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RESEARCH ARTICLE

Kawasaki disease at a pediatric hospital in Mexico☆

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KEYWORDS
Kawasaki disease;
Latin America;
Signs and symptoms;
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Abstract
Background: Kawasaki disease (KD) is one of the most common systemic vasculitis in children under five years of age. The epidemiology of the disease is not well established in Mexico. The objective of this study was to describe the epidemiology, clinical features and treatment of patients with KD at the Hospital Infantil de Mexico Federico Gomez (HIMFG).
Methods: We conducted a retrospective, descriptive and analytical study of patients diagnosed from January 2004 to December 2014 with KD at the HIMFG.
Results: We analyzed 204 cases of which 55% were male, with a median age of 32.5 months (6-120) and a rate of hospitalization of 96%. Twenty percent of patients presented incomplete KD. No differences in the somatometric measurements or vitals were reported. The most frequent symptoms were fever, conjunctivitis (89%), oral changes (84%), pharyngitis (88%) and strawberry tongue (83%). We found higher acute phase reactants in the classic presentation. Echocardiographic alterations were observed in 60 patients (29%) who presented ectasia (12%) and coronary aneurysms (11%). On the other hand, 169 (83%) patients received intravenous immunoglobulin (IVIG), 18 (9%) showed resistance to IVIG, 6 (3%) required corticosteroids, and 2 (1%) infliximab; all received acetylsalicylic acid.

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Conclusions: There were no important differences between classic and incomplete presentations. The incidence of cardiac alterations is less than previously reported in Mexico but similar to other countries.

PALABRAS CLAVE
Enfermedad de Kawasaki;
Latinoamérica;
Manifestaciones clínicas;
Alteraciones coronarias

Enfermedad de Kawasaki en un hospital pediátrico en México

Resumen
Introducción: La enfermedad de Kawasaki (EK) es una de las vasculitis sistémicas más comunes en niños menores de 5 años de edad. La epidemiología de la enfermedad no está bien establecida en México. El objetivo de este trabajo fue describir la epidemiología, características clínicas y tratamiento de los pacientes con EK atendidos en el Hospital Infantil de México Federico Gómez (HIMFG).
Métodos: Se realizó un estudio retrospectivo, descriptivo y analítico de pacientes diagnosticados con EK en el HIMFG en el periodo comprendido entre enero de 2004 y diciembre de 2014.
Resultados: Se analizaron 204 casos, la mayoría de sexo masculino (55%), con mediana de edad de 32.5 meses (6-120) y una tasa de hospitalización del 96%. El 20% de los pacientes presentó EK incompleto. No se reportaron diferencias en la somatometría ni signos vitales. La sintomatología más frecuente fue fiebre, conjuntivitis (89%), cambios orales (84%), faringitis (88%) y lengua en fresa (83%). Se encontraron reactantes de fase aguda más elevados en las presentaciones clásicas. Se reportaron alteraciones ecocardiográficas en 60 pacientes (29%), de las cuales el 12% fueron ectasia y el 11% aneurismas coronarios. Por otro lado, 169 pacientes (83%) recibieron inmunoglobulina intravenosa (IGIV), 18 (9%) mostraron resistencia a IGIV, 6 (3%) requirieron corticosteroides y 2 (1%) infliximab; todos recibieron ácido acetilsalicílico.
Conclusiones: No se encontraron diferencias importantes entre las presentaciones clásicas e incompletas. La incidencia de alteraciones cardiacas es menor a la reportada previamente en México, pero similar a la de otros países.

1. Introduction

Kawasaki disease (KD) is a systemic vasculitis frequently present in children under five years of age.[1–3] It is a self-limited disease that affects predominantly medium caliber vessels, particularly the coronary arteries.

More than 45 years have passed since T. Kawasaki reported this condition; however, its etiology remains unknown. Some infectious agents have been suggested as triggers of the disease (*Streptococcus*, *Staphylococcus*, *Propionibacterium* sp., *Yersinia* sp., Epstein Barr virus, retrovirus, parainfluenza virus, *Candida* sp. and *Lactobacillus* sp., among others). However, the current trend is directed to bacterial superantigens related with the overproduction of proinflammatory cytokines, mononuclear cells, cytotoxic antibodies and activated T-cells. Other studies have found associated genetic alterations (ITPKC, CASP3, BLK, CD40), imbalance between helper (Th17) and regulatory T-cells, increase of IgA-producing plasma cells, concentrations of the components of the erythrocyte sedimentation rate (ESR), increased activity of matrix metalloproteinases and the hypothesis of the homeostasis protein system.[1,4–7] These theories can explain very significant alterations, such as the presence of erythema at the site of BCG vaccine secondary to a polymorphism in the gene that encodes for the enzyme ITPKC.[8]

KD diagnosis is based on characteristic signs and symptoms. The classical criteria are a fever that lasts longer than five days, bilateral conjunctival injection, changes in the lips and oral cavity, polymorphic erythema, changes in extremities and non-purulent acute cervical lymphadenopathy. At least five of these symptoms must be present for the diagnosis of KD.[9] Some patients do not meet the classic criteria and only present some of the main features. For this reason, diagnosis represents a challenge known as ''incomplete KD.''[10,11] The typical form of the disease has three phases: the acute phase, which lasts ten days and is characterized by high fever, adenopathies, erythema or peripheral edema, conjunctivitis and enanthema. The subacute phase lasts from 11 to 21 days and is characterized by thrombocytosis, desquamation, and resolution of the fever. Finally, the convalescence phase (from 21 to 60 days) during which clinical signs disappear gradually.[12]