

Assessment of Intravenous Thrombolytic Therapy in Children with Kawasaki Disease Complicated by Coronary Artery Thrombosis

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Introduction

Kawasaki disease (KD), also known as mucocutaneous lymph node syndrome, is a disease in which blood vessels throughout the body become inflamed. 1 out of every 10,000 children younger than 5 are at risk of Kawasaki disease. Currently Kawasaki disease is the leading cause of acquired heart disease in children. Although there are treatment protocols in place for the management of myocardial infarction in young adults, there is no defined protocol for children. Data on efficacy and safety of thrombolytic agents for the treatment of KD patients with coronary artery aneurysm thrombosis and ongoing or impending myocardial infarction are missing.

Methods

Patient data was collected between 1990 and 2019 from Boston Children's Hospital. Descriptive statistics were used to describe clinical, echo, and lab features of the group (n=10). The primary analysis was stratified by thrombolytic treatment within 10 days vs. thrombolytic agents at > 10 days of fever.

Results

Results show that thrombolytic therapy leads to earlier resolution of coronary artery thrombus in KD compared to conservative anticoagulation management. Additionally, thrombolytic therapy is associated with an acceptable safety profile in relieving coronary artery blood-flow.

Discussion

These findings confirm prior research. When the response rate was analyzed by treatment method, the response rate to thrombolytics was high even when considerable time (≥ 1 week) had elapsed since thrombus formation. Because of the small sample size, no definite conclusions about the efficacy of thrombolytics can be drawn, either alone or combined with another therapy. Despite these results, it is difficult to conclude that thrombolytics are not effective in cases in which several days or even a

week or more has elapsed since thrombus formation. It is important to not rule out the possibility that even slight thrombolysis achieved by thrombolytics on the thrombus surface later enhances responses to thrombolytic therapy.

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