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KAWASAKI DISEASE: A PAEDIATRIC CASE REPORTIN A TERTIARY CARE HOSPITAL IN SOUTHERN INDIA

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ABSTRACTS
Kawasaki disease (KD) is an acute systemic vasculitis of unknown aetiology that has largely replaced rheumatic heart disease as a cause of acquired heart disease in children of many developed countries. We report a case of incomplete KD in a two and half-year-old boy.[1] The diagnosis of incomplete KD was made with the clinical presentations such as high-grade fever for 6 days irritable with stomatitis and excoriation of lips, cervical lymphadenopathy. During the hospital stay he experienced one episode of skin peeling of fingers and toes. He was treated with intravenous immunoglobulin, antibiotics and aspirin following which he made a fast improvement and discharged after 8 days of hospital stay. The patient's condition had improved and there were no new concerns when the review was done two weeks later. It is important for all the health care practitioners having knowledge about the incomplete KD for rapid diagnosis and prompt treatment of these patients with intravenous immunoglobulin is crucial for the prevention of lethal coronary complications.[2]

KEYWORDS: Kawasaki disease (KD), Stomatitis, Excoriation of lips, Cervicallymphadenopathy, Skin peeling.

INTRODUCTION
Kawasaki disease (KD) was first described in a 1967 report by Japanese paediatrician Tomisaku Kawasaki. The cardiac sequelae were later documented in 1970, following investigation of 10 autopsy cases of sudden cardiac death following diagnosis of KD. The first reported cases outside Japan were in Hawaii in the early 1970s; KD cases have since been reported in more than 60 countries worldwide.[2]

Kawasaki disease (KD) is a rare systemic inflammatory disease that predominately affects children less than 5 years of age. Pathogenesis of KD remains unknown; the leading theory is that an unknown stimulus triggers an immune-mediated inflammatory cascade in a genetically susceptible child.[3]

Classic KD is a clinical diagnosis based on set criteria and excluding other similar clinical entities. Patients who do not fulfill complete diagnostic criteria for KD are often referred to as atypical (or incomplete) KD. The most feared complication of KD is coronary artery abnormality development, and patients with atypical KD are also at risk. Administration of intravenous immunoglobulin (IVIG) and aspirin has greatly reduced the incidence of coronary lesions in affected children. Several other immune-modulating therapies have recently been utilized in complex or refractory cases.[4]

CASE REPORT
A 2.5-year-old boy was admitted in the hospital with chief complaints of high-grade fever for 6 days. irritable with stomatitis, redness of tongue, excoriation of lips and cervical lymphadenopathy. Initially he was treated at local hospital for fever with antipyretics and antibiotics. He was referred here suspecting Kawasaki disease.

The child is 96 cm in height and weighs 12 kg. on examination the child was febrile withtemperature 100^0 F and irritable with all the clinical presentations.

Vital signs

Vitals	Day1	Day2	Day3	Day4	Day5	Day6	Day7	Day8
P. Rate (permin)	150	120	110	118	122	130	117	116
R. Rate (permin)	28	26	30	23	32	30	28	26
Temp (^{0}f)	100	102	99	98.6	98.4	98.2	98.4	98.6

Lab investigations

Lab parameters	Normal value	Observed value
Esr	0-20mm/hr	80
Platelet count	150-450*10^3 c/cu	372*10^3
Hb	11-18 g/dl	10.5
Tlc	4-11*10^3c/cumm	17300
Crp	0-6mg/l	330.09
Sgpt	5-48 iu/l	83
Polymorph	45-75%	76
Lymphocyte	20-45%	16
Eosinophil	0-6%	01
Monocyte	0-8%	01
Basophil	0-1%	00

Urine routine examination

Factors	Normal	Observed
Urine albumin	Nil	Slight trace
Urine sugar	Nil	Nil
Pus cells	0-1/hpf	10-12
Epithelial cells	0-2/hpf	Nil
Rbc	0-3/hpf	Nil
Crystals	Nil	Nil
Casts	Nil	Nil

From the paediatric cardiac observations, it was found that situs solitus and levocardia, NRGA, IAS/IVS infract, normal coronaries, LMCA :0.27 cm, RCA :0.24 cm, no PDA, noPAH, and good biventricular function.

Diagnosis

From the subjective evidences such as high-grade fever, stomatitis, excoriation of lips, cervical lymphadenopathy, skin peeling and objective evidences such as elevated ESR, CRP, TLC, presence of pus cells in urine the patient is having atypical Kawasaki disease with urinary tract infection

Treatment

Here the child is presented with high grade fever and symptoms suggests the clues to the Kawasaki disease. On the day of admission he was treated with inj amoxycillin clavulanic acid 300mg 1-1-1 ,inj ceftriaxone sulbactum 250 mg 1-1-1, syp paracetamol (125 mg/5 ml)6 ml 1-1-1 and choline salicylate gel for L/A .On the second day all the medications are continued along with 2 doses of IVIG 1gm IV from 4.00 pm-8.00 pm and 1 gm IV from 8.00 pm-6.00 am and administration of paracetamol suppository12.5 gm to manage fever spikes then the boy experienced one episode of vomiting which was managed with inj ondansetron 4 mg stat dose and started inj pantoprazole 10 mg 1-0-0 . On the third day of hospital stay IVIG was stopped and started tab aspirin 300 mg 1-1-1 and flutibact ointment 1- 0-1 for lip application, choline salicylate gel was stopped and all other medications are continued. On the fourth day of admission syp paracetamol was changed for sos choice when the temperature more than 99^0 F all other medications were continued as same. On the 5 th day all the medicines were continued and added novogermina oral suspension 0-1-0. On the sixth day frequency of Tab. Aspirin was reduced to1-0-1 from1-1-1 with same dose, all the ongoing medications also administered. On the seventh day all the IV antibiotics and novogermina oral suspension are stopped and started syp becosules 5 ml 0-1-0 along with ongoing medications. On the eighth day patient was discharged with following medications Tab. Aspirin 150 mg 0-1-0 for 2 weeks, syp rantac 5 ml 0-1-0 for 10 days, syp becosules 5 ml 0-1-0 to be completed. The patient was discharged in a stable condition. The review was made after 2 weeks and condition of the patient got improved and had no fresh complaints.

DISCUSSION

The epidemiology of KD may yield important clues to the etiology of this mysterious disease. First, KD strikes predominantly infants and young children; 80% of patients are younger than 5 years of age, although the disease can occur even in adolescence. The young age of onset suggests that susceptibility may be linked to maturation of the immune system. Second, although KD has been recognized on every continent and in all racial groups.[4]

Diagnosis of KD is essentially clinical and based on guidelines that have been provided by American Heart Association and Japanese Ministry of Health. These guidelines are based on clinical signs and symptoms and there are, as yet, no confirmatory laboratory tests for diagnosis of this condition. In the absence of typical clinical features, the diagnosis of KD is often challenging even for clinicians with experience in this field. It has been reported that as many as half of all cases of KD diagnosed at any centre may have incomplete

presentations. Risk of coronary artery abnormalities in children with incomplete forms of KD is no less thanthe risk in children with complete KD. Severest form of KD is usually seen in infants and is associated with more severe coronary artery involvement as compared to older children.

Echocardiography remains an important imaging modality for assessment of coronary arteries in children with KD but has several limitations.[5]

CONCLUSION

Kawasaki disease is a rare kind of disease with unknown etiology, this case report mainly focused on early detection and diagnosis of KD along with treatment using IVIG administration and aspirin. The child's parent was given counselling about the importance of administering the drugs especially the aspirin. The patient was reviewed after 2 weeks with animprovement in his condition.

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Conflicts of interest

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article

Abbreviations

IAS: Intact arterial septum
IVIG: Intravenous Immunoglobulin
IVS: Intact ventricular septum
KD: Kawasaki Disease
LMCA: Left main coronary artery
NRGA: Normally related great arteries
PAH: Pulmonary arterial hypertension
PDA: Patent ductus arteriosus
RCA: Right coronary artery

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