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Anna Tryfonos

Advisor(s): Maria-Anna Vastardi

Association of Adiposity Status with Disease Severity and Outcomes in Pediatric Patients with Kawasaki Disease.

Introduction: Kawasaki disease(KD)is a medium size vasculitis of childhood with predilection for Coronary Arteries(CA).The mainstay of treatment is intravenous immunoglobulin(IVIG).Excessive adipose tissue is associated with a systemic inflammatory state and worse outcomes have been reported in inflammation mediated diseases in adults and children. Only 1 study so far identified a possible association between obesity and CA lesions in KD.This study aims to describe the basic epidemiology and disease characteristics and outcomes in children with KD. Also, to explore possible association between adiposity status,disease severity and outcomes in KD in an urban population.

Methods: We conducted a retrospective review of electronic medical records (EMRs)of patients 0-18 years old,hospitalized at SUNY Downstate or Kings County Hospital Center with the diagnosis of Kawasaki Disease OR Mucocutaneous Lymph Node Syndrome, from January 1st 2012–December 31st 2022.The adiposity status was determined by World Health Organization(WHO) weight normative values for children <2 years old and Center for Disease Control(CDC) body mass index (BMI) for children >2 years old.We used R Studio for statistical analysis,descriptive statistics for cohort characterization and Mann Whitney U Test to test for significant differences in disease severity and outcomes in two different adiposity status groups:Underweight & Normal and Overweight & Obese groups.

Results: We identified 55 cases of KD.Ninety one percent were Black/African American. Fifty one percent of cases presented as incomplete KD. There were no statistically significant differences in the disease severity variables,peak platelet(PLT),day of peak PLT,max CRP values,number of IVIG doses and echocardiographic findings between the two adiposity groups.

Conclusions:The study gives insights in KD in an urban African American predominant population.Further studies are needed to explore associations between adiposity status and KD outcomes.