

Abstract

Background:: Kawasaki disease is a pediatric vasculitis of unknown cause. Approximately 2.3% of patients have coronary artery sequelae, but there is little evidence regarding long-term management strategies. In particular, there has not yet been a fact-finding survey on the method and frequency of diagnostic imaging. Therefore, the purpose of this study was to conduct an assessment of long-term diagnostic imaging of patients with Kawasaki disease in Japan using the national database.

Methods: This was a retrospective cohort study using the National Database of Health Insurance Claims and Specific Health Checkups of Japan (NDB). We extracted data from April 1, 2012 to December 31, 2020. A cohort of patients with a new diagnosis of Kawasaki disease were targeted and the actual conditions of the range of imaging examinations were examined. In addition, we examined how it differs depending on the severity of coronary aneurysm (CA) as registered in the database.

Results: During the study period, 397,282 persons were extracted, of which 136,029 were included in the study. There were 128,625 in the no CA group, 6,355 in the mild CA group, and 1,049 in the moderate-giant CA group. Echocardiography and electrocardiography were performed more than once a year on average even after the first year of onset, as

recommended by the guidelines. Cardiac nuclear medicine examination, PET, and MRI were still infrequently performed.

Conclusion: Using the NDB, we clarified the actual clinical practice of Kawasaki disease over the long-term. Echocardiography and electrocardiography were the most frequently performed imaging studies in the late stage of Kawasaki disease, and the frequency of these imaging tests was in accordance with the guidelines.

Keywords: Kawasaki disease, imaging tests, National database, NDB, coronary sequelae, long-term management