The efficacy and safeness of steroid combination therapy for high risk cases of Kawasaki disease

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Background: There are three scoring systems for the prediction of non-response to IVIG in Japan. Steroid combination therapy for initial treatment is recommended for high risk cases in the new guideline from the Japanese society of pediatric cardiology and cardiac surgery in 2012. Objective: To evaluate efficacy of steroid combination therapy for high risk cases which have high scores in more than two prediction scoring systems. Subjects and Methods: From January 2009 to 2014, a total of 54 hospitalized patients with high scores in more than two prediction scoring systems were enrolled. The patients were separated into two groups. Group S (n=21): who were administered steroid+IVIG, Group N (n=33): who were administered only IVIG. Clinical data, clinical course, and circumstances of additional therapies were compared. Results: In the patients who had high scores in two prediction scoring systems, there were fewer patients who received additional therapies in group S compared to that in group N (13% 1/8 vs. 38% 8/21). On the other hand, in patients who had high scores in all prediction scoring systems, those who received additional therapies had not decreased in group S compared to that in group N (50% 6/12 vs. 46% 6/13). However, there was no patient who had residual enlargement of the coronary artery over 2 months in group S (15% 3/20 in group N). In the patients who had high scores in all prediction scoring systems, there were more patients who had hypothermia and bradycardia as adverse effect in group S compared to that in group N (35.6 degrees C, 70bpm vs. 36.0 degrees C, 100bpm). However, non-administration of aspirin for 2 days while initial therapy was initiated prevented them (36.4 degrees C, 87bpm). Conclusions: Steroid combination therapy is beneficial for high risk cases of Kawasaki disease. In super-high risk cases those who have high scores in all prediction scoring systems, steroid combination therapy does not avoid the additional therapy and it reduces residual enlargement of coronary artery. Non-administration of aspirin while initial therapy avoids adverse effects.