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Long term outcome of coronary artery lesions after Kawasaki Disease in children

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The aims of this study were to describe and assess long term outcome of cardiac lesions after Kawasaki Disease.

Material and Methods: The medical records of 417 patients referred for KD suspicion since 1988 were retrospectively reviewed.

Results: 210 patients met criteria for diagnosis of KD, at the age of 2.7 ± 2.5 years (median 2). Time to diagnosis was 7 ± 4.6 days (median 6 days), time to hospitalization 5.7 ± 4.3 days (median 5 days). Time to first echocardiography was 11.4 ± 7.8 days (median 9 days), shorter in more recent period. Median time to intravenous immunoglobulin administration was 8 days (1 to 39). At initial evaluation, 63.8% were free from cardiac lesions, 23.8% (52 cases) had coronary artery lesions (CAL) (aneurisms : 25, dilatation : 27) and 12.4% had «hyperechogen» coronary arteries. Among CAL, 40 were <5mm in diameter, 9 were 5-8mm, and 3 were >8mm (giant aneurisms): one third localized on one coronary vessel, one third on 2 and one third on all 3 coronary arteries. Echographic pericarditis was found in 31 patients, mitral insufficiency in 20 and aortic insufficiency in 2. All patients recovered, except 1 who died from cardiogenic shock due to ruptured chordae. Coronary lesions resolved in 17 of 52 cases (32.6%) and persisted in 35 (67.4%, i.e. 16.7% of all patients): 14 with aneurisms and 19 with dilatations. No patient developed significant long-term coronary artery stenosis. The incidence of aneurisms was lower over the past decade (7.2%). Children with CAL were more likely to have pericardial effusion (OR 3.00, CI 1.34 – 6.72) and valvular regurgitation (OR 2.51, CI 1.22 – 5.16) at diagnosis. However, in case of CAL absence at first echocardiography, these abnormalities were not predictive of CAL at follow-up. Neither valvular regurgitation, nor systolic dysfunction, nor pericardial effusion was associated with persistence of CAL. Male gender, size of CAL, and resistance to immunoglobulin treatment were independent factors predictive of the persistence of CAL.

Conclusion: The occurrence of coronary lesions in KD have lessened over time and long-term cardiac outcome is favourable despite persistent coronary lesions. Children with valvular regurgitation or pericardial effusion should have a careful assessment of coronary status at diagnosis.