophic pathogens such as herpesviruses under conditions of COVID-19 immune dysregulation, SARS-CoV-2 interactions with host microbiome/virome communities, clotting/coagulation issues, dysfunctional brainstem/vagus nerve signaling, ongoing activity of primed immune cells, and autoimmunity due to molecular mimicry between pathogen and host proteins. The individualized nature of PASC symptoms suggests that different therapeutic approaches may be required to best manage care for specific patients with the diagnosis.

Database: EMBASE

Strategy 1114710

#	Database	Search term	Results
1	Medline	(COVID OR COVID-19 OR COVID19 OR COVID2019).ti,ab	36197
2	Medline	exp CORONAVIRUS/	26411
3	Medline	(coronavirus OR "Corona virus").ti,ab	25607
4	Medline	(2019-nCoV).ti,ab	771
5	Medline	(SARS-CoV).ti,ab	12988
6	Medline	(Wuhan AND coronavirus).ti,ab	4439
7	Medline	((2019 AND novel) AND coronavirus).ti,ab	7621
8	Medline	(severe acute respiratory syndrome coronavirus 2).ti,ab	4868
9	Medline	(SARS-CoV-2 OR SARSCoV2).ti,ab	10656
10	Medline	(2019-nCoV).ti,ab	1373
11	Medline	(1 OR 2 OR 3 OR 4 OR 5 OR 6 OR 7 OR 8 OR 9 OR 10)	221422
12	Medline	((medium OR long-term OR long-haul OR expanded OR extended OR recurr* OR sustain* OR persist* OR prolong* OR continu* OR debilitating) ADJ2 (effect* OR symptom* OR impact* OR outcome* OR recover* OR suffer* OR sequela*)).ti,ab	322082
13	Medline	("long haul*").ti,ab	858
14	Medline	("patient discharge").ti,ab	1488
15	Medline	("hospital discharge*").ti,ab	29690
16	Medline	("following hospital discharge").ti,ab	989
17	Medline	("post hospital discharge").ti,ab	385

18	Medline	("following patient discharge").ti,ab	16
19	Medline	("post patient discharge").ti,ab	1
20	Medline	("following discharge").ti,ab	2894
21	Medline	("post discharge").ti,ab	5583
22	Medline	("post acute").ti,ab	3243
23	Medline	((post OR following OR after) ADJ2 ("hospital discharge" OR "patient discharge" OR discharge OR recovery OR infection)).ti,ab	215554
24	Medline	(12 OR 13 OR 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 OR 23)	580462
25	Medline	(long-lasting).ti,ab	50620
26	Medline	(long-covid OR "Long Covid").ti,ab	587
27	Medline	(24 OR 25 OR 26)	627331
28	Medline	(11 AND 27)	9956
29	Medline	(Therap*).ti,ab	3004325
30	Medline	exp "COVID-19"/	83452
31	Medline	(11 OR 30)	224189
32	Medline	(27 AND 31)	9971
33	Medline	(29 AND 32)	1472
34	Medline	exp REHABILITATION/	158122
35	Medline	(33 AND 34)	44
36	Medline	(rehab*).ti,ab	1739
37	Medline	(34 OR 36)	462592
38	Medline	(29 OR 37)	3367418

39	Medline	(Lancet OR JAMA OR "New England Journal of Medicine" OR NEJM OR BMJ).ti,ab	8397
40	Medline	(32 AND 39)	2
41	Medline	(11 AND 29 AND 39)	19
42	Medline	(Lancet OR JAMA OR "New England Journal of Medicine" OR NEJM OR BMJ).jn	296572
43	Medline	(32 AND 42)	94
44	Medline	(community).ti,ab	545958
45	Medline	(32 AND 44)	527
46	Medline	(32 AND 37)	171
47	Medline	(29 OR 34 OR 36 OR 44)	3844517
48	Medline	(Physiotherap* OR Physical therap*).ti,ab	109896
49	Medline	(Community-nurs* OR "Community nurs*").ti,ab	3682
50	Medline	(47 OR 48 OR 49)	3854760
51	Medline	(32 AND 50)	2063
52	CINAHL	(COVID OR COVID-19 OR COVID19 OR COVID2019).ti,ab	65228
53	CINAHL	exp CORONAVIRUS/	13760
54	CINAHL	(coronavirus OR "Corona virus").ti,ab	15114
55	CINAHL	(2019-nCoV).ti,ab	219
56	CINAHL	(SARS-CoV).ti,ab	308
57	CINAHL	(Wuhan AND coronavirus).ti,ab	819
58	CINAHL	((2019 AND novel) AND coronavirus).ti,ab	1052

59	CINAHL	(severe acute respiratory syndrome coronavirus 2).ti,ab	4054
60	CINAHL	(SARS-CoV-2 OR SARSCoV2).ti,ab	4407
61	CINAHL	(2019-nCoV).ti,ab	219
62	CINAHL	((medium OR long-term OR long-haul OR expanded OR extended OR recurr* OR sustain* OR persist* OR prolong* OR continu* OR debilitating) ADJ2 (effect* OR symptom* OR impact* OR outcome* OR recover* OR suffer* OR sequela*)).ti,ab	92655
63	CINAHL	("long haul*").ti,ab	364
64	CINAHL	("patient discharge").ti,ab	813
65	CINAHL	("hospital discharge*").ti,ab	14383
66	CINAHL	("following hospital discharge").ti,ab	470
67	CINAHL	("post hospital discharge").ti,ab	204
68	CINAHL	("following patient discharge").ti,ab	11
69	CINAHL	("post patient discharge").ti,ab	3
70	CINAHL	("following discharge").ti,ab	1614
71	CINAHL	("post discharge").ti,ab	3214
72	CINAHL	("post acute").ti,ab	2676
73	CINAHL	((post OR following OR after) ADJ2 ("hospital discharge" OR "patient discharge" OR discharge OR recovery OR infection)).ti,ab	40146
74	CINAHL	(52 OR 53 OR 54 OR 55 OR 56 OR 57 OR 58 OR 59 OR 60 OR 61)	73741
75	CINAHL	(62 OR 63 OR 64 OR 65 OR 66 OR 67 OR 68 OR 69 OR 70 OR 71 OR 72 OR 73)	147721

76	CINAHL	(74 AND 75)	2379
77	CINAHL	(Therap* OR rehab* OR nurs* OR physio*).ti,ab	1264810
78	CINAHL	(76 AND 77)	590
79	Medline	(UK OR Great Britain OR NHS OR England OR Wales OR Scotland OR Ireland).ti,ab	236148
80	Medline	(51 AND 79)	85
81	CINAHL	(Long Covid AND community).ti	12
82	EMBASE	(Long COVID).ti	359
83	EMBASE	("Post-acute COVID-19 syndrome").ti	33
84	Medline	("The NIHR review of evidence living with Covid-19").ti,ab	0
85	AMED, BNI, CINAHL, EMBASE, EMCARE, HMIC, Medline, PsycINFO, PubMed	("The NIHR review of evidence living with Covid-19").ti,ab	0
86	EMBASE	(therap* OR UK OR England OR Wales OR Great Britain OR United Kingdom OR Scotland OR Ireland).ti,ab	4862432
87	EMBASE	(82 AND 86)	56