

# 論 文 要 旨

Immunoglobulin G Values before Treatment Are Correlated With the Responsiveness to Initial Intravenous Immunoglobulin Therapy for Kawasaki Disease

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Low levels of serum immunoglobulin G (IgG) before intravenous immunoglobulin (IVIG) therapy for Kawasaki disease (KD) have been reported as one of the risk factors for coronary artery abnormalities (CAAs). This risk factor needs to be re-evaluated because the dosage of IVIG has changed from 0.2-0.4 g/kg/day for 5 days to a single high dose of 2 g/kg. Methods: We reviewed the clinical records of KD patients admitted to our hospital from January 2001 to August 2011. Patients who were given a single high dose of IVIG within 7 days of illness, and who had blood collected for serum immunoglobulin values before treatment, were selected. The serum immunoglobulin levels and coronary artery diameters measured by echocardiogram were transformed to z-scores. Results: The subjects were 197 KD patients, including 22 IVIG nonresponders and 16 patients with CAAs. Of these, 150 (76%) had a z-score for IgG (IgGz) of  $\leq 0$ . There were no differences in IgGz values between patients with CAAs and those without CAAs. However, nonresponders had higher IgGz values than responders (median, 25th percentile and 75th percentile:  $-0.26$ ,  $-0.83$  and  $0.34$  vs.  $-0.79$ ,  $-1.40$  and  $-0.03$ ;  $p = 0.020$ ). Logistic regression analysis showed that the IgGz value was an independent risk factor for resistance to IVIG (OR 1.36, 95% CI 1.002-1.849;  $p = 0.048$ ). Conclusions: Low IgGz values were not a risk factor for CAAs in this study. However, KD patients with relatively high IgGz values before treatment may have an increased risk of resistance to initial IVIG therapy.