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Long-term Outcome of Percutaneous Transluminal Coronary Rotablator Ablation for Ischemic Heart Disease Caused by Kawasaki Disease

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OBJECTIVE: The purpose of this study was to determine long-term outcome of percutaneous transluminal coronary rotablator ablation (PTCRA) in patients with ischemic heart diaease caused by Kawasaki disease (KD).
METHODS: Subjects were 15 patients (12 male and 3 female) with a history of KD who developed ischemic heart disease as a result of coronary aneurysms and were treated by PTCRA since 1994. From medical chart, patients' information concerning demographics, history of catheter and surgical interventions, and final outcome were collected. Based on these data, we calculated restenosis-free rate using Kaplan-Meier's analysis.
RESULTS: Subject's age at onset was 1.9 ± 1.7 years old and median observational period was 9.8 years (range 0.2-15.3 years). PTCRA was applied on #6 (n = 7), #1 (n = 5), #2 (n = 2), and #5 (n = 1) of coronary arteries using burr size of 2.1 ± 0.3 (1.5 - 2.5) mm at median of 15.6 (4 – 23.9) years old, 12.3 ± 5.2 years after KD. Coronary stenosis was alleviated from 86 ± 8.7 to 39 ± 25% stenosis with additional balloon dilation (13) or stent placement (2). In the follow-up period, 5 patients showed re-stenosis at 0.2, 2.7, 3.0, 10.2, 14.6 years after the initial PTCRA, giving re-stenosis free rate of 78% and 62% at 5 and 10 years after the initial PTCRA. Among these 5 patients, 4 patients underwent additional PTCRA with additional balloon dilation (3) and stent placement (1), but 1 patient who previously underwent coronary bypass graft surgery and had stenosis on #5 died at 2nd session because of acute myocardial infarction. The remaining 1 patient showed total occlusion of target vessel (#1), but was treated medically because of sufficient collateral communications. Of 15 patients, 14 patients survived with a median age of 23.8 years old.
CONCLUSIONS: Long-term outcome of PTCRA for ischemic heart disease caused by KD may not be acceptable and further refinement of the indication and technical innovation are necessary.