Short Communication

Long COVID in Mexico – Research Efforts

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In this communication, a review is made of the main reports on Long COVID carried out in Mexico, as research efforts that will help characterize this affected population and subsequently favor the creation of clinical practice guidelines.

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Brief Communication

Long COVID is a relatively new entity in the country and is not yet recognized by the health sector. Therefore, there are no action protocols or clinical practice guides to guide health personnel in the diagnostic approach and treatment of this entity.

The first efforts of Mexican researchers in international collaboration provided the first description of symptoms of persistent COVID in a systematic review with meta-analysis, where a symptomatic procession of more than 50 symptoms is established. Other researchers have synthesized the global experience of the main current theories around this entity that attempt to elucidate the etiopathogenic mechanisms of Long COVID, from which current treatment opportunities arise. Reinforcing Mexican clinical research around Long COVID, there has been applied basic research identifying inflammatory patterns associated with obesity, which is so prevalent in our population and which favors diabetes and greater severity of COVID-19, and markers of cellular senescence manifested in greater expression of CD57 in CD8+ lymphocytes. [1][2][3]

Regarding the characterization of the Mexican population affected by Long COVID, this has been done since 2020, with documents from various Mexican cities such as Puebla, Zacatecas, San Luis Potosí, Mexico City, Yucatán, and Veracruz. Globally, the female gender is most affected, with an average age of 42 years, with the main risk factors being obesity, diabetes, and hypertension in most reports, although special populations have been studied, such as those with autoimmune diseases, which do not differ much from the general population. The main symptom is persistent fatigue, which can become disabling and affect family, school, and work; other important symptoms are dyspnea, headache, insomnia, and memory disturbances, as well as anxiety and depression. Table 1. [4][5][6][7][8][9][10][11]

Finally, we consider that the clinical scenario is suitable to integrate the first diagnostic and treatment experiences in our population. As a study group, we have proposed the creation of the first Mexican clinical practice guide, and we have made the first proposal for a diagnostic and therapeutic approach. We consider that we have to gain national experience and international collaborations so that these patients have better therapeutic options, as well as limiting sequelae and integrating into their daily lives. [12]

Authors, City, Year	Study Center	Participants	Average Age (Male %, Female %)	Risk Factors	Long COVID Symptoms
Herrera-García, et-al, México, 2020	Hospital Ángeles Puebla, Puebla, México	50 patients	50.5 years (70%, 30%)	Hypertension, Diabetes, Autoimmunity	Fatigue, Weakness, Headache, Chest Tightness, Dyspnea
Galván-Tejeda, et-al, México, 2020	Inter-institutional collaboration Zacatecas - San Luis Potosí	219 patients	39 years (49%, 51%)	Not specified	Shaking Chills, Dyspnea, Abdominal Pain, Anosmia/Dysgeusia, Nausea/Vomiting/Diarrhea
Cortés-Telles, et-al, México, 2021	Hospital de Alta Especialidad de la Península de Yucatán	186 patients	47 years (61%, 39%)	Obesity, Diabetes, Hypertension	Fatigue, Dyspnea, Myalgias, Cough, Chest Pain
Wong A, et-al, Canadá-México, 2021	Hospital de Alta Especialidad de la Península de Yucatán, University of British Columbia, Alberta	225 patients	47 years (62%, 38%)	Obesity, Diabetes, Hypertension	Fatigue, Dyspnea, Chest Pain, Myalgias, Cough
Alba-Leonel, et-al, Inter-institutional collaboration México, 2022	UNAM-ENEO-IMSS, Saint Luke School of Medicine, Ciudad de México	191 patients	26 years (39%, 61%)	Not specified	Fatigue, Headache, Anxiety, Insomnia, Cough
Quiñones-Moya, et-al, México, 2022	CMN Siglo XXI, IMSS, Instituto de Biotecnología, UNAM	64 patients with autoimmune diseases	47.3 years (23.44%, 76.56%)	Systemic lupus erythematosus, Rheumatoid arthritis, Systemic sclerosis, Spondyloarthropathy, Sjögren's syndrome, Granulomatosis and polyangiitis, Antiphospholipid syndrome, Juvenile arthritis, Still Disease, Psoriatic arthritis, Dermatomyositis	Lupus: Fatigue, Alopecia, Insomnia, Arthritis; Fatigue, Headache, Muscular Weakness; Rest of Patients: Fatigue, Arthralgias, Palpitations
Cantú-Cárdenas, et-al, México, 2022	Universidad Autónoma de Nuevo León, San Nicolas de	397 patients	Age 15-29 years (33.7%, 66.3%)	Not specified	Fatigue, Headache, Anxiety, Cough, Alopecia

Authors, City, Year	Study Center	Participants	Average Age (Male %, Female %)	Risk Factors	Long COVID Symptoms
	los Garza, Nuevo León				
Del Carpio-Orantes, et-al, México, 2023	Grupo de Estudio de COVID-19, Veracruz, México	338 patients	41 years (31%, 69%)	Obesity, Diabetes, Hypertension	Fatigue, Arthralgias, Anxiety, Depression, Memory Disorder, Palpitations
Nuñez et-al, México, 2023	Instituto Nacional de Ciencias Médicas y Nutrición "Salvador Zubirán"	192 patients	53 years (35%, 65%)	Obesity, Diabetes, Hypertension	Anxiety, Difficulty Hearing, Difficulty Exercising, Congestion, Hair Loss, Nausea

Table 1. Main Clinical-Epidemiological Investigations in Mexico on Long COVID

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Declarations