International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)
IJAMSCR |Vol.12 | Issue 2| Apr - June -2024
www.ijamscr.com
DOI : https://doi.org/10.61096/ijamscr.v12.iss2.2024.169-180
ISSN: 2347-6567

Research

To Evaluate The Efficacy Of Homeopathic Medicines In Post Covid Syndrome With Emphasis On Dyspnea, Fatigue And Hairfall

Bhanuja singh Jodha*, Charanjeet Singh, Rekha Juneja

[1]*MD Scholar, Sri Ganganagar Homoeopathic Medical College & Research Institute, Tantia University, Sri Ganganagar, Rajasthan*
[2]*Principal & HOD Sri Ganganagar Homoeopathic Medical College & Research Institute, Tantia University, Sri Ganganagar, Rajasthan*
[3]*Professor (Dr.) Sri Ganganagar Homoeopathic Medical College & Research Institute, Tantia University, Sri Ganganagar, Rajasthan*

*Author for Correspondence: Dr. Bhanuja singh Jodha
Email: bhanujasjodha@gmail.com

Published on: 22 May 2024

Published by:
DrSriram Publications

2024| All rights reserved.
Creative Commons Attribution 4.0 International License.

Abstract

Post-COVID syndrome is increasingly recognized as a new clinical entity in the context of SARS-CoV-2 infection. Symptoms persisting for more than three weeks after the diagnosis of COVID-19 characterize the post-COVID syndrome. Prolonged inflammation has a key role in its pathogenesis and may account for several symptoms. Long COVID is a term used to describe presence of various symptoms, even weeks or months after acquiring SARS-CoV-2 infection irrespective of the viral status. There can be the persistence of one or more symptoms of acute COVID, or appearance of new symptoms. Most people with post-COVID syndrome are PCR negative, indicating microbiological recovery.

To determine the efficacy of homoeopathic medicines in post covid syndrome with emphasis on Dyspnea, fatigue & hair fall.

Data analysis includes statistical methods to assess the significance of changes in symptom severity over the treatment period. Additionally, subgroup analyses may be conducted to explore variations in treatment response based on demographic factors and comorbidities.

Out of 100 cases 77 patients of 77 % were improved and 23 patients of 23 % were not improved. The paired t-test resulted in a statistical value of (15.94), indicating a p-value of less than (<0.05). This indicates that the study was statistically significant; supporting the hypothesis that homoeopathy can improve post-Covid symptoms (Fatigue, Dyspnea and Hair fall).

The findings of this study could contribute valuable insights into the potential role of homoeopathic medicines in managing post-COVID syndrome, providing a complementary and holistic approach to alleviate dyspnea, fatigue, and hair fall. This research may inform future clinical practices and contribute to a more comprehensive understanding of integrative approaches to post-viral sequelae.

Keywords: SARS-CoV-2 infection, post-COVID syndrome, dyspnea, fatigue, hair fall.

INTRODUCTION

More than a year after the declaration of the coronavirus disease 2019 (COVID-19) pandemic, the world continues to face its devastating impact, not only on morbidity, mortality, and healthcare services, but also its tremendous societal and economic consequences, globally. Although the overwhelming body of knowledge on COVID-19 focuses almost exclusively on acute illness it has become evident thatlong-term consequences occur. It is observed that COVID-19 patients had symptoms persisting for several weeks after acute infection. The most common post-COVID symptoms include fatigue, dyspnea, olfactory, gustatory and mental disorders. Symptoms may last for several months and disrupt work activities and the qualityof life of the affected individuals.

It is defined as the continuation or development of new symptoms 3 months after the initial SARS-CoV-2 infection, with these symptoms lasting for at least 2 months with no other explanation.

Long COVID, also known as Post-COVID Conditions, is a condition characterized by signs, symptoms, and health issues that persist or develop after the acute phase of a COVID-19 infection. It encompasses a wide range of new, returning, or ongoing health problems that individuals experience following infection with the virus that causes COVID-19. The symptoms of Long COVID can last for weeks, months, or even years after the initial infection, affecting various aspects of an individual's health and well-being. It is not a singular illness but rather a complex syndrome with diverse manifestations that can impact different organ systems within the body. Common symptoms include fatigue, shortness of breath, cognitive dysfunction, insomnia, changes in smell and taste, chest pain, palpitations, dizziness, depression, anxiety, muscle and joint pain, among others. Individuals with Long COVID may experience a range of symptoms that can fluctuate over time and may even result in disability for some patients

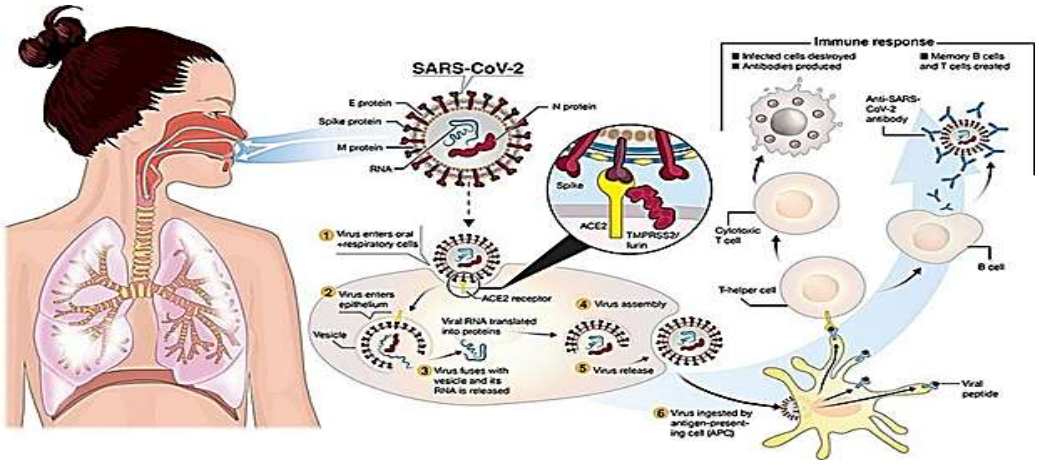


Fig 1: Transmission and life cycle of SARS-CoV-2 causing COVID-19.

Classification of Post-COVID Syndrome

According to the proposed criteria of the University of Cincinnati Medical Center for Post COVID-19 sequelae, there are five categories of long COVID-19 syndrome, based on initial symptoms, time of onset, and duration of symptoms and period of quiescence. Type 1 includes patients with a varying duration of recovery that directly relates to the severity of the acute infection, organ complications, and underlying medical conditions; Type 2 is characterized by symptoms persisting six weeks from the onset of illness; Type 3 shows a period of quiescence or nearly full recovery, followed by a recurrence of symptoms persisting for at least three months (Type 3A) or at least six months (Type 3B); Type 4 refers to patients who are initially asymptomatic at the time of a positive SARS-CoV-2 test but become symptomatic one to three months (Type 4A), or at least three months later (Type 4B); and Type 5 includes patients who are asymptomatic or have few symptoms at the time of diagnosis and die within the next 12 months.

Table 1: Five Categories of Post-COVID-19 Syndrome Based on Four Criteria

Categoriesby type	Initial symptoms	Duration of symptoms	Delayed onsetof symptoms	Period of quiescence
Type 1	Variable	Variable	No	No
Type 2	Mild	>6 weeks	No	No

Type 3	Mild	3 to >6 months	No	Yes
Type 4	None	Variable	Yes	No
Type 5	None	None	≥3–6 months	No

Manifestations of long COVID

Post-COVID syndrome may encompass a plethora of debilitating symptoms and conditions. Incidence of specific symptoms may range according to the severity of the acute infection and observation period. Several studies state that fatigue is the most common post- COVID symptom, with an incidence ranging from 17.5% to 72% among patients, extending on several occasions beyond seven months after the onset of illness and causing significant disability. Dyspnea and a decreased exercise tolerance have been reported in 10–40% of COVID-19 patients. Chest pain has been reported in up to 22% of COVID-19 patients two months after discharge from hospital. Olfactory and gustatory dysfunction may extend beyond one month after its onset. Palpitation is also reported after acute COVID-19.Sleeping and mental disorders, such as anxiety and depression, may affect approximately 26% and up to 40% of patients, respectively, even after months after COVID-19. Other manifestations may include obsession and compulsion, reduced social activity, poor concentration, aggression, irritability, substance use, and cognitive deficit. Post-traumatic stress disorder: a psychiatric condition induced by life- stressing factors, could occur after recovery from a life-threatening illness, including COVID-19 and cerebrovascular disorders, such as ischemic stroke, cerebral vasculitis and hemorrhage, and irreversible hearing loss, however, these severe conditions are rare.

Pathogenesis of post-COVID syndrome

Systemic inflammatory response syndrome (SIRS) could be the potential cause forthe development of organ dysfunction and tissue injury in PCS. Due to the development of an exaggerated immune response and a high pro-inflammatory response in COVID-19, a counter-balanced anti-inflammatory response is developed, leading to a state of immunosuppression to maintain immunological homeostasis. However, prolonged immunosuppression may cause propagation catabolism syndrome and the development of PCS. It has been reported that post- septic patients are susceptible to latent viral infections and reactivations and a relapse of SARS-CoV-2 infection in recovered COVID-19 with the development of secondary infections. Transforming growth factor β (TGF-β) which is an immunosuppressive, profibrotic, and anti-inflammatory cytokine, is increased during and after SARS- CoV-2 infection to dampen an exaggerated pro-inflammatory response. TGF-β is associated with the development of pulmonary interstitial fibrosis in COVID-19 patients.

Taken together, immune dysregulation, persistence of inflammatory reactions, autoimmune mimicry, and reactivation of pathogens together with host microbiome alterations may contribute to the development of PCS. Therefore, unresolved lymphopenia and protracted high pro-inflammatory cytokine levels are linked with the development of headaches, joint pain, and fatigue, the cardinal symptoms of PCS.

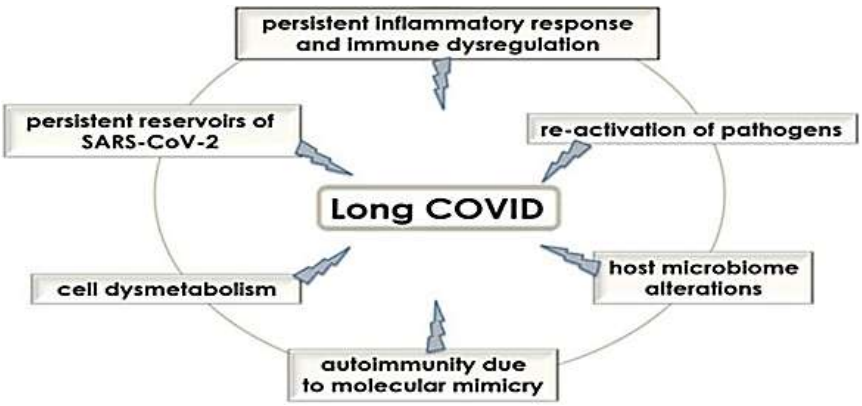


Fig 2: Systemic effects of post-COVID syndrome



Fig 3: Manifestations of Long Covid

Homoeopathy in long covid

Scientific evidence in various epidemics clearly showcase that Homoeopathy can be used both therapeutically and /or as prophylactic with success using approaches like Genus epidemicus, nosodes etc. Its greatest successes have been recorded in the prevention & treatment of flu like illnesses. Homeopathy has given the best results during pandemics even in Hahnemann time. Homeopathy is a system of therapeutics based on the law of similar. ―Like cures like means Similia Similibus Curentur. It is a universal law, where patients are prescribed a similimum based on Totality of Symptoms. The disease is a reaction of the patient to unfavorable environmental factors and that this reaction manifests through signs and symptoms the patterns of this reaction and the essence of these sign and symptoms gives totality of symptoms.

The physician relies on the wholeness of symptoms revealed during the entire evolution of the infection and prescribes an ultra - high diluted succussed solution product which has been proven to heal similar conditions. This is a great advantage in this timing while Post Covid-19 Syndrome is in rapid development because the diagnosis of the indicated ultra-high diluted succussed solution product is based on individual symptoms (if these are very characteristic) or on the totality of symptoms, and not in the pathology. Homoeopathic medicines that can help in managing Long COVID complications are:

Arsenicum album

It includes exhaustion, and restlessness, with nightly aggravation, are most important. Great exhaustion after the slightest exertion. This, with the peculiar irritability of fiber, gives the characteristic

irritable weakness. There is Great prostration, with rapid sinking of the vital force with mental restlessness, but physically too weak to move; cannot rest in any place: changing places continually; fear of death; thinks it useless to take medicine, is incurable, is surely going to die.

Arnica montana

Coughs depending on cardiac lesion, paroxysmal, at night, during sleep, worse exercise. Dyspnea with hemoptysis. Influenza. Thrombosis. Respiration short, panting, difficult, and anxious. Rattling in the chest. Oppression of the chest and difficulty of breathing. Respiration frequently slows and deep. Shootings in the chest and sides, with difficulty of respiration, aggravated by coughing, but breathing deeply, and by movement, better from external pressure. Beating and palpitation of the heart.

Belladona

The fever may be associated with sensitivity to light and noise. It is used for headaches that are throbbing, pulsating,and intense. The pain may be concentrated in the forehead, temples, or the back ofthe head. Symptoms may include a sudden onset of a dry, barking cough, difficulty swallowing, and a sensation of a lump in the throat.

Bryonia

Bryonia is commonly used for respiratory issues, particularly when there is a dry, hacking cough that worsens with movement or deep breathing joint pain, such as in cases of arthritis or muscle pain, where movement aggravates the discomfort. Bryonia may be recommended for headaches, especially when the pain is aggravated by movement or any kind of jarring motion. The headache may be accompanied by irritability and a desire to be left alone. In cases of fever, Bryonia may be indicated when there is a slow onset of symptoms, dryness of mucous membranes, and an aversion to motion.

China

China is often indicated for individuals experiencing weakness and fatigue, especially when there is a history of loss of vital fluids, such as excessive bleeding, diarrhea, or other fluid losses. It may be recommended for those who feel drained or debilitated. .

Gelsemium

It acts upon the nervous system, causing various degrees of motorparalysis. General prostration with Muscular weakness. Dizziness, drowsiness, dullness, and trembling is present along with Slow pulse, tired feeling, mental apathy. Complete relaxation and prostration of whole muscular system with entiremotor paralysis. Lack of muscular co-ordination; confused; muscles refuse to obey the will. The heart is feeble, and the pulse is feeble, soft, and irregular. There is palpitation during the febrile state. Palpitation, with weakness and irregularity of the pulse. It is accompanied by extreme restlessness from threatened suffocation.

Kali carb

It may be indicated when there is a sensation of tightness in the chest, difficulty breathing, and cough with thick, white, or yellowish expectoration. Also, for used for musculoskeletal conditions, especially in cases of arthritis or rheumatism. It may be indicated when there is stiffness, aching, and stitching pains in the joints, particularly aggravated by cold and damp weather. It may be recommended when symptoms worsen with cold air or exposure to damp conditions. Kali carbs are indicated for cases of general weakness, fatigue, and exhaustion. It may be prescribed when there is a sense of heaviness, especially in the limbs, and an overall feeling of weakness.

Nitric acid

Headache from pressure of hat; full feeling; worse from street noises. Hair falls out. Scalp sensitive. Hoarseness. Aphonia, with dry hacking cough, from tickling in larynx and pit of stomach. Soreness at lower end of sternum. Short breath on going upstairs . Cough during sleep

Nux vomica

In cases of sleep disturbances characterized by an overactive mind or the inability to relax, Nux vomica may be considered. It is often recommended for individuals who are mentally and physically exhausted but find it difficult to unwind. It may be prescribed when symptoms include irritability, restlessness, sensitivity to drafts, and a desire for warmth. Headaches, especially those triggered by overwork, stress, or exposure to strong sensory stimuli. The headaches may be accompanied by nausea and sensitivity to light.

Phosphoricum acidum

"Debility" is very marked in this remedy, producing nervous exhaustion. Mental debility first; later physical. Is listless, apathetic; indifferent to the affairs of life; prostrated and stupefied with grief; to those things that used to be of most interest. The patient pines and emaciates, grows

Rhus toxicodendron

Rhus tox is frequently prescribed for muscle and joint pain that is worse with initial movement but improves with continued motion. The person may experience restlessness and a desire to stretch or move to alleviate discomfort. Rhus tox may be used for flu-like symptoms, including body aches, restlessness, and fever. The person may feel better with warmth and movement. Individuals who benefit from Rhus tox often experience restlessness and a desire to keep moving to alleviate discomfort, whether it's physical pain or a sense of restlessness in the mind.

Sulphur

The skin symptoms may be characterized by redness, burning sensations, and dryness. There may also be a tendency for the skin to worsen with heat and improve with cold applications. Sulphur is used for respiratory conditions such as chronic coughs, bronchitis, and asthma. The cough may be dry, spasmodic, and worse at night. Sulphur is indicated for various rheumatic complaints, including arthritis and joint pain. Joint pain is typically worse with heat, and the person may experience relief from cool applications or open air.

Aim and objective

To determine the efficacy of homoeopathic medicines in post covid syndrome with emphasis on Dyspnea, fatigue & hair fall. To know the various medicines of Post Covid Syndrome. To review the clinical presentation of Post Covid Syndrome. To know the concept of Post Covid Syndrome from a homoeopathic perspective, I'd like proper study of individuals with their pathology and investigation. To revive the health of the sick, give a quick, gentle, permanent cure as mentioned by Dr. Hahnemann in aphorism 2 in Organon of medicines 6th edition. To develop proper skills to handle such conditions in future.

MATERIALS AND METHODS

Site Of Study: Hospital wing of Sri Ganganagar Homeopathic Medical College, Hospital and Research Institute, Sri Ganganagar, Rajasthan
Sample Size: 100 Patients of IPD/OPD of Sri Ganganagar Homoeopathic Medical College & Hospital
Study Design: Observational study was based upon a purposive sampling method.100 patients were selected from cases who qualified the inclusion criteria.
Ages & Sex: This study has been conducted on age group 18-60 yrs. on both sexes.
Duration of study: 1 year
Inclusion Criteria: Patients who had previous COVID-19 are included.**Exclusion Criteria**: Patients who had advanced pathology & cases with complication are exclude
Software: Complete Repertory,
Statistical Analysis: Paired T -Test
Assessment Scale: Modified Yorkshire assessment scale was used.
Remedy selection: Remedy was selected after repertorisation and confirmation byMateria Medica.
Source of remedy: Pharmacy of Sri Ganganagar Homeopathic Medical College, Hospital and Research Institute, Sri Ganganagar.
Remedy application: Potency selection, application and repetition of medicine(s)were done according to the case and project work.
Investigation: All necessary investigations were done at this institute. If special investigations were needed, patients were referred to higher laboratories at the cost of the patient without any reimbursement.

STATISTICAL ANALYSIS

Statistical analysis was done by using the XL Miner Analysis Tool Pak t-test calculator. To detect the difference between pre-assessment score and post-assessmentscore, t-test was conducted. And paired t-test showed that statistical value was (15.94), which shows the p-value obtained was less than (<0.05); Therefore, the study said to be statistically significant, and hypothesis was that homoeopathy is effective inimproving the post-Covid syndromes.

RESULT AND DISCUSSIONS

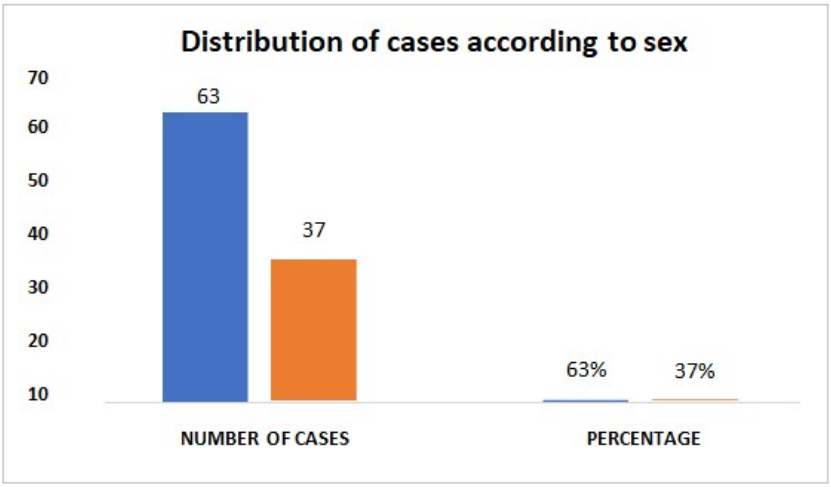
Observations and outcome

For the study "*To Evaluate The Efficacy Of Homeopathic Medicines In Post Covid Syndromes With Emphasis On Dyspnea, Fatigue And Hairfall*" 100 cases of Post Covid Syndromes have been included in the study. The data obtained was recorded in specially designed case taking proforma, and sorted out in the form of different tables and charts as below:

Distribution of cases according to sex

Table 2: Distribution of cases according to sex

Sex	Number Of Cases	Percentage
Male	63	63%
Female	37	37%
TOTAL	**100**	**100%**



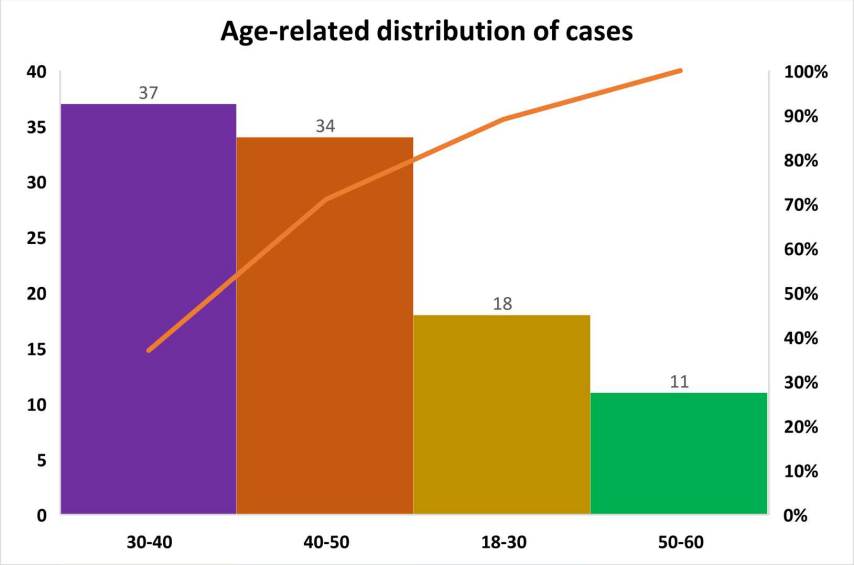
Out of 100 patients, cases (37%) were observed of female, whereas 63 cases (63%) were observed of male. The large number of cases were observed in males than female.

Graph 1: Distribution of cases according to sex

Age related distribution of cases

Table 3: Age-related distribution of cases

Age	No. of patient	Percentage
18-30	18	18%
30-40	37	37%
40-50	34	34%
50-60	11	11%
Total	**100**	**100%**



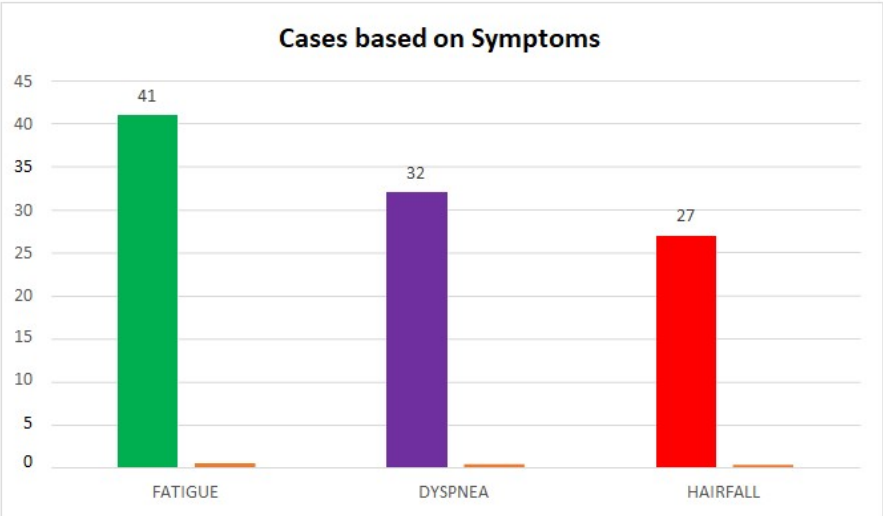
Out of 100 patients, patients of age ranging 18-30 years were 18%, patients of age ranging 30-40 were 37 %, patients of age ranging 40-50 were 34% and those were between 50-60 were only 11%. The highest number of patients were observed in the range of 30-40 years.

Graph 2: Age-related distribution of cases

Cases distributed based on symptoms

Table 4: Cases based on Symptoms

Probable cause	Fatigue	Dyspnea	Hairfall
No of patients	41	32	27
Percentage	41%	32%	27%



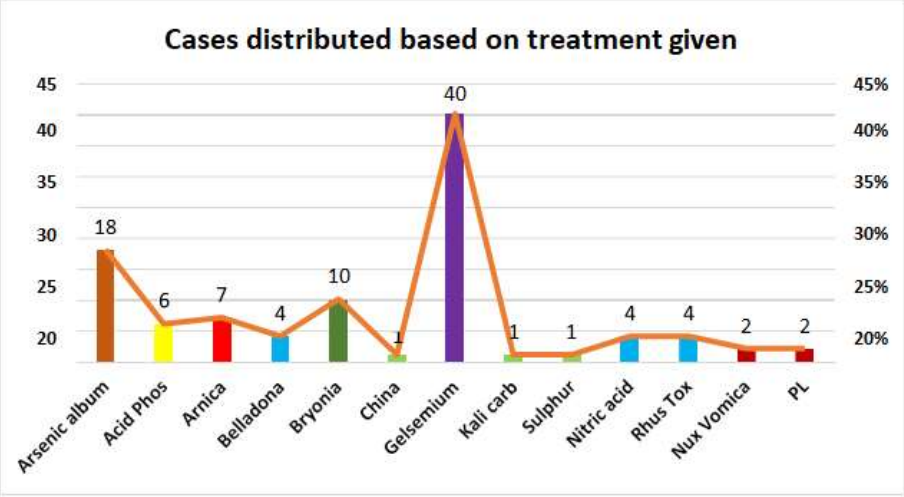
Out of 100 cases the patient diagnosed with fatigue were 41%, patients diagnosed with dyspnea were 32% and patients diagnosed with hair fall were 27%.

Graph 3: Cases based on Symptoms.

Cases distributed based on treatment given

Table 5: Cases distributed based on treatment given

Medicine	Count	Percentage
Arsenic album	18	18%
Acid Phos	6	6%
Arnica	7	7%
Belladona	4	4%
Bryonia	10	10%
China	1	1%
Gelsemium	40	40%
Kali carb	1	1%
Sulphur	1	1%
Nitric acid	4	4%
Rhus Tox	4	4%
Nux Vomica	2	2%
PL	2	2%
TOTAL	**100**	**100%**



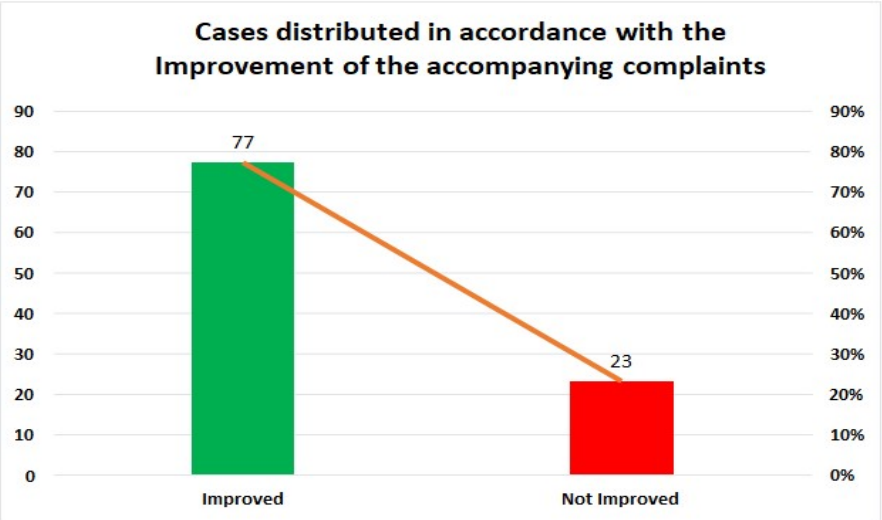
Out of almost many medicines for post covid syndrome these 13 medicines were more effective in treating patients with post covid syndrome. To all the 100 patients, treatment was given according to their condition and among the 100 patients Gelsemium was given to 40 patients and they were 40%.

Graph 4: Cases distributed based on treatment given

Cases distributed in accordance with the improvement of the accompanying complaints

Table 6: Cases are distributed in accordance with the improvement of the accompanying complaints

Accompanying complaints	No. of Patients	Percentage
Improved	77	77%
Not Improved	23	23%
Grand Total	**100**	**100%**



Out of 100 cases 77 patients of 77 % were improved and 23 patients of 23 % were not improved

Graph 5: Cases distributed in accordance with the improvement of the accompanying complaints

This dissertation titled "To Evaluate The Efficacy Of Homeopathic Medicines In Post Covid Syndromes With Emphasis On Dyspnea, Fatigue And Hairfall" study was conducted in O.P.D and I.P.D of Sri Ganganagar Homoeopathic Medical College, Hospital and Research Institute, Sri Ganganagar, Rajasthan for duration of 1 year. In this study 100 cases that were selected based on the inclusion and exclusion criteria. For this study of Post Covid Syndrome prescription was Homoeopathic remedies in different potencies. The effects of Homoeopathic remedies were observed for a period of minimum interval of 15 – 30 days. The study's findings led to the following conclusions:

- In my study there were some post-Covid Syndromes which were emphasized are fatigue, dyspnea and hair fall etc.
- According to the study, Fatigue was more prevalent among these three post covid syndromes.
- Males were more suffered with post-Covid syndromes.
- Post covid syndromes were more prevalent in the age group of 30-40 years.
- Patients who were observed in the study were mainly middle-aged adults.

It demonstrates how treating with Homeopathic medications lessens the symptoms of post-Covid syndromes disease. The best treatments used for treating was Gelsemium, Arsenic album, Acid Phos, Bryonia, Arnica, Belladona, China, Kali Carb, etc. Homoeopathy is beneficial in treating post-Covid syndromes. Homoeopathy treats the person. It means that Homoeopathic treatment focuses on the patient as a person, as well as his pathological condition so to give him a proper simillimum, the use of Materia medica is essential. When a Homeopathically selected medicine is administered to a sick person, there is disappearance of symptoms and restoration of patient to health. It represents the reaction of susceptible organism to the impression of the curative remedy

Homoeopathy consists of unchanging laws and principles, which once mastered, will unfailingly guide the predisposition and the management of the case. It has been logically evolved as an experimental science according to the method of inductive reasoning in which exact observation, correct interpretation; rational explanation and scientific construction play a leading role.

The following salient conclusions have been drawn from the present study after summarizing its findings.

- Homoeopathic treatment is best suitable for the management of Post Covid Syndrome. Homoeopathic remedies give prompt relief in suffering and improve complaints of sufferer.
- It can be stated that homoeopathic drugs should be used as first line of treatment in Post Covid Syndrome
- Even though the patient had cluster of symptoms of PCS they showed admirable response because each homoeopathic prescription is tailored accordingly.
- The patients got quick, fast and gentle recovery in their suffering.
- This study emphasized on majorly three symptoms of PCS but during the course of study many other symptoms were observed such as headaches, palpitations, anxiety, myalgia, decreased concentration, insomnia or other sleep difficulties, mood changes etc.

CONCLUSION

This study provides a small step to alleviate and enhance my knowledge about Post Covid Syndrome as well as the Homoeopathic medicines taken in the study by exploring possible literature available about the study. It gave me opportunity for application of Homoeopathic medicine on patients of Post Covid Syndrome. Lastly based on above study it can be concluded that homoeopathy definitely opens a ray of hope for the patients of Post Covid syndrome. Homoeopathy is the form of treatment that has shown an over helming positive response in treating the cases. Homoeopathy is the only science not only relief symptoms but can also prevent further complications.

Future perspective

Homeopathy has shown promise in mitigating and shortening the symptoms of Long Covid. Evidence that homeopathy is effective in managing the Post Covid Syndrome , as well as an add on therapy, especially in reducing the intensity of the disease and decreasing the duration of stay at hospital is enough to invoke more studies on this front, with better methodology and compliance levels. Thus, we must initiate preventive and curative trials in this field . With the increasing understanding of role of Homoeopathy in post covid syndrome and more rigorous trials should be conducted in future that will tackle with better strategies and management plan. To develop proper skills as a homoeopathic physician to deal with COVID or post-COVID symptoms, it is essential to consider focusing on individualized treatment approaches, continuous learning, and research-based practices, homoeopathic physicians can enhance their skills to effectively address COVID and post-COVID symptoms. Corona viruses will continue to mutate & new variants will continue to emerge. It is not possible for the man kind to wait for vaccines for each variant. No vaccine can be a panacea for the emerging variants. It is here that the cost effectiveness & clinical effectiveness of Homoeopathy will come handy for the public & private health systems while dealing with masses. Additionally, conducting more research on homoeopathy's efficacy in treating COVID or post-COVID symptoms can help establish a stronger evidence base.

CONFLICT OF INTEREST

There was no conflict of interest in this research. All patients were randomly selected and informed consent was obtained from all the participants for being included in the study. All procedures followed were in accordance with the ethical standard of the responsible committee.

REFERENCES

1. Sreehitha, Daliparthy Sai, and Justina M. Steefan. "Efficacy of homoeopathy in treating post-COVID fatigue in adults using fatigue assessment scale. IJHS. 2023;7(1):37-42. https://www.homoeopathicjournal.com/articles/729/7-1-9-845.pdf
2. Kaur H, Bawaskar R, Khobragade A, Kalra D, Packiam V, Khan MY, Kaur T, Sharma M, Verma NK, Kaushik S, Khurana A. Randomised controlled trial to compare efficacy of standard care alone and in combination with homoeopathic treatment of moderate/severe COVID-19 cases. Plos one. 2023 Nov 15;18(11):e0292783. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0292783
3. Dixit AK, Giri N, Singh S. Exploring the scope of homoeopathy in combating the unfortunate consequences of post-COVID-19 survivors based on non-COVID conditions: a narrative review. Journal of Complementary and Integrative Medicine. 2023 Jun 15;20(2):302-15. https://www.degruyter.com/document/doi/10.1515/jcim-2021-0200/html
4. Chaudhary, Anupriya, and Anil Khurana. A review on the role of Homoeopathy in epidemics with some reflections on COVID-19 (SARS-CoV-2). 2020. http://aohindia.in/jspui/handle/123456789/7482
5. Nayak D, Devarajan K, Pal PP, Ponnam HB, Jain N, Shastri V, Bawaskar R, Chinta R, Khurana A, COVID-19 Study Group. Efficacy of Arsenicum album 30C in the Prevention of COVID-19 in Individuals Residing in Containment Areas: A Prospective, Multicenter, Cluster-Randomized, Parallel-Arm, Community-Based, Open-Label Study. Complementary Medicine Research. 2023 Nov 1;30(5):375-85. https://karger.com/cmr/article/30/5/375/836949
6. Yadav M, Mangal G, Garg G. COVID-19-Understanding the emerging viral disease through the concepts of Ayurveda. Journal of Ayurveda. 2020 Oct 1;14(4):16-21. https://journals.lww.com/joay/fulltext/2020/14040/covid_19__understanding_the_emerging_viral_disease.5.aspx
7. Townsend L, Moloney D, Finucane C, McCarthy K, Bergin C, Bannan C, Kenny RA. Fatigue following COVID-19 infection is not associated with autonomic dysfunction. PloS one. 2021 Feb 25;16(2):e0247280. https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0247280

8. Davis HE, McCorkell L, Vogel JM, Topol EJ. Long COVID: major findings, mechanisms and recommendations. Nature Reviews Microbiology. 2023 Mar;21(3):133-46. https://www.nature.com/articles/S41579-022-00846-2
9. Batiha GE, Al-Kuraishy HM, Al-Gareeb AI, Welson NN. Pathophysiology of Post-COVID syndromes: a new perspective. Virology Journal. 2022 Oct 9;19(1):158. https://link.springer.com/article/10.1186/s12985-022-01891-2
10. Mazza MG, Palladini M, Poletti S, Benedetti F. Post-COVID-19 depressive symptoms: epidemiology, pathophysiology, and pharmacological treatment. CNS drugs. 2022 Jul;36(7):681-702. https://link.springer.com/article/10.1007/s40263-022-00931-3 11.
11. Renaud-Charest, Olivier, et al. "Onset and frequency of depression in post-COVID-19 syndrome: A systematic review." Journal of psychiatric research 144 (2021): 129-137.
12. Saha, Sangita, et al. "Individualized homeopathic medicines in the treatment of post-COVID-19 fatigue in adults: A single-blind, randomized, placebo-controlled trial." Complementary Medicine Research (2023): 1-1.
13. Tripathy, Dr Tridibesh, and Dr Manjushree Kar Shankar Das. "Long COVID 19 & Homoeopathy." Saudi J Med 7.1 (2022): 84-87.
14. Yang, Fengwen, et al. "Post COVID-19 burden focus on the short-term condition." Acupuncture and Herbal Medicine 2.3 (2022): 139.
15. Fawzy, Nader A., et al. "A systematic review of trials currently investigating therapeutic modalities for post-acute covid-19 syndrome and registered on World Health Organization International Clinical Trials Platform." Clinical Microbiology and Infection (2023).
16. Karosanidze, Irina, et al. "Efficacy of adaptogens in patients with long COVID-19: a randomized, quadruple-blind, placebo-controlled trial." Pharmaceuticals 15.3 (2022): 345.
17. Sheeba, S., et al. "A clinical case study of treating Post Covid Syndrome by Administrating Calcarea Carbonica 200 Potency with Assessment of IgG Level." (2023).
18. Akter, Salima, et al. "Alternative medicine: A recent overview." Alternative Medicine-Update (2021).
19. Lidiia, Soprun, et al. "The post-COVID syndrome." Autoimmunity, COVID-19, Post-COVID19 Syndrome and COVID-19 Vaccination. Academic Press, 2023. 747-758.
20. Carson, Erin, and Alice N. Hemenway. "A scoping review of pharmacological management of postacute sequelae of severe acute respiratory syndrome coronavirus 2 infection in 2021." American Journal of Therapeutics 29.3 (2022): e305-e321.
21. Adambaev, Z. I., et al. "Efficiency of comprehensive rehabilitation of chronic fatigue syndrome due to coronavirus infections COVID-19." BIO Web of Conferences. Vol. 65. EDP Sciences, 2023.
22. Hendawy, Lina. "Adiantum capillus-veneris Linn (Maidenhair fern) extract-based drug as a symptomatic treatment for COVID-19.(clinical candidate)." (2020).
23. Matsuoka, Norihiro, Takuo Mizutani, and Koji Kawakami. "Symptom Profile of Patients With Post-COVID-19 Conditions and Influencing Factors for Recovery." Journal of Clinical Medicine Research 15.2 (2023): 116.
24. Trüeb, Ralph M., et al. "The Hair and Scalp in Systemic Infectious Disease." Hair in Infectious Disease: Recognition, Treatment, and Prevention. Cham: Springer International Publishing, 2023. 303-365.
25. Lemcke, Tim Frederik. Retrospective analysis of post-COVID-19 symptoms in hospitalized patients, comparing the different SARS-COV- 2-variants regarding headache. Diss. University of Split. School of Medicine, 2023.
26. Nauman, Eileen. Homeopathy for Epidemics. Light Technology Publishing, 2004.
27. WAHAB, SHADMA. "LONG COVID MEDICAL COMPLICATIONS." The Novel Coronavirus (2023): 76.
28. Majumder, Rajib, et al. "Revisiting the COVID-19 Pandemic: An Insight into Long-Term Post-COVID Complications and Repurposing of Drugs." COVID 3.4 (2023): 494-519.
29. Wan, Minying, et al. "Post-acute COVID-19 syndrome and Long Haulers." American Journal of Translational Medicine 5.3 (2021): 125- 137.