

NEED FOR DIAGNOSTIC CRITERIA FOR ANTIBODY MEDIATED REJECTION (AMR) IN PANCREAS AFTER KIDNEY TRANSPLANTATION. Subramanian Kannan, Renu Bansal, Swetha Nataraj, Sharad Sathyan, Andrew Ricci, K. Vinay Ranga. Medicine / Pathology / Transplant, Hartford Hospital / UCHC, Farmington, CT

Antibody Mediated Rejection (AMR), both acute and chronic, is well described in kidney transplantation with definite diagnostic criteria. In simultaneous kidney pancreas transplantation, there is concordance of the pathologic processes in both organs about 85% of the time, making it mostly unnecessary to biopsy the pancreas. Unfortunately, in pancreas after kidney (PAK) transplants, there are no established criteria for diagnosing AMR in the pancreas allograft alone.

A 40-year-old female with type I Diabetes Mellitus, recipient of a PAK transplant in 2005 (kidney transplant in 2001), was admitted for work-up of hyperglycemia. She was on Prednisone and Tacrolimus, having failed to increase MMF dose, dropped temporarily 3 months earlier for diarrhea. Exam was benign, Scr stable at 1.7 mg/dl, HbA1c was 6.6%, Tacrolimus levels averaged around 7 ng/ml, C-peptide was 2.4 ng/ml (0.8-3.1), pancreatic enzymes not elevated, and urinalysis was normal. Abdominal imaging showed normal transplanted pancreas. Biopsy revealed grade V acute rejection (AR), chronic vascular rejection, severe fibrosis, and diffuse staining of the arterioles for C4d. Donor specific antibodies (DSA) were demonstrated against the pancreas donor. Full doses of MMF were resumed. Given the extensive chronic changes, AR was treated with steroids alone. Persistent hyperglycemia has necessitated the continued use of Insulin.

The combination of pancreatic dysfunction, histopathology, C4d staining and DSA suggests diagnosis of AMR of the pancreas allograft. Even though the validity of C4d deposition has been more extensively studied in kidney, cardiac and lung transplantation, its significance in pancreas rejection has not yet been defined. In the context of multiple transplants, AMR may occur against one single organ, the pancreas in our case, and it is imperative to make an early diagnosis of AMR as appropriate therapy may help salvage the transplanted organ. We conclude by emphasizing that diagnostic criteria for AMR in pancreas transplantation need to be defined.