

MP3-21

Myocardial infarction in Kawasaki disease patients

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Objectives

Kawasaki Disease (KD) has become the main reason of children's acquired heart diseases in the world. It is a real challenge to diagnose some patients due to the lack of specific disease markers. Myocardial Infarction (MI) is the most serious complication, its course requires further investigation.

Methods

The data of 163 early stage KD patients' aged 0-17 yo examined in children's cardiology department in 1994-2009 have been analyzed.

Results

Acute MI attacked 10.4% of patients (17 out of 163) during a year from beginning of KD, including 7.4% (12) in acute stage. MI emerged in the complete and incomplete form of KD (10 and 7, $p \geq 0.2$). 29.4% (5 of 17 pts) had infarction on the 3-rd week, 41.2% (7) on the 3-6 weeks, in all 70.6% (12). Acute heart failure appeared in 66.7% (5 of 12), and 33.3% (4) had cardiac arrest. There were 29.4% (5) more MI cases over the period of 6 weeks up to 1 year from the acute attack of KD. MI clinical presentation included neurological dysfunction in 88.2% (15 of 17), dyspnea and tachycardia in 68.7%, 11, bubbling rales (58.8%, 10), gallop rhythm (56.2%, 9). Left coronary artery aneurysms/ectasia took place in 70.6% (12 of 17). ECG revealed Q-Infarction in 58.8% (10), subendocardial MI in 17.6% (3), in addition 23.5% (4) had not typical MI ECG-signs but there were segmental hypokinetic wall motion and severe mitral valve regurgitation due to infarction of papillary muscles. 17.6% (3 of 17) died at an early KD stage; 64.3% (8) of 14 survivors had LV dilation, including 50% (7 of 14) with low LV ejection fraction. All MI patients had delayed KD diagnosis and immunoglobulin treatment. Mammery-coronary bypass on the beating heart was successfully performed on the 5 mo infant with an acute coronary thrombosis and refractory cardiogenic shock.

Conclusions

7.4% of KD patients had MI at the 3-6 week, cardiac arrest occurred in 33.3% of them; 3% more had MI during the 1-st year. Q-Infarction emerged in 58.8%, papillary muscles infarction in 23.5%. Mammery-coronary bypass surgery on the beating heart was performed on 5 mo infant.