ECHOCARDIOGRAPHY TO ASSESS NATURAL HISTORY AND REGRESSION OF CLASS III-V CORONARY ARTERY ANEURYSMS IN KAWASAKI DISEASE

ACC Moderated Poster Contributions
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Background: Limited data exist on regression or progression of coronary artery aneurysms (CAA) in higher risk patients with Kawasaki disease (KD) in the current era of early treatment with immunomodulatory and anticoagulation therapy. Coronary risk classification in KD is defined by: Class I with no coronary artery involvement, Class II with transient coronary ectasia that disappears within 6-8 weeks, Class III with 1 small-medium CAA, Class IV with >=1 large or giant CAA, and Class V with coronary artery occlusion. We assessed the hypothesis that Class III-V CAA may regress, but coronary artery dimensions often do not normalize.

Methods: Retrospective chart review was performed on KD patients who were referred for management of Class III-V CAA related to KD.

Results: From 11/1995 to 8/2010, 32 KD patients had Class III (n=2), Class IV (n=25), and Class V (n=5) coronary risk classification based on echocardiographic imaging. Age at presentation ranged from 0.21 to 10.8 yrs (mean 4.2, SD 3.79). Coronary artery involvement included LMCA and LAD in 97% of cases, LCX in 72%, and RCA in 97%. Normalization of CAA occurred in 6/32 (19%) patients by echocardiography with mean maximum diameter of 4.4mm (range 3.1-6.5); mean time to resolution was 467 days (range 119-748). Patients who remained in Class III and IV (n=21, 66%) had mean maximum diameter of 8.2mm (range 4.8-13mm) with most recent mean diameter of 6.1mm (range 3.9-12), demonstrating regression but not normalization. Coronary artery occlusion (Class V) was present in 5 (16%) patients (2 LAD, 1 RCA, and 1 LAD and RCA) with mean maximum CAA diameter of 9.3mm (range 0.7-1.1), which is significantly different from the group that normalized or remained in Class III or IV (p=0.006).

Conclusion: In conclusion, the majority of KD patients with Class III-V CAA demonstrated regression over time, but coronary artery diameters did not normalize requiring life-long follow up and therapy. A subgroup remains at significant risk for ischemia requiring CABG or catheter intervention.