

The efficacy and safety of new strategy for refractory Kawasaki disease

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Background. Approximately 15-20% of patients with Kawasaki disease (KD) are not responsive to intravenous immunoglobulin (IVIG). This KD was defined as refractory KD. In these refractory KD patients, coronary artery lesions frequently developed. We examined clinical utility and safety of new strategy for refractory KD as IVIG-plus-methylprednisolone combined therapy (IVIG+IVMP) for initial treatment in patients predicted as refractory KD. Methods. Since 2008, 120 KD patients, mean age 30.5 ± 22.4 month were studied at Kitasato University. We predicted refractory KD patients before initial treatment using Egami score (J Pediatr 2006) and randomly divided IVIG+IVMP therapy or single-IVIG treatment to patients. The Egami scoring system identifies age, days of illness, platelet count, C-reactive protein (CRP), alanine aminotransferase (ALT) to predict refractory KD patients before treatment (cut-off: 3 points; 78% sensitivity and 76% specificity). Results. The 45 of 120 KD patients (37.5%) were predicted refractory KD patients using Egami score. The predicted IVIG-responders (n=75) were administered single-IVIG (2.0 g/kg for 1day). The 45 patients with prediction of refractory KD were randomly assigned to the single-IVIG group (n=27) and IVIG+IVMP therapy group (n=18). The 16 of 18 patients (88.9%) had a prompt defervescence in the IVIG+IVMP therapy group compared with 6 of 27 patients (33.3%) in the single-IVIG group ($p < 0.05$). The 3 patients had coronary artery lesion in the IVIG+IVMP therapy group. However 10 patients had coronary artery lesion in single-IVIG treatment groups. There no serious adverse events in both treatment groups. Conclusion. Our study demonstrated the new strategy for refractory KD as IVIG+IVMP therapy was the effectiveness and safety as a primary treatment for predicted refractory KD patients.