



**TITLE: INVOLVEMENT OF THE THYROID GLAND SECONDARY TO SARS-COV 2 INFECTION (COVID 19) IN THE GENERAL HOSPITAL OF MEXICO ‘‘DR. EDUARDO LICEAGA’’ PERIOD 2020 - 2021**

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**ABSTRACT**

**Research Type:** Analytical - Cross-sectional retrospective, Observational.

**Context:** The current coronavirus pandemic began on December 8, 2019 in the country of the city of Wuhan in China with the unusual presentation of several patients with severe pneumonia of unidentified cause until that time. On February 11, 2020, the World Health Organization gave the name COVID-19 to the disease caused by SARS-CoV-2 and finally declared it a global pandemic on March 11, 2020. Coronavirus disease compromises all organs and biological systems, either by direct involvement of specific tissues or by indirect effects. The endocrine system is no exception and altered thyroid function and parenchyma have been reported. Histopathological study on the effects of SARS-CoV - 2 infection in the thyroid showed an extensive lesion of the para-follicular cells and the destruction and exfoliation of the epithelial cells in the thyroid follicle, an interesting finding was the absence of inflammatory infiltrate which supported the hypothesis of extensive apoptosis responsible for the findings. In the course of the Covid 19 pandemic, sequelae and affectation of systems have been observed, having health problems, for which it has been considered necessary to study the signs and symptoms related to the thyroid gland and Covid 19, this has been evidenced with the increase in cases. of Covid 19 in some cases has been unnoticed, others symptomatic and even

overcome the severity producing and affecting the thyroid gland.

**General Goal:** To determine the relationship between the degree of severity of the Sars – CoV-2 infection and the involvement of the thyroid Gland.

**Specific goal:** Demographically characterize the study patients. To identify the degree of severity due to Sars – CoV-2 infection in the study patients. Define the specific diagnosis of thyroid gland involvement in the study patients. Establish the relationship between the severity of the Sars-CoV-2 infection and the specific diagnosis of thyroid gland involvement.

**Methodology:** A study was carried out at the General Hospital of Mexico ‘‘Dr. Eduardo Liceaga’’ in the period 2020 - 2021 with alteration of thyroid dysfunction the course of the Sars - CoV - 2 disease; Of which 9 presented symptoms of hypothyroidism and 3 of hyperthyroidism, the laboratory results confirmed the diagnosis described. A descriptive and retrospective cross-sectional observational study was carried out, the information data was collected from the clinical history of the admitted patients to present them in a summarized way in tables and graphs with absolute number and percentage.

**Results:** One of the concerns in the face of the COVID-19 pandemic is whether the virus itself can cause alterations in thyroid function and whether thyroid diseases increase the infection

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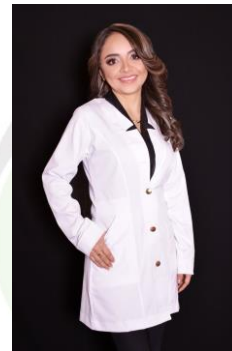
and the severity of complications. In the present study, patients admitted to the General Hospital of Mexico "Dr. Eduardo Liceaga" with a clinical picture of severe acute respiratory syndrome (SARS-CoV-2), without a previous history of thyroid disease, were investigated. Thyroid dysfunction in this entity is characterized by phases of thyrotoxicosis, hypothyroidism and euthyroidism, each phase is accompanied by the typical symptoms of thyroid alteration and characteristic laboratory findings; assessment of thyroid autoimmunity, which may be undetectable or present in low titers. A possibility of a correlation between thyroid disorders, pulmonary dysfunction and cardiovascular risk has been raised, with an impact on processes such as dyspnea, pleural effusion, sleep apnea and other conditions that favor greater cardiorespiratory pathophysiological compromise.

**Key words:** Hypothyroidism / Hyperthyroidism / SARS - CoV- 2 / COVID 19 / Thyroid Autoimmunity

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**Mode of Presentation:** Oral.

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**Conclusions:** In the General Hospital of Mexico "Dr. Eduardo Liceaga", due to the great demand for admissions in the pandemic, cases of Covid 19 and involvement of the thyroid gland have been reported. For this reason, the importance of studying the prevalence and degree of severity, existing relationship of the alterations of the thyroid tests during the disease, being able to be transitory or not, was considered. Within the prevalence of comorbidities and their effects in patients infected with SARS-CoV-2, endocrine diseases have been reported in 8% of those hospitalized with COVID-19 with a prevalence of hypothyroidism of 4.7%, being more frequent in women between 30 and 50 years of age. The risk for the development of complications would be given by the metabolic alterations induced by the effects of thyroid hormones on cellular metabolism, cardiac function and the respiratory system.