
CASE REPORT

The Importance of Differential Diagnosis of Pediatric Inflammatory Multisystem Syndrome

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Abstract

Pediatric inflammatory multisystem syndrome (PIMS) is a condition related to the previous exposure to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. The pathophysiology of PIMS is not fully understood. However, it can be explained as a consequence of hyperactivation of the immune system. Clinically, PIMS usually follows 2-4 weeks after SARS-CoV-2 infection and its main symptom is fever that lasts for a few days. The diagnosis of PIMS is established by detailed anamnesis, clinical examination, and biological changes such as increasing levels of interleukin-6 (IL-6), D-dimer, NT-proBNP and anti-SARS-CoV-2 IgG antibodies. The intensive treatment should be quickly initiated, as the consequences could be fatal. The treatment is represented by a combination of intravenous immunoglobulins, corticosteroids and anticoagulants.

Keywords: SARS-CoV-2 infection, corticotherapy, immunoglobulins, anticoagulants.

Introduction

Coronavirus disease 2019 (COVID-19) is an air-transmitted illness caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [1,2]. It is known that the severity increases with age, usually the population over 65 years old being the most affected. Children and young people have an asymptomatic or mild course of the disease [1,3].

The problem that arises in terms of the pediatric population, in the context of this viral infection, is related to the increasingly severe consequences that require a differential diagnosis as quickly and correctly as possible. These consequences are known as a condition called pediatric inflammatory multisystem syndrome (PIMS) a new disease seen in children directly

influenced by previous SARS-CoV-2 infection. The pathophysiology of PIMS is not fully understood. However, it can be explained as a consequence of hyperactivation of the immune system [3-4].

Clinically, PIMS usually follows 2-4 weeks after SARS-CoV-2 infection and its main symptom is fever that lasts for a few days [3-5]. Other manifestations could be represented by rash, fatigue, abdominal pain, red and cracked lips, pharyngeal erythema, swollen hands and feet, peeling skin on hands and feet, headache, conjunctivitis, muscle aches and pains, diarrhea and vomiting, swollen neck glands, unexplained irritability [6-7].

The diagnosis of PIMS is established by corroborating data from anamnesis, clinical examination and paraclinical tests. The