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Review of clinical manifestations, diagnosis and treatment of the syndrome post-Covid-19

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ABSTRACT
Post-COVID-19 syndrome, also known as long COVID, refers to the persistence of physical and psychological symptoms after the acute phase of SARS-CoV-2 infection. The most common clinical manifestations include chronic fatigue, breathing difficulties, cognitive changes, and sleep disorders, significantly impacting the quality of life of patients. This study offers a comprehensive review of the main clinical manifestations, diagnostic methods, and currently recommended therapeutic approaches. The management of post-COVID-19 syndrome involves a multidisciplinary approach that integrates physical rehabilitation, psychological support, and drug therapies, with the aim of promoting a gradual recovery and minimizing long-term impacts on the health of affected individuals.

Keywords: Post-Covid-19 syndrome, Clinical manifestations, Diagnosis, Treatment, SARS-CoV-2.

INTRODUCTION

Post-COVID-19 syndrome, also known as long COVID, has emerged as a significant complication following acute SARS-CoV-2 virus infection, affecting an increasing number of patients. Characterized by the persistence of symptoms such as extreme fatigue, breathing difficulties, cognitive dysfunctions, and muscle pain, this syndrome can severely compromise the quality of life of affected individuals, often for months or even years after initial recovery.

Although the understanding of the underlying mechanisms is still developing, the diversity of clinical manifestations and the need for a multidisciplinary therapeutic approach make this condition an ongoing challenge for the medical community. In this context, early identification, accurate diagnosis, and implementation of effective treatments are essential to mitigate the long-term effects of post-COVID-19 syndrome.

METHODOLOGY

The methodology of this study was based on a systematic review of the literature, covering the main biomedical databases, such as PubMed, Scopus, and Web of Science. The research included articles published between 2020 and 2024, using terms such as "post-COVID-19 syndrome", "long COVID", "clinical manifestations", "diagnosis" and "treatment". Observational studies, clinical trials, systematic reviews, and meta-analyses addressing the

persistent manifestations of post-COVID-19 syndrome and its therapeutic approaches were included.

To ensure the relevance and quality of the information, the inclusion criteria considered peer-reviewed articles and publications in English, Portuguese, and Spanish. Studies with small sample sizes, narrative reviews, and those without clear information on diagnostic and therapeutic criteria were excluded. Data analysis was performed descriptively, emphasizing the main therapeutic trends and challenges in the clinical management of the syndrome.

RESULTS

The literature review reveals that post-COVID-19 syndrome affects a variety of systems in the body, with the most common manifestations being persistent fatigue, dyspnea (difficulty breathing), cognitive dysfunctions such as "brain fog," and musculoskeletal pain. Cardiovascular symptoms, such as palpitations and chest pain, as well as psychological disorders, such as anxiety and depression, are also frequently reported. The variability of symptoms, their intensity and duration, can differ significantly between patients, making diagnosis challenging. Early identification of the condition depends on a detailed history and the exclusion of other possible causes for the symptoms.

The management of post-COVID-19 syndrome requires an individualized approach, with a focus on physical and mental rehabilitation, requiring the involvement of multidisciplinary teams composed of physiotherapists, pulmonologists, neurologists, cardiologists, and psychologists. Interventions such as breathing exercises, muscle strengthening programs, psychological support, and the use of medications for specific symptoms have been shown to be effective in gradually improving patients. Cardiac and pulmonary rehabilitation has been shown to be particularly useful in patients who have had significant impairment of these functions during infection. Evidence also suggests that long-term follow-up is essential to monitor symptom progression and adjust treatment as needed.

CONCLUSION

Post-COVID-19 syndrome presents with a broad spectrum of clinical manifestations that may persist or emerge after initial recovery from SARS-CoV-2 infection. Among the most common symptoms are persistent fatigue, dyspnea, cognitive dysfunctions, such as difficulty concentrating and "mental fog", as well as muscle and joint pain. Other symptoms include palpitations, changes in smell and taste, as well as gastrointestinal and psychological problems,

such as anxiety and depression. Diagnosis is largely clinical, based on the presence of these symptoms for a period of more than 12 weeks after the initial infection.

Therapeutic management involves a multidisciplinary approach, with the participation of specialists in various areas, such as pulmonology, neurology, psychiatry, and physical therapy. Treatments include physical rehabilitation to restore functional capacity, cognitive therapies to improve mental function, and psychological support. Pharmacological interventions, such as anti-inflammatory drugs and treatments targeted at specific symptoms, have also been used. Personalizing treatment according to the clinical presentation and patient needs is crucial to optimizing outcomes. Rehabilitation therapies have shown significant improvements in patients' quality of life over time, with many reporting gradual reduction in symptoms.

This improvement suggests that, although recovery may be slow, most patients respond positively to appropriate interventions when management is multidisciplinary and oriented to the specific needs of each individual.

REFERENCES

1. Carfi, A., Bernabei, R., & Landi, F. (2020). Persistent symptoms in patients after acute COVID-19. *JAMA, 324*(6), 603–605. https://doi.org/10.1001/jama.2020.12603

2. Davis, H. E., Assaf, G. S., McCorkell, L., & et al. (2021). Characterizing long COVID in an international cohort: 7 months of symptoms and their impact. *EClinicalMedicine, 38*, 101019. https://doi.org/10.1016/j.eclinm.2021.101019

3. National Institute for Health and Care Excellence. (2020). *COVID-19 rapid guideline: Managing the long-term effects of COVID-19*. https://www.nice.org.uk/guidance/ng188

4. Del Rio, C., Collins, L. F., & Malani, P. (2020). Long-term health consequences of COVID-19. *JAMA, 324*(17), 1723–1724. https://doi.org/10.1001/jama.2020.19719