Case Report
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Kawasaki Disease Presenting as Acute Clinical Hepatitis

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Abstract

Kawasaki disease is a systemic vasculitis of children. Among gastrointestinal symptoms of this disease jaundice occurs uncommonly. We present a 23 month boy with icter and clinical hepatitis and final diagnosis of kawasaki disease.

Keywords
Clinical hepatitis, Diagnosis, Kavasaki.

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Introduction

Kawasaki disease is an acute febrile illness of children in all populations. The incidence of disease is highest among children of Asian background. Median age of disease is 2-3 yr and 80% of affected children are less than five years old. This illness is a systemic vasculitis of unknown etiology. Coronary artery abnormalities are seen in approximately 20-25% of affected children without treatment. There are five clinical criteria for diagnosis of Kawasaki disease in addition to fever including bilateral non-exudative bulbar conjunctivitis, erythema of oral and pharyngeal mucosa, edema of hands and feet, rash of various forms and cervical lymphadenopathy . In classic KD, the diagnosis is based on lasting of fever for at least 4 days and presence of at least four of above criteria. If there is persistent fever but fewer than four of the five clinical criteria, the atypical or incomplete Kawasaki should be considered. In these atypical cases laboratory and echocardio- graphic data can be diagnostic. Gastrointes- tinal symptoms and signs occur commonly in patients with kawasaki disease. Although liver tests abnormalities and hydrops of gallbladder have been reported in kawasaki disease,jaundice and clinical hepatitis are unusual presentings complaints(1-5).

Case Report

A 23 month boy was referred to our clinic because of prolonged fever and icter. The onset of fever was from 10 days before admission and icter manifested 5 days after the onset of fever. Dark urine and pale stool were associated with icter. History of hepatotoxic drug consumption was negative. There was a history of maculopapular rashes on trunk and limbs and swelling of fingers and toes that appeared 1-2 days after the onset fever and last for 3-4 days. On physical examination mild hepatosplenomegaly and RUQ tenderness were found. Auxillary temperature was 39.5$^{\circ c}$. Desquamation on the tips of fingers and toes was seen. Eye examination showed bilateral bulbar conjunctival injection. Abdominal ultrasonography revealed hepatosplenomegaly with normal echogenecity. Gallbladder and bile ducts were normal. Ascites was not detected. Laboratory findings showed elevation of ESR, CRP and liver transaminases with hyperbilirubinemia. There was no serologic finding compatible with HAV, HBV, HCV and EBV infections (Table.1).

Table 1: Laboratory characteristics of patient

WBC	7100/mm^3
Hb	7.9gr/dl
Plt	396000/ mm3
ESR	135
CRP	9 mg/dl
AST	177 IU/L
ALT	198 IU/L
ALP	2786
Bili(Total, Direct)	(5.7 mg/dl, 2.6 mg/dl)
Albumin	3.7 g/dl
PT	13s
GGT	392
HBSAg	Negative
Anti HAV(IgM)	Negative
Anti HCV	Negative
Anti EBV(IgM)	Negative

According to clinical and laboratory findings of this patient, Kawasaki disease was suspected and echocardiography was done. In echocardiographic assessment three Vessels aneurysms(LAD,LCA,RCA) were detected. IVIG (2gr/kg) and ASA (80mg/kg) were administer. Resolution of fever and icter were achieved during 24h after initiation of IVIG.

Liver tests became normal in 2 weeks. A follow-up echocardiography was done a week after the onset of treatment and revealed three vessels aneurysms like the first one. The patient was referred to pediatric cardiologist for continuing treatment and follow-up.

Discussion

Gastrointestinal involvement has been often associated with Kawasaki disease but does not belong to the classic diagnostis

criteria. Although hydrops of gallbladder and elevation of liver transaminases occur in KD,acute clinical hepatitis is extremely rare. KD is the leading cause of acquired heart disease in children(1,4,7). Atypical forms of KD have been reported 15 to 36.2% and represent a high clinical risk for developing heart disease (8-10). We reported an incomplete or atypical form of KD since lower than four criteria exist in this patient consist of skin rash, extrimities changes and conjunctival injection. Presence of coronary artery aneurysm confirmed the diagnosis. Although coronary artery aneurysm had been formed in this patient at diagnosis, we started treatment. Complete resolution of clinical symptoms occured after initiation of IVIG. Grech V, et al. reported a 3.5 year old girl presented with acute hepatitis and satisfied the criteria for the diagnosis of KD but there were no coronary artery abnormalities in this patient (6). A 10 year old boy was reported by Chen WT, et al. with persistent fever and jaundice followed by conjunctivitis, periungual desquamation and strawberry tongue. Echocardiography revealed multiple coronary artery aneurysms like our patient (11).

Andrea toddio,et al. reported five patients with acute febrile cholestatic jaundice and final diagnosis of KD. All patients obviated clinical criteria for KD. There were no cardiac involvements in these patients. All of 5 patients recovered completely after starting IVIG (4). The most significant finding in our patient compared with other cases is multiple coronary artery aneurysms that seen only in the case reported by chen WT, et al. it seems delayed diagnosis is the reason for this finding because other cases mostly fulfilled classic clinical criteria for disease but we confronted with an incomplete form of disease. Acute febrile clinical hepatitis is a common feature in other causes of hepatitis such as hepatotropic viruses but presence of persistent fever along with clinical hepatitis and elevation of ESR can be clues for diagnosis of kawasaki disease. We conclude in any patient with persistent febrile clinical hepatitis, Kawasaki disease should be highly suspected even in presence of lower than four clinical criteria and should be proptly treated to prevent cardiac complications.

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