World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 4.223

KAWASAKI DISEASE WITH FEVER AND DIARRHEA - A CASE REPORT

K. Vinod[1]*, B, Dr. N. Surendra Reddy[2], T.S. Durga Prasad[2], Dr. Y. Prasanna Raju[3], Dr. D. Ranganayakulu[4]

Pharm D Intern[1], Assistant Professor[2], Head of the Department[3], Department of Pharmacy Practice, Principal[4]
Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupati – 517503, India.

***Corresponding Author: K. Vinod**
Pharm D. Intern, Department of Pharmacy Practice, Sri Padmavathi School of Pharmacy, Tiruchanoor, Tirupati – 517503, India.

Article Received on 19/03/2017 **Article Revised on 08/04/2017** **Article Accepted on 29/04/2017**

ABSTRACT

Kawasaki disease (KD) is an idiopathic acute systemic vasculitis of childhood. Although it simulates the clinical features of many infectious diseases, an infectious etiology has not been established. Among the standard criteria for a diagnosis of KD are oral manifestations such as strawberry tongue, erythematous cracked lip, and oropharyngeal mucositis. A 6 year old female child history of KD admitted in SVRRGG Hospital, Tirupati with recurrent symptoms of fever, changes in lips and oral cavity along with diarrhea. We suggest that physicians should be cognizant of the fact that they must individualize every patient's management to the best of their knowledge and judgment, rather than simply going by the guidelines.

KEYWORDS: Kawasaki disease (KD), erythematous cracked lip, fever, diarrhea, IV Immunoglobulin.

INTRODUCTION

Kawasaki disease (KD) is an acute, self-limited vasculitis of unknown etiology that was first described in the Japanese literature in 1967 and has since been recognized as both endemic in the America, Europe and community wide epidemic in Asia.[1] The disease most frequently occurs in children aged between 6 months to 5 years and is often accompanying with coronary artery aneurysms. Indeed, findings from an epidemiologic survey conducted in Japan revealed that only 1% of KD cases occurred in children aged 9 years.[2]

The diagnosis is based on the presence of at least five of the following six clinical features: 1) persistent fever, 2) polymorphous rash, 3) characteristic changes in the extremities (erythema of the hands and feet followed by desquamation of the fingers and toes), 4) bilateral conjunctivitis, 5) cervical lymphadenopathy, 6) oropharyngeal changes including 'strawberry' tongue (prominent lingual papillae); dry, erythematous or cracked lips, and erythema of the oropharyngeal mucosa. The oral changes are a prominent feature of this serious disease and it is quite possible that some cases will present to dentists or dental departments in the first instance. Despite this, there appears to be little awareness of the condition in the dental community and the condition has received little attention in the dental literature. Since early diagnosis and treatment is important, the condition should be considered in children presenting with any of the oral features of the disease.[3]

CASE REPORT

A 6 year old female child brought by mother to the hospital pediatric department with the complaints of fever one day, loose stools one day and swelling of lips. History of present illness shows fever high grade not associated with rash/chills and rigors, not associated with vomitings/convulsions. Loose stools one day 5 episodes, history of worms in stools noted by mother watery in nature, not mucoid, not foul smelling, history of cold and cough from one day onwards, history of abdominal pain peripheral region one day back. No history of convulsions, vomiting. Immunization given as per scheduled and the developmental history of child appropriate for age. Her family history shows grandfather having Tuberculosis and grandmother having Bronchial asthma.

Her past history shows she had similar complaints in the past child was admitted and treated for kawasaki disease at SVRRGGH for 23 days 2 months back. At that time the patient had fever more than 5 days, peeling of finger and toes, history of edema in hands and feet, change in lips and oral cavity, desquamated rash in groin. Her lab investigations were Leucocytosis-15000 cells/mm^3, ESR-80mm/hr, CRP-96 mg/ml, Hb -9.9 gm /dl, Thrombocytosis-9.31 L/mm^3, 2-D Echo: normal study (no coronary artery abnormality seen). Other lab investigations are serum albumin -4.1gm, serum cholesterol -179 mg/dl, liver function test SGOT - 28.9 IU/l, SGPT-16.1 iu/l. Based on the above investigations the patient was diagnosed with Kawasaki Disease (KD).

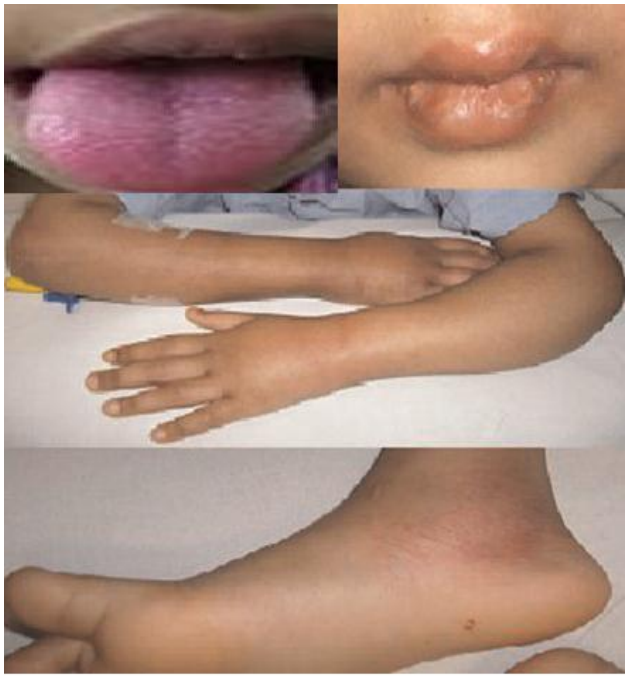

Figure 1: 6 year old female child with change in lips and oral cavity, edema in hands and feet.

The patient was treated with IV immunoglobulin infusion 2mg/kg in single infusion, Tab.ASPIRIN 100 mg/kg/day in QID for 2 days then started with Tab. ASPIRIN 75mg oral TID and Tab. RANITIDINE 75 mg BD. After treatment the patient was recovered and finally discharged with Tab. ASPIRIN 75mg oral three times in a day, Tab. RANTAC 75 mg two times in a day, Syp. HEPATOGLOBIN 5ml two times in a day.

On examination her vitals shows normal but observed sign of dehydration with dry oral mouth and her systemic examinations shows normal. Lab investigations shows normal serum electrolytes, total count was 12,700 cells/cumm, Hb was 11.9 g/dl, Hematocrit was 29.5%, platelet count was 2.43 lakhs/cumm. Based up on the chief complaints and past history the patient was diagnosed with Kawasaki disease with fever and diarrhea.

The patient was treated with IV fluids Ringer lactate, ORS with plenty of fluids, Inj. CEFOTAXIME 500mg BD, Inj. PANTOP 20 mg OD, Tab. PARACETAMOL 250mg orally QID, Syp.Zn-20 5ml orally once in a day. The same treatment was given for 4 days after that the patient was recovered and all the symptoms were subsided and discharged.

DISCUSSION AND CONCLUSION

Kawasaki disease is predominantly a disease of childhood although cases have been reported in adults.[4] Around 80% of cases occur in children under 5 years of age. It occurs more often in boys than girls with a male/female ratio of about 1.5:1. Since first being described in the Japanese population, where it retains its highest incidence, cases have been reported worldwide in children of all racial backgrounds.[5]

The etiology of Kawasaki disease remains obscure. Epidemiological evidence suggests a microbial agent as the likely cause; however no causative organism has been identified to date. A recent hypothesis is that the disease is caused by a bacterial super antigen toxin, similar to that responsible for the Staphylococcal and Streptococcal toxic shock syndrome.[6] Regardless of aetiology, early treatment with a single dose of intravenous immunoglobulin (2 g/kg) has been shown to significantly reduce the incidence and severity of aneurysm formation as well as providing symptomatic relief for the acute illness.[7] Immunoglobulin appears to be most beneficial if given as early as possible after diagnosis. Low dose aspirin is also used for its anti-inflammatory and anti-thrombotic effects although its efficacy remains unproven. Paracetamol can also be used as an antipyretic. Recurrence of the disease has been previously noted with reported rates varying between 0.8% in the United States to 3% in Japan. The proportion of patients suffering a recurrence increases with age, while the majority of recurrences occur within 2 years of the initial attack. In rare cases (0.2%), patients can suffer multiple recurrences.[8]

The patient's chief complaint when she was presented with lip swelling, no sign of any insect bite was observed since the swelling repeated almost on the same site with no response to antihistamine drugs. No relevance with any medical syndromes was observed which might indicate the involvement of any of the signs and symptoms e.g. Crohns' Disease or Melkersson–Rosenthal Disease. Any other possible cause for lip swellings was investigated with no direct causative relevance emerged. All symptoms subsided spontaneously. Symptoms that the patient had experienced were not related to any environmental changes. The most recent laboratory results showed an ESR rate of 80 mm/h. Some of the clinical signs and symptoms including lip involvement and the spontaneous resolution of the allergic-like reaction may suggest the possibility of a recurrence of KD in this case. Early diagnosis of KD is essential, because administration of IVIG within the first 10 days of illness has been shown to reduce the incidence of coronary artery aneurysms by a factor of five[9]. Estimates of the incidence of under diagnosed conditions attempt to justify a larger incidence rate than is reported by doctors or medical authorities; whereas other rates may use only the official reported rates.

In view of these potentially avoidable outcomes and because KD is under diagnosed, it is important to have a high degree of suspicion for the disease in any child with prolonged unexplained fevers.[9] The standard of care for children with acute Kawasaki disease is a single, 2 mg/kg infusion of IVIG along with aspirin at a dose of 80–100 mg/kg/day in 4 divided doses.[10] Aspirin can be

decreased to 3–5 mg/kg/d once the fever has resolved doses. Although the patient reported here was admitted during the initial episode of her disease and presented with all of the criteria of the acute febrile phase, the delayed diagnosis led to the delayed administration of IVIG. This may ultimately have been responsible for the observed late recurrence of the oral Manifestations.[10]

Dentists and oral medicine specialists are not usually involved in the diagnostic process of Kawasaki disease in children since the persistent fever tends to be the parents' main concern. The oral manifestations of the disease are important to recognize since they may be overlooked by the general physician. Dentists have the opportunity to play an important role in assisting other health professionals in the early diagnosis of this rare disease.

REFERENCES

1. Ates Kara, HasanTezer, MD, I˙lkerDevrim, MD, EsraKılıc¸, Korkmaz, MD, TevfikKarago Z, MD, Sema O zer, MD, A. Bu lentCengiz, MD, and Gu ltenSec¸ meer, MD, Kawasaki Disease A Case Report in Extreme of Pediatrics, Infectious Diseases in Clinical Practice, September 2006; 14(5): 333-334.
2. Chiew-Yee Yap,Lung-Huang Lin,Nan-Koong Wang, An atypical presentation of Kawasaki disease: a 10-year-old boy with acute exudative tonsillitis and bilateral cervical lymphadenitis, CLINICS, 2012; 67(6): 689-692.
3. M. N. Pemberton, I. M. Doughty,R. J. Middlehurst,and M. H. Thornhill,Recurrent Kawasaki disease, British Dental Journal, March 27 1999; 186(6): 270-271.
4. Thompson A C, Lamey P J. Kawasaki syndrome in an adult. J Laryngol Otol, 1990; 104: 569-572.
5. Dajani A S, Taubert K A, Gerber M A et al. Diagnosis and therapy of Kawasaki disease in children. Circulation, 1993; 87: 1776-1780.
6. Curtis N. Kawasaki disease. British Medical Journal, 1997; 315: 322-323.
7. Newburger J W. Treatment of Kawasaki disease. Lancet, 1996; 347: 1128.
8. Yanagawa H, Nakamura Y,Yashiro M, Hirose K. Results of 12 nationwide surveys of Kawasaki disease. In Kato H (ed) Kawasaki disease. Amsterdam: Elsevier Science, 1995; 3-14.
9. Bhatnagar, S.K., Paul, G., Subramanian, R., Al Hosni, M.S., Al Khusaiby, S.M., 2003. Kawasaki disease in Oman – a clinical study. J. Trop. Pediatr, 49(6): 361–366.
10. Asmaa Faden, Recurrent lip swelling as a late presentation of Kawasaki disease: Case report and review of literature, The Saudi Dental Journal, 2013; 25: 43–47.