Editorial

# Kawasaki disease: A new challenge for Pediatricians.

Recently we are getting significant number of cases in our noninvasive Echocardiography laboratory for checking cardiovascular changes specially coronary artery changes in Kawasaki disease. So every practitioner specially pediatrician must have some idea on Kawasaki disease. Kawasaki disease (KD) is an acute self-limiting inflammatory disease associated with vasculities, affecting predominantly medium sized vessels. The most concerning complication is coronary artery aneurysm (CAA) leading to myocardial infarction (MI) or sudden death. KD is the only cause of MI in children.[1] Fever is the essential feature. Kawasaki disease is invariably associated with an inflammatory process with elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and white blood cell count (WBC). Early recognition and treatment with IVIG (Intravenous venous immunoglobulin), and Aspirin showed highest protection against development of coronary artery disease. Incidence of KD is more in East Asia or in Asian ancestry living in other countries.[2] The reason for high incidence in developing country is still unknown. Recently a significant number of cases attended in day to day pediatric practice in out patient department.

Epidemiological Case Definition of KD are as follows (Classic Clinical Criteria): 1. Fever persisting at least 5 days 2. Presence of at least 4 out of 5 following principal features: a. Changes in extremities: Acute Erythema of palms, soles; edema of hands, feet. Sub-acute : Periungual peeling of fingers, toes in weeks 2 and 3 of disease. b. Polymorphous exanthem. c. Bilateral bulbar conjunctival injection without exudates. d. Changes in lips and oral cavity: erythema, lip cracking, strawberry tongue, diffuse injection of oral and pharyngeal mucosa. e. Cervical lymphadenopathy (>1.5 cm diameter), usually unilateral. 3. Exclusion of other diseases with similar findings like scarlet fever.[3]

Involvement of coronary artery in Kawasaki disease is the most serious consequence of the disease. Important cardiovascular findings in KD are - Congestive heart failure, myocarditis, pericarditis, valvular regurgitation, coronary artery abnormalities from simple dilatation to aneurysms formation (CAA) etc, Aneurysm of medium-sized non-coronary arteries, Raynaud's phenomenon, peripheral gangrene etc may occur.[4]

Laboratory Findings in Acute Kawasaki Disease: a. Leukocytosis with neutrophilia and immature forms. b. Elevated erythrocyte sedimentation rate. c. Elevated C-reactive protein. d. Anemia. e. Abnormal plasma lipids. f. Hypoalbuminemia. g. Hyponatremia. h. Thrombocytosis after week 1. i. Sterile pyuria. j. Elevated serum transaminases. k. Elevated serum gamma glutamyl-transpeptidase. i. Pleocytosis of cerebrospinal fluid. m. Leukocytosis in synovial fluid. Two-dimensional echocardiography is the most useful test to monitor development of CAA and should be performed by a Pediatric cardiologist.[5]

Treatment of KD: There is no specific treatment. Conservative management in acute stage include intravenous immunoglobulin 2 g/kg over 10-12 hours and Aspirin 80-100 mg/kg/day divided every 6 hours orally until patient is afebrile for at least 48 hours. Once patient is afebrile, Aspirin 3-5 mg/kg once daily orally should be given until 6-8 weeks of onset if coronaries are normal throughout course. Long-term therapy of Aspirin 3-5 mg/kg once daily orally is needed until coronary returns to normal in cases where coronary dilatation or aneurysm formation present. Clopidogrel 1 mg/kg/day (maximum: 75 mg/day) may be added in severe involvement of coronaries[3].

Most experts add warfarin or low-molecular-weight heparin for those patients who are at high risk of thrombosis. In case of acute coronary thrombosis, prompt fibrinolytic therapy with tissue plasminogen activator or other thrombolytic agent should be done under supervision of a pediatric cardiologist.

If a case is identified early and treated properly, then mortality can be avoided from myocardial infarction in KD.

**Professor Brig Gen Nurun Nahar Fatema**
FCPS, FACC, FSCAI, FRCP (Edin)
Chief pediatric cardiologist &
Advisor pediatrics, CMH Dhaka.

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