INHIBITION OF ANGIOTENSIN SIGNALING REDUCES INCIDENCE OF ANTIBODY MEDIATED ALLOGRAFT REJECTION.

ACC Poster Contributions
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Background: Activation of the renin angiotensin system is seen in acute allograft rejection and has been implicated in development of allograft vasculopathy (CAV). Whether ACE-I or ARB therapy reduces the incidence or the impact of acute rejection on the transplanted myocardium is unknown.

Methods: Among consecutive patients transplanted in our program between 2002 and 2007 we identified those who were started on ACE-I or ARB within 30 days of transplant and those who were not. We evaluated the incidence of cellular and antibody mediated rejection (AMR) in the first year after transplant in the two groups. AMR episode was defined as deposits of complement (C3d or C4d) and immunoglobulin detected by immunofluorescence on 3 endomyocardial biopsies.

Results: Out of 124 recipients, 72 were started on ACE-I or ARB within 30 days of transplant and 52 were not. Baseline characteristics were similar. At one year after transplant, there was no difference in the incidence of cellular rejection between the two groups. There was a significant difference in the incidence of AMR - 18% in the ACE-I/ARB group vs. 32% in the control group - p=0.03 (figure 1), as well as in incidence of more than mild myocardial fibrin deposition - 0% vs. 11% respectively, p=0.02.

Conclusion: ACE-I or ARBs initiated early after transplant appear to decrease the incidence of AMR and myocardial fibrin deposition. It is through this mechanism that they may also attenuate progression of CAV. A prospective study should be done to confirm these findings.