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Case Report

The Subtle Storm: Identifying Incomplete Kawasaki Disease in Children

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Abstract

Incomplete Kawasaki disease (KD) poses a significant diagnostic challenge, particularly in pediatric patients who do not fulfill the classical diagnostic criteria[1]. Timely recognition and early initiation of therapy are crucial to prevent serious cardiovascular complications[2], especially coronary artery involvement. It is the leading cause of acquired heart disease in children in developed countries. The highest incidence is in Asia with almost 1 in a 100 children in Japan having the disease by age 5 [2]. In Africa, two cases were reported in South Africa in Caucasian children in 1980 but the first case in an African child was reported in Ivory Coast in 1981. Despite of sporadic cases being reported across many countries in Africa, mainly North Africa and the West African region, the epidemiological data for KD is limited for African countries [3,4,5].

The etiology of the disease remains unknown and several hypothesis exist in trying to explain the cause. Epidemiologic data suggest that an infectious agent may be causing the disease in genetically susceptible individuals [6]. The classic presentation of the disease occurs in children below 5 years. This suggests that there is an environmental trigger to which children mount an immune response after which the disease no longer manifests [7]. Postulated infectious agents include variants of normal flora which are induced by environmental factors such as improved hygiene [8].

Pathogenetic-mechanisms postulated to result in endothelial injury include that of a protein homeostasis system in which immune cells target pathogenic proteins bound to endothelial cells resulting in host cell injury [9]

We present a case of a 6-year-old child with prolonged fever, mucocutaneous manifestations, and elevated inflammatory markers, ultimately diagnosed with incomplete KD. Prompt treatment with intravenous immunoglobulin (IVIG) led to rapid clinical improvement and prevented coronary complications. This case underscores the importance of maintaining high clinical suspicion and initiating early management in children with atypical or incomplete presentations of Kawasaki disease.

KEYWORDS: *Incomplete Kawasaki Disease, Pediatric vasculitis, IVIG, Coronary artery complications, Maculopapular rash.*

In children, Kawasaki disease is rarely reported(1,2). We herein report one such case.

Case Report

A 6-year-old male child presented with c/o of fever since 15 days & c/o rash since 10 days , on examination vitals were stable and systemic examination was normal.Routine investigations were sent and CRP was positive(21.1) and ESR was raised(40)

Child was clinically diagnosed as incomplete kawasaki disease and shifted to wards and was started on ecosporin and oral antibiotics and IVIG infusion was given over 10 hours and vitals were strictly monitored. LFT and RFT was sent and reports were normal.Serum electrolytes were sent and found to be normal Urine routine was sent and was normal 2d echo and US abdomen pelvis was done and found to be normal On day 3 of admission child had headache and vomiting for which symptomatic treatment was given.

On day 4 of admission child was taken to pediatric cardiologist opinion was taken for coronary studies and it was reported to be normal. Sr ferritin and Pro BNP was sent and was reported to be high. Blood culture sent showed no growth for 24 and 48hrs. Child was afebrile for 48 hours and hence dose of ecosporin was reduced.



Figure 1 :- Palmar erythema and peeling : Classic hand manifestation in Kawasaki disease



Figure 2 :- Perineal desquamation : Early mucocutaneous change in Kawasaki disease.

Discussion

Patient was apparently alright 15 days back after which he developed fever which was sudden in onset continuous high grade associated with chills and rigor and not relieved on medications. Mother c/o rash in the child on day 3 of fever ,acute in onset,maculopapular and erythematous first appearing on the neck and groin region and then trunk associated with itching. Rash over the hands and soles was also present which was painful. Child was admitted in a hospital as he was not getting better with oral symptomatic treatment. Rash subsided with skin peeling, pigmentation in 3-5 days and as fever subsided child was discharged.

H/o redness and swelling of tongue and redness over the lips present. After an afebrile period of 4 days child developed fever again and rash over the palms and soles of the child.

H/o odynophagia since yesterday H/o travel 2 days back

H/o periungual desquamation

On evaluation leukocytosis, thrombocytosis, elevated CRP and ESR, hypertriglyceridemia, hypercholesterolemia, urine routine showed 4-8 pus cells/hpf. USG abdomen and pelvis was normal.

2 D Echo was done to look for coronary artery dilatation and was found to be normal.

Child was treated with IV immunoglobulin and aspirin.

Child responded within 48 hours of treatment and was discharged with low dose aspirin for 4 weeks .Follow up echo was found to be normal. Early identification of incomplete Kawasaki disease is important for preventing complications from this disease.

Conclusion

This case highlights the importance of high clinical suspicion and timely management in children presenting with atypical features of Kawasaki disease. Early intervention with IVIG can significantly reduce morbidity, even in incomplete presentations.

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