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Management of Giant Coronary Artery Aneurysm With Long-Term Infliximab Therapy in IVIG-Resistant Kawasaki Disease with Three-Vessel Coronary Artery Aneurysms

Background: Kawasaki Disease (KD) is a medium-vessel vasculitis that can lead to coronary artery aneurysms (CAA). Infliximab is used for IVIG-resistant KD, and recent studies suggest it may help treat CAA due to elevated anti-tumor necrosis factor levels in KD patients, making it the medication of choice in this case. Case: A 2-year-old male with fever >5 days, oropharyngeal erythema, cracked lips, desquamating rash, hand swelling, and cervical lymphadenopathy was diagnosed with KD. Due to persistent fever and elevated C-reactive protein (CRP), he received high-dose aspirin, 2 doses of intravenous immunoglobulin (IVIG) (2 g/kg), and IV methylprednisolone, resulting in fever resolution and CRP reduction. The initial echocardiogram showed prominent coronary arteries without dilation. Discharged on low-dose aspirin, he was readmitted 7 days later with fever and rising CRP. Cardiac CT and echocardiogram revealed a giant aneurysm in the left anterior descending artery (LAD, Z score +11.7), as well as aneurysms in the right coronary artery (RCA, Z score +3.85) and left circumflex artery. He received infliximab (5 mg/kg), prednisolone, aspirin, and warfarin. Monthly infliximab infusions (5-10 mg/kg) were started due to elevated CRP. Over 5 years, serial imaging showed improvement, and infliximab infusions were spaced and stopped. Warfarin was continued for 4 years. At 5 years, the LAD aneurysm had regressed to 3.6mm (Z score +4), with a small distal fusiform aneurysm. The patient remains stable on aspirin. Discussion: IVIG resistance occurs in 10-20% of KD patients and may lead to severe coronary artery disease, with giant aneurysms being often persistent. Infliximab is used for IVIG-resistant cases, but more studies are needed to guide treatment for giant aneurysms. Conclusion: Early and prolonged infliximab therapy led to regression of a giant aneurysm in this case. Close follow-up is essential, as overlap with other vasculitis conditions is possible.