

MANIFESTACIONES NEUROLÓGICAS EN PACIENTES CON INFECCIÓN POR CORONAVIRUS (SARS-COV-2) DURANTE LA PANDEMIA 2019-2020 UNA REVISION ANALITICA

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RESUMEN

Dado que los coronavirus no siempre permanecen confinados al sistema respiratorio, en determinadas condiciones pueden invadir distintos sistemas incluido el sistema nervioso, conllevando a la presentación de manifestaciones neurológicas diversas.

Objetivos: Establecer la prevalencia de manifestaciones neurológicas en pacientes con infección por COVID-19 y su relación con las comorbilidades presentes en los sujetos del estudio.

Materiales y métodos: Se realizó una revisión sistemática cuantitativa, a partir de los datos aportados por los estudios que hasta la fecha se han realizado en pacientes con COVID 19 encontrados en las bases de datos (MedRxiv, PUBMED,

OVID, EMBASE, MEDLINE y SCOPUS. El tiempo de la revisión abarca desde el 01 de diciembre del 2019 hasta el 31 de mayo del 2020.

Resultados: Mediante la estrategia de búsqueda PRISMA, se pudieron identificar 162 artículos siendo seleccionados para este estudio 58 de ellos.

Conclusiones: La incidencia de manifestaciones neurológicas en pacientes con infección por COVID-19 resulta importante, por lo que se recomiendan todos los esfuerzos del personal médico para su detección oportuna, de tal forma que se brinden las opciones terapéuticas necesarias para impactar tanto en la mortalidad como en la discapacidad que puedan generar.

Palabras clave: Coronavirus, COVID-19, Encefalopatía, SARS-COV-2, ACV, Síndrome de Guillain Barre, convulsión, epilepsia, cefalea.

ABSTRACT

Since coronaviruses do not always remain confined to the respiratory system, under certain conditions they can invade different systems including the nervous system, leading to the presentation of various neurological manifestations.

Objectives: To establish the prevalence of neurological manifestations in patients with COVID-19 infection and its relationship with the comorbidities present in the study subjects.

Materials and methods: A quantitative systematic review was carried out, based on the data provided by the studies that have been carried out to date in patients with COVID 19 found in the databases (MedRxiv, PUBMED, OVID, EMBASE, MEDLINE and SCOPUS). The time during which the information in the databases was reviewed corresponds from December 1, 2019 to May 31, 2020.

Results: Using the PRISMA search strategy, we were able to identify 162 articles. Finally, we had 58 articles for synthesis.

Conclusions: Future epidemiological studies and case registries should give importance to the incidence of neurological manifestations, in addition to their pathogenic mechanisms, which leads to optimal therapeutic options that impact both mortality and disability.

Keywords: Coronavirus, COVID-19, Encephalopathy, SARS-COV-2, stroke, Guillain Barre Syndrome, seizure, epilepsy, headache.

REFERENCIAS

1. OMS | Neumonía de causa desconocida – China. World Health Organization. World Health Organization [Internet]. 2020 [Citado 10 jun 2020]. Disponible en: <https://www.who.int/csr/don/05-january-2020-pneumonia-ofunkowncause-china/es/>
2. WHO Director-General's opening remarks at the media briefing on COVID-19. World Health Organization [Internet]. 2020 [Citado 10 jun 2020]. World Health Organization; Disponible en: <https://www.who.int/dg/speeches/detail/whodirector-general-s-openingremarks-at-the-media-briefing-on-covid-19---11march-2020>
3. Lu R, Zhao X, Li J, Niu P, Yang B, Wu H, et al. Genomic characterisation and epidemiology of 2019 novel coronavirus: implications for virus origins and receptor binding. *The Lancet*. 2020;395(10224):565–574. [https://doi.org/10.1016/S0140-6736\(20\)30251-8](https://doi.org/10.1016/S0140-6736(20)30251-8)
4. Mao L, Jin H, Wang M, Hu Y, Chen S, He Q, et al. Neurologic Manifestations of Hospitalized Patients With Coronavirus Disease 2019 in Wuhan, China. *JAMA Neurology*. 2020;77(6):683-690. doi:10.1001/jamaneurol.2020.1127 5. Lechien J, Chiesa-Estomba C, Place S, Van Laethem, Y., Cabaraux, P., Mat. Clinical and epidemiological characteristics of 1,420 European patients with mild to moderate coronavirus disease 2019. *Journal of internal medicine*. 2020 Apr 30;10.1111. <https://doi.org/10.1111/joim.13089>
6. Docherty AB, Harrison EM, Green CA, Hardwick HE, Pius R, Norman L, et al. Features of 20133 hospitalised UK patients with COVID-19 using the ISARIC WHO Clinical Characterisation Protocol. *BMJ*. 2020 May 22;369:m1985. <https://doi.org/10.1136/bmj.m1985>
7. Lighter J, Phillips M, Hochman S, Sterling S, Johnson D, Francois F, et al. Obesity in Patients Younger Than 60 Years Is a Risk Factor for COVID-19 Hospital Admission. *Clinical Infectious Diseases*. 2020;71(15):896–7. <https://doi.org/10.1093/cid/ciaa415>
8. Guan W-J, Ni Z-Y, Hu Y, Liang W-H, Ou C-Q, He J-X, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. *New England Journal of Medicine*. 2020;382(18):1708–1720. DOI: 10.1056/NEJMoa2002032

9. Liu W, Tao Z-W, Wang L, Yuan M-L, Liu K, Zhou L, et al. Analysis of factors associated with disease outcomes in hospitalized patients with 2019 novel coronavirus disease. *Chinese Medical Journal*. 2020;133(9):1032–8. <https://dx.doi.org/10.1097%2FCM9.0000000000000775>
10. Jain V, Yuan J-M. Systematic review and meta-analysis of predictive symptoms and comorbidities for severe COVID-19 infection. medRxiv preprint [Internet]. 2020. [citado 14 abr 2020]. Disponible en: <https://www.medrxiv.org/content/10.1101/2020.03.15.20035360v1>
11. Zhao X, Zhang B, Li P, Ma C, Gu J, Hou P, et al. Incidence, clinical characteristics and prognostic factor of patients with COVID-19: a systematic review and meta-analysis. MedRxiv preprint [Internet]. 2020. [citado 14 abr 2020]. Disponible en: <https://www.medrxiv.org/content/10.1101/2020.03.17.20037572v1>
12. Guan W-J, Liang W-H, Zhao Y, Liang H-R, Chen Z-S, Li Y-M, et al. Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis. *European Respiratory Journal*. 2020;55(5):2000547. <https://dx.doi.org/10.1183%2F13993003.00547-2020>
13. Nam KW, Kwon HM, Jeong HY, Park JH, Kwon H, Jeong SM. Cerebral small vessel disease and stage 1 hypertension defined by the 2017 American College of Cardiology/American Heart Association Guidelines. *Hypertension*. 2019;73(6):1210-1216. <https://doi.org/10.1161/hypertensionaha.119.12830>
14. Ortiz M., Valencia N, Moreno E, Zafra M, Espinel L, Villarreal D. ACV y covid19: una revisión de los estudios observacionales publicados en época de pandemia. *Acta Neurol Colomb*. 2020; 36(2): 63-74. <https://doi.org/10.22379/24224022280>
15. Nasr DM, Rabinstein AA. Neurologic Complications of Extracorporeal Membrane Oxygenation. *Journal of Clinical Neurology*. 2015;11(4):383-389. <https://dx.doi.org/10.3988%2Fjcn.2015.11.4.383>
16. Khosravani H, Rajendram P, Notario L, Chapman MG, Menon BK. Protected code stroke: hyperacute stroke management during the coronavirus disease 2019 (COVID-19) pandemic. *Stroke*. 2020 Jun;51(6):1891-1895. <https://doi.org/10.1161/STROKEAHA.120.029838>
17. Ghannam M, Alshaer Q, Al-Chalabi M, Zakarna L, Robertson J, Manousakis G. Neurological Involvement of Coronavirus Disease 2019: A Systematic Review. 2020;Jun 19;1-19. <https://dx.doi.org/10.1007%2Fs00415-02009990-2>
18. Lodigiani C, Iapichino G, Carenzo L, Cecconi M, Ferrazzi P, Sebastian T, et al. Venous and arterial thromboembolic complications in COVID-19 patients admitted to an academic hospital in Milan, Italy. *Thrombosis Research*. 2020;191:9–14. <https://doi.org/10.1016/j.thromres.2020.04.024>

19. Li Y, Li M, Wang M, Zhou Y, Chang J, Xian Y, et al. Acute cerebrovascular disease following COVID-19: a single center, retrospective, observational study. *Stroke and Vascular Neurology*. 2020 Jul 2;svn-2020-000431. <https://doi.org/10.1136/svn-2020-000431>