A simple marker in supporting the diagnosis of the incomplete Kawasaki disease: Red cell distribution width

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Objectives: In this study, we aimed to assess whether red cell distribution width (RDW) would be a useful supplementary laboratory marker to diagnose Kawasaki disease (KD), particularly its incomplete form (iKD).

Methods: We retrospectively evaluated the medical records of all the cases diagnosed with Kawasaki disease between 2006 to 2012. The patients were divided into two groups consisting of complete and incomplete forms of KD. Complete KD (cKD) was determined according to previously reported criteria. The patients who had prolonged fever and 2 or 3 clinical criteria together with at least three supplementary laboratory findings or echocardiographic coronary artery abnormalities were diagnosed to have incomplete KD. The complete blood counts of sex- and age-matched healthy children were used as controls.

Results: The number of the cases with KD and controls were 67 and 69, respectively. The groups were similar in terms of age and gender. RDW values were significantly higher in patients with KD compared to controls. Forty-three cases had complete and 24 cases had incomplete KD according to clinical findings. The numbers of the patients with coronary involvement in those groups were 13 and 10, respectively. When clinical and laboratory findings of complete and incomplete Kawasaki disease patients were compared, age at diagnosis was significantly lower and RDW values were significantly higher in patients with iKD.

Conclusions: Our results showed that elevated RDW levels can be used as a simple, inexpensive laboratory marker in supporting the diagnosis of iKD which is frequently associated with coronary involvement.