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Case Report

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# Covid-19 and Dengue Coinfection: Case Report

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**ABSTRACT**

The concurrence of COVID-19 with dengue present a similarity in the early stages of both diseases could cause delays in the diagnosis of dengue infection, SARS-CoV-2 or both. This adds an additional difficulty to the diagnosis and suggests that a positive result of IgM or IgG serology would not be sufficient for the definitive confirmation of dengue. Clinical case: 13-year-old female patient in poor general condition who debuts with a clinical picture of 5 days of evolution consisting of fever, anosmia, ageusia, unquantified fever peaks, chills, abdominal pain and vomiting that does not stop.

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## Introduction

Currently, worldwide we are experiencing the simultaneous circulation of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the causative agent of coronavirus disease 2019 (COVID-19) and dengue virus. Both are related because they present a great physiopathological and clinical similarity. In the pediatric population, especially in those under 15 years of age, manifestations that may or may not be associated with fever, presence of respiratory symptoms (cough, odynophagia, among others) have been described. and / or gastrointestinal symptoms that can range from mild to severe. One of the points in which we can suspect dengue, involves symptoms ranging from retroocular pain, to serous effusions in the peritoneum, pleura and / or pericardium (detected clinically and / or by images), mucosal bleeding, drowsiness or irritability, major hepatomegaly 2 cm, sudden increase in hematocrit associated with a rapid decrease in platelet count. Very little documented information records co-infection of covid-19 and Dengue in pediatric patients, mainly because the co-circulation of these two viruses can lead to a delay in the diagnosis of either of the two conditions, which in turn directly impacts the quality of patient care. In epidemiological terms, the delay in case detection leads to a late implementation of preventive measures, which can generate a workload for health services. Our health system must continue to provide care to patients with COVID-19 and at the same time have the capacity to detect arboviruses, such as dengue, and already have care protocols ready when the influenza season begins [1-4].

## Presentation of the clinical case

A 13-year-old female patient in poor general condition, who debuted with a clinical picture of 5 days of evolution consisting of fever, anosmia, agusia, unquantified fever peaks, chills, abdominal pain and vomiting that did not stop. On physical examination: patient with 39.3 ° C, with other vital signs in normal parameters,

hemodynamically stable, without alterations in the central nervous system, hyperemic tonsils, colicky abdominal pain at the hypogastric level of moderate intensity on superficial and deep palpation, without diarrhea. He was ordered a PCR test and covid-19 antibodies, hemogram, urinalysis and abdominal ultrasound.

06/17/2021: the patient underwent an abdominal ultrasound that reported hepatomegaly (slightly enlarged liver + - 2 cm) shape and normal echogenicity, without free fluid in the peritoneal cavity. Bilateral pleural effusion of approximately 13 ML. Diagnosis 1: hepatomegaly and bilateral pleural effusion. 07/18/2021: covid-19 PCR test: positive. The patient underwent a chest x-ray that reported a bilateral diffuse interstitial pattern, right fissuritis, suggestive of pulmonary hyperflow, in addition, multiple foci of alveolar pattern were observed diffusely in the bilateral lower lobe with a tendency to consolidate, giving an image impression. cottony, which may correspond to the beginning of acute lung edema vs. Neuomina due to Sars-Cov-2, obliterated left costophrenic angle is observed, impressed with pleural effusion at that level and normal cardiac silhouette, thickened hilum (Image 1).


**Image 1:** Patient who is left under observation with Hartmann's solution in bolus 360 cc and continue at 58 cc per hour, omeprazole 18 MG IV, acetaminophen syrup give 9 cc every 6 hours for temperature greater than 38.2 °C, hemogram, urinalysis, curve ends every 4 hours and vital signs check.

## Discussion

According to current literature, children account for approximately 1% to 5% of diagnosed COVID-19 cases. Approximately 90% of pediatric patients are diagnosed as asymptomatic, level or moderate disease. However, up to 6.7% of cases can be serious. Severe disease is generally seen in patients younger than 1 year and patients with underlying diseases [5].

On the other hand and with equal importance, dengue is a disease of variable, systemic and dynamic clinical presentation that presents a wide clinical spectrum that includes severe and non-serious clinical manifestations. It can, at times, present as an undifferentiated feverish picture. The clinical course is unpredictable. After a period of 3 to 7 days of incubation, the symptoms begin suddenly, being able to differentiate more serious stages with greater symptoms than not receiving adequate treatment and surveillance could trigger major health problems and even the death of the child [6].

Both dengue and COVID-19 have a febrile and a critical period, both are systemic infections and their initial symptoms may be similar to each other and not be the same as the typical or characteristic later symptoms, particularly in pediatric age. Dengue defines its course in one week and the disease due to the new coronavirus has at least three weeks for its recovery or fatal evolution. Each similarity and difference between the two is analyzed considering the most up-to-date national and international criteria, emphasizing the best way to treat each patient to avoid complications and death [7].

## Conclusion

There is very little documented information that records co-infection of Covid-19 and Dengue in pediatric patients, mainly due to the co-circulation of these two viruses and the pathophysiological and clinical similarities they share. In order to provide timely care to the pediatric population worldwide and especially to the pediatric population located in endemic areas, it is necessary to continue investigating, documenting the behavior of these entities in cases of coinfection [8].

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