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1. Long-term Effects of Coronavirus (long COVID)

[Access] NHS on 28 June 2021. Available: <https://www.nhs.uk/conditions/coronavirus-covid-19/long-term-effects-of-coronavirus-long-covid>

For some people, coronavirus (COVID-19) can cause symptoms that last weeks or months after the infection has gone. This is sometimes called post-COVID-19 syndrome or "long COVID". About long COVID :How long it takes to recover from COVID-19 is different for everybody.

Many people feel better in a few days or weeks and most will make a full recovery within 12 weeks. But for some people, symptoms can last longer. The chances of having long-term symptoms does not seem to be linked to how ill you are when you first get COVID-19. People who had mild symptoms at first can still have long-term problems.

Symptoms of long COVID. There are lots of symptoms you can have after a COVID-19 infection. Common long COVID symptoms include: extreme tiredness (fatigue), shortness of breath, chest pain

or tightness, problems with memory and concentration ("brain fog"), difficulty sleeping (insomnia), heart palpitations, dizziness, pins and needles, joint pain, depression and anxiety, tinnitus, earaches, feeling sick, diarrhoea, stomach aches, loss of appetite, a high temperature, cough, headaches, sore throat, changes to sense of smell or taste and rashes.

2. Caring for Patients with Long Covid —a Compassionate Tightrope

Minna Johansson *BMJ* 9 October 2021 [Access] on 28 June 2021 Available on <https://blogs.bmj.com/bmj/2020/10/09/minna-johansson-caring-for-patients-with-long-covid-a-compassionate-tightrope/>

What do our reactions to long covid reveal about medicine's uncomfortable relationship with uncertainty? Minna Johansson reflects. After the initial outbreak of covid-19 cases and the surge of deaths in many countries, another painful consequence of this viral infection has become increasingly apparent: persistent illness in people with initially "mild" symptoms. Many have shared frightening testimonies of a variety of persistent symptoms, such as intense brain fog, fatigue, muscle weakness, breathlessness, and difficulties concentrating.

As is often the case with symptoms that lack a clear biomedical explanation, many stories from patients reveal a blatant failure of the healthcare system to respond compassionately to this uncharted experience of suffering. Too many patients feel dismissed, disbelieved, and ignored.

At the same time, hypothetical biomedical explanations are emerging to try and explain these experiences—often supported by small studies that use sophisticated technologies to investigate potential abnormalities. Despite often limited clinical relevance, these hypotheses rapidly diffuse into clinical care and the public domain. This phenomenon is not new or particular to our response to persistent post-covid-19 illness (or "long covid"). Indeed, it is only a new chapter in our inability to care for people with "medically unexplained symptoms," with the medical complex primed to respond not with compassion, but either dismissal or prompt medicalisation.

3. NICE Guideline on Long Covid

BMJ 2020; 371 <https://doi.org/10.1136/bmj.m4938> (Published 23 December 2020)

Research must be done urgently to fill the many gaps in this new “living guideline”

The covid-19 pandemic has killed over 1.6 million people worldwide, caused the worst healthcare crisis of this century, and put a huge dent in our economies. The magnitude of the population still struggling with symptoms four weeks after their acute illness—commonly called “long covid”—is becoming obvious and demands urgent prioritisation to prevent a further blow to health systems and the healthcare workforce.

Long covid is thought to occur in approximately 10% of people infected, so there are likely more than 5 million people affected globally. The National Institute for Health and Care Excellence (NICE), the Scottish Intercollegiate Guidelines Network, and the Royal College of General Practitioners have developed a rapid guideline for managing the long term effects of covid-19 to assist long covid services being set up in the NHS and elsewhere. A lack of systematic research means that the current guideline is necessarily preliminary, but it will be updated regularly as new evidence emerges—becoming a “living guideline.” This approach is essential as the current guideline lacks important detail, including a comprehensive list of organ complications seen in patients with long covid, the investigations required, and specific interventions for these complications.

Standardised terms

The guideline defines long covid as “signs and symptoms that develop during or following an infection consistent with covid-19 and which continue for more than four weeks and are not explained by an alternative diagnosis.” Given that we are beginning to understand the underlying immunological and organ specific effects of SARS-CoV-2, it might have been better to define it as “signs and symptoms that continue for more than four weeks and can be attributed to covid-19 infection.” This definition would include all the post-acute medical complications of covid-19 under one unified definition rather than making long covid a vague diagnosis of exclusion. NICE recommends using the term “post-covid syndrome” from 12 weeks after infection. But no evidence exists of any particular physiological changes (that predict chronicity) at 12 weeks, so it would be preferable to use the term long covid for symptoms of any duration beyond four weeks, as is strongly advocated by people with lived experience of this condition. Using the prefix “post” implies that acute infection and any active disease process are resolved, which is currently unknown.

Comprehensive assessment

The guideline rightly includes people with suspected covid-19 infection without requiring a positive antigen or antibody test. Any other approach risks missing the many thousands of people who did not have access to testing in the early phases of the pandemic. The recommendations emphasise comprehensive assessment by a multidisciplinary team and support the use of virtual methods of assessment, including screening questionnaires such as C19-YRS (Yorkshire Rehabilitation Screen). They also warn clinicians not to rely on questionnaires alone and to undertake additional thorough assessments.

The guidance mentions screening blood tests (such as full blood count; clotting profile; renal, liver, and thyroid functions; and C reactive protein) and tests of both cardiac and lung function to capture

reversible abnormalities, but it lacks detail on the management of serious life threatening complications such as a hypercoagulable state. The next update should prioritise how to screen for, diagnose, and manage medical complications reported in patients with long covid including silent desaturations; cardiac, respiratory, renal, hepatic, gastrointestinal, and neurological abnormalities; endocrine problems; autonomic dysregulation and postural tachycardia; and mast cell disorder. Missing these complications could result in serious adverse outcomes for patients.

One stop multidisciplinary clinics are recommended, led by a doctor with relevant specialist skills and experience. NHS England has also emphasised the importance of multidisciplinary assessment and diagnostics being available in long covid clinics to avoid multiple referrals to different specialists. Clearer guidance on the optimal composition of multidisciplinary teams would have been helpful. Respiratory physicians, cardiologists, neurologists, general physicians (from primary care or rehabilitation medicine), neuropsychologists or neuropsychiatrists, physiotherapists, occupational therapists, speech and language therapists, and dieticians may all be required.

Interventions

Shared decision making is appropriately emphasised in the setting of goals and the formulation of personalised management plans and care plans. The guidance lacks detail on potentially helpful rehabilitation interventions such as breathing techniques, psychological interventions (such as cognitive behaviour therapy), cognitive training (such as memory training), and occupational rehabilitation, perhaps understandably given the current paucity of supporting evidence. The dangers of exercise in some patients, such as those with undiagnosed acute pericarditis or myocarditis, highlight the need for a personalised approach. All these aspects of care should be prioritised in future updates.

Research on the underlying pathophysiology of long covid is now urgent, including identifying the immunological, inflammatory, genetic, metabolic, and psychological correlates, to better understand symptom development. The NICE guideline rightly recommends further research to characterise common clusters of symptoms (phenotypes), risk factors, prognostic markers, natural history, and trajectory of long covid, and to identify effective interventions for all age groups.

The need to tackle health inequalities in care for people with long covid—such as those with mental health conditions, learning disabilities, or specific cultural needs, or where there are language barriers—is emphasised in the guidance. The key priority is to understand the mechanisms causing long covid, so that organ complications might be managed early to prevent long term symptoms and serious adverse consequences and to enable individuals to return to their normal lives as soon as possible.

4.COVID-19: An Update on the Epidemiological, Clinical, Preventive and Therapeutic Evidence and Guidelines of Integrative Chinese-Western Medicine for the Management of 2019 Novel Coronavirus Disease

Keywords: 2019-nCoV; COVID-19; Chinese Medicine; Guideline; Integrative Medicine

Kam Wa Chan , Taam Wong , Chi Wai Tang *Am J Chin Med* 2020;48(3):737-762.

Abstract

As of 22 February 2020, more than 77662 cases of confirmed COVID-19 have been documented globally with over 2360 deaths. Common presentations of confirmed cases include fever, fatigue, dry cough, upper airway congestion, sputum production, shortness of breath, myalgia/arthralgia with lymphopenia, prolonged prothrombin time, elevated C-reactive protein, and elevated lactate dehydrogenase. The reported severe/critical case ratio is approximately 7-10% and median time to intensive care admission is 9.5-10.5 days with mortality of around 1-2% varied geographically. Similar to outbreaks of other newly identified virus, there is no proven regimen from conventional medicine and most reports managed the patients with lopinavir/ritonavir, ribavirin, beta-interferon, glucocorticoid and supportive treatment with remdesivir undergoing clinical trial. In China, Chinese medicine is proposed as a treatment option by national and provincial guidelines with substantial utilization. We reviewed the latest national and provincial clinical guidelines, retrospective cohort studies, and case series regarding the treatment of COVID-19 by add-on Chinese medicine. We have also reviewed the clinical evidence generated from SARS and H1N1 management with hypothesized mechanisms and latest *in silico* findings to identify candidate Chinese medicines for the consideration of possible trials and management. Given the paucity of strongly evidence-based regimens, the available data suggest that Chinese medicine could be considered as an adjunctive therapeutic option in the management of COVID-19.

5.Covid-19 Antiviral Agent, Antibody Development and Traditional Chinese Medicine.

Keywords: Antibody; Coronavirus disease 2019 (COVID-19); Drug repositioning; Network-based pharmacology; Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2); Traditional Chinese medicine; Updates.

Wenyi Guan, Wendong Lan, Jing Zhang et al. *Viol Sin* 2020 Dec;35(6):685-698.

Abstract

The World Health Organization (WHO) has declared coronavirus disease 2019 (COVID-19) is the first pandemic caused by coronavirus named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Currently, there is no effective anti-SARS-CoV-2 drug approved worldwide for treatment of patients with COVID-19. Therapeutic options in response to the COVID-19 outbreak are urgently needed. To

facilitate the better and faster development of therapeutic COVID-19 drugs, we present an overview of the global promising therapeutic drugs, including repurposing existing antiviral agents, network-based pharmacology research, antibody development and traditional Chinese medicine. Among all these drugs, we focus on the most promising drugs (such as favipiravir, tocilizumab, SARS-CoV-2 convalescent plasma, hydroxychloroquine, Lianhua Qingwen, interferon beta-1a, remdesivir, etc.) that have or will enter the final stage of human testing-phase III-IV clinical trials.

6. Rehabilitation of Patients with COVID-19

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

Tiantian Sun , Liyun Guo , Fei Tian et al . *Expert Rev Respir Med* . 2020 Dec;14(12):1249-1256.

Abstract

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

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

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

7. Contribution of Traditional Chinese Medicine to the Treatment of COVID-19

Keywords: COVID-19; Integrated therapy; Traditional Chinese medicine.

Wan-Ying Wang , Ying Xie , Hua Zhou et al. *Phytomedicine* 2021 May;85:153279.

Abstract

COVID-19 as an epidemic disease has spread across the planet since December 2019. The somber situation reminds each country to take actions in preventing the spreading of the virus. China as one of the early affected countries has been fighting against the novel coronavirus with the achievements of nearly 80,000 cured confirmed patients. Traditional Chinese medicine (TCM) has made contributions to the treatment of COVID-19 because of its efficacy and comprehensive therapeutic theory. In this commentary, the advantage, etiology and mechanism of TCM therapy were discussed in the aspect of its functions in reducing the harms brought by COVID-19 to human beings.

8. 6-month Consequences of COVID-19 in Patients Discharged from Hospital: a Cohort Study

Chaolin Huang , Lixue Huang , Yeming Wang et al. *Lancet* 2021 Jan 16;397(10270):220-232.

Abstract

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

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

Enrolled patients who had participated in the Lopinavir Trial for Suppression of SARS-CoV-2 in China received severe acute respiratory syndrome coronavirus 2 antibody tests. Multivariable adjusted linear or logistic regression models were used to evaluate the association between disease severity and long-term health consequences.

Findings: In total, 1733 of 2469 discharged patients with COVID-19 were enrolled after 736 were excluded. Patients had a median age of 57.0 (IQR 47.0-65.0) years and 897 (52%) were men. The follow-up study was done from June 16, to Sept 3, 2020, and the median follow-up time after symptom onset was 186.0 (175.0-199.0) days. Fatigue or muscle weakness (63%, 1038 of 1655) and sleep difficulties (26%, 437 of 1655) were the most common symptoms. Anxiety or depression was reported among 23% (367 of 1617) of patients. The proportions of median 6-min walking distance less than the lower limit of the normal range were 24% for those at severity scale 3, 22% for severity scale 4, and 29% for severity scale 5-6. The corresponding proportions of patients with diffusion impairment were 22% for severity scale 3, 29% for scale 4, and 56% for scale 5-6, and median CT scores were 3.0 (IQR 2.0-5.0) for severity scale 3, 4.0 (3.0-5.0) for scale 4, and 5.0 (4.0-6.0) for scale 5-6. After multivariable adjustment, patients showed an odds ratio (OR) 1.61 (95% CI 0.80-3.25) for scale 4 versus scale 3 and 4.60 (1.85-11.48) for scale 5-6 versus scale 3 for diffusion impairment; OR 0.88 (0.66-1.17) for scale 4 versus scale 3 and OR 1.77 (1.05-2.97) for scale 5-6 versus scale 3 for anxiety or depression, and OR 0.74 (0.58-0.96) for scale 4 versus scale 3 and 2.69 (1.46-4.96) for scale 5-6 versus scale 3 for fatigue or muscle weakness. Of 94 patients with blood antibodies tested at follow-up, the seropositivity (96.2% vs 58.5%) and median titres (19.0 vs 10.0) of the neutralising antibodies were significantly lower compared with at the acute phase. 107 of 822 participants without acute kidney injury and with estimated glomerular filtration rate (eGFR) 90 mL/min per 1.73 m² or more at acute phase had eGFR less than 90 mL/min per 1.73 m² at follow-up.

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

9. Identifying Potential Treatments of COVID-19 from Traditional Chinese Medicine (TCM) by Using a Data-driven Approach

Keywords: COVID-19; Chinese medicine (CM); Data mining; Molecular docking; Network pharmacology.

Xia Ren, Xin-Xin Shao, Xiu-Xue Li, et al. *J Ethnopharmacol.* 2020 Aug 10;258:112932.

Abstract

Ethnopharmacological relevance: Traditional Chinese Medicine (TCM) has been widely used as an approach worldwide. Chinese Medicines (CMs) had been used to treat and prevent viral infection pneumonia diseases for thousands of years and had accumulated a large number of clinical experiences and effective prescriptions.

Aim of the study: This research aimed to systematically excavate the classical prescriptions of Chinese Medicine (CM), which have been used to prevent and treat Pestilence (Wenbing, Wenyi, Shiyi or Yibing) for long history in China, to obtain the potential prescriptions and ingredients to alternatively treat COVID-19.

Materials and methods: We developed the screening system based on data mining, molecular docking and network pharmacology. Data mining and association network were used to mine the high-frequency herbs and formulas from ancient prescriptions. Virtual screening for the effective components of high frequency CMs and compatibility Chinese Medicine was explored by a molecular docking approach. Furthermore, network pharmacology method was used to preliminarily uncover the molecule mechanism.

Results: 574 prescriptions were obtained from 96,606 classical prescriptions with the key words to treat "Warm diseases (Wenbing)", "Pestilence (Wenyi or Yibing)" or "Epidemic diseases (Shiyi)". Meanwhile, 40 kinds of CMs, 36 CMs-pairs, 6 triple-CMs-groups existed with high frequency among the 574 prescriptions. Additionally, the key targets of SARS-COV-2, namely 3CL hydrolase (Mpro) and angiotensin-converting enzyme 2(ACE2), were used to dock the main ingredients from the 40 kinds by the LigandFitDock method. A total of 66 compounds components with higher frequency were docked with the COVID-19 targets, which were distributed in 26 kinds of CMs, among which Gancao (Glycyrrhizae Radix Et Rhizoma), HuangQin (Scutellariae Radix), Dahuang (Rhei Radix Et Rhizome) and Chaihu (Bupleuri Radix) contain more potential compounds. Network pharmacology results showed that Gancao (Glycyrrhizae Radix Et Rhizoma) and HuangQin (Scutellariae Radix) CMs-pairs could also interact with the targets involving in immune and inflammation diseases.

Conclusions: These results we obtained probably provided potential candidate CMs formulas or active ingredients to overcome COVID-19. Prospectively, animal experiment and rigorous clinic studies are needed to confirm the potential preventive and treat effect of these CMs and compounds.

10. Profiles of COVID-19 Clinical Trials in the Chinese Clinical Trial Registry

Keywords: COVID-19; Traditional Chinese Medicine; anti-viral drug; clinical trials; vaccine.

Peng Xu , Xiangyu Xing , Keying Yu ,et al. *Emerg Microbes Infect.* 2020 Dec;9(1):1695-1701.

Abstract

The COVID-19 pandemic has caused a global public health crisis. There is a pressing need for evidence-based interventions to address the devastating clinical and public health effects of the COVID-19 pandemic. The Chinese scientists supported by private and government resources have adopted extensive efforts to identify effective drugs against the virus. To date, a large number of clinical trials addressing various aspects of COVID19 have been registered in the Chinese Clinical Trial Registry (ChiCTR), including more than 200 interventional studies. Under such an urgent circumstance, the scope and quality of these clinical studies vary significantly. Hence, this review aims to make a comprehensive analysis on the profiles of COVID-19 clinical trials registered in the ChiCTR, including a wide range of characteristics. Our findings will provide a useful summary on these clinical studies since most of these studies will encounter major challenges from the design to completion. It will be a long road for the outcomes of these studies to be published and international collaboration will help the ultimate goals of developing new vaccines and anti-viral drugs.

The Association of Traditional Chinese Medicine and Acupuncture UK (ATCM) Edited by Wenqing Li

In the COVID-19 period, all members of ATCM. Please pay an attention to safety ; and please protect yourselves and your families!



