



## Marked variations in serial coronary artery diameter measures in Kawasaki disease: a new indicator of coronary involvement.

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Abstract:

The long-term risk of patients with Kawasaki disease is not well defined. A great proportion of patients with Kawasaki disease have important variation of their coronary artery (CA) diameters, but the significance of this variation is not known. The aim of this study was to test the hypothesis that patients within the normal range of CA diameters but with important Z-score variation have a stronger inflammatory response and increased resistance to treatment than those without such Z-score variation.

A retrospective study was conducted in 197 patients with Kawasaki disease with serial echocardiograms up to 12 months after diagnosis. Patients with occult CA dilatation (variation > 2 Z-score units but within the normal range) were compared with patients with definite CA dilatation (Z score > 2.5) and with patients with normal CA for resistance to treatment and systemic inflammatory parameters.

A total of 63 patients (32.0%) were identified with Z scores always within the normal range but with important variation of CA diameter during follow-up (occult dilatation). There was a strong statistically significant trend of increasing inflammatory marker levels across patient categories (normal > occult dilatation > definite dilatation). Furthermore, resistance to intravenous immunoglobulin therapy was significantly increased in patients with occult dilatation compared with patients with normal CAs (relative risk, 2.6; 95% confidence interval, 1.21-5.44; P = .006).

The suggested definition of occult CA dilatation identified patients with CA involvement currently unrecognized per the current guidelines. These patients might be at a higher CA risk than previously thought.

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