



CLINICAL OUTCOME OF ACUTE REJECTION EPISODES IN KIDNEY RECIPIENTS: ANALYSIS OF 12 YEARS OF SINGLE CENTER EXPERIENCE



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INTRODUCTION AND AIM:

Kidney transplantation is the best treatment of choice for patients with end stage renal disease. Despite improvement in immunosuppressive treatment options, acute rejection of allograft is still the main cause of graft loss. In this study we aimed to show frequency and types of acute rejections with their effects on graft survival

METHOD:

Kidney recipients from 2003 to 2015 were investigated for acute rejection diagnosis retrospectively. 390 patients who underwent kidney transplant at our center were searched. Patients who had acute rejection episode (ARE) during follow-up were analyzed according to their demographic features, immunologic state, donor properties, rejection type, treatment modalities and outcomes.

RESULTS:

Biopsy-proven 69 (17.69 %) acute rejection episode were identified in 64 kidney allograft recipients. Demographic and immunologic features of patients were given in table 1. Of the 64 patient, 7 who had an high risk immunologic state were treated with plasma exchange and intravenous immunoglobulin (IVIG). A total 28 out of 69 (40.5 %), 24 (34.7 %), 7 (10.1%) rejection were T cell-mediated (TCMR), antibody-mediated (AMR) and mix type respectively. Type of acute rejections according to banff classification were given in table 2. 47 (68.2 %) acute rejection episode were in first 6 months, 22 (31.8%) were after 6 month at posttransplantation period. Noncompliance of treatment in 3 patients resulted with ARE. At the follow-up 5 (7.8%) patients developed second acute rejection episode. Biopsy-proven acute rejection episodes were treated with high-dose methylprednisolone (58 ARE), thymoglobulin (47 ARE), IVIG (14 ARE) plasma exchange (13 ARE), rituximab (1 ARE), eculizumab (2 ARE) according to histopathologic classification. Graft loss occurred in 11 patients (17.1%). In long term, although graft survival was 84% in patients without AMR and 70% with AMR (p= 0.042) five year graft survival in patients with TCMR was 80% .

Table 2 : Type of Acute Rejections According to Banff Classification. 69 ARE in 64 patients (17.69 %) (Total 390 patients)

Type	Subtype	Percent and Number of Patients
Antibody Mediated Rejection	Type (grade) 1	24 % (n = 16)
	Type (grade) 2	10 % (n = 6)
	Type (grade) 3	0.1 % (n = 1)
Borderline		15 % (n =9)
T Cell Mediated Rejection	Type (grade) 1A	16 % (n = 9)
	Type (grade) 1B	14 % (n = 8)
	Type 2A	10 % (n = 6)
	Type 2B	0.2 % (n =2)
	Type 3	0

Table 1: Demographic and Immunological Features of the Patients

Patient Number (n)	64
Age (mean ± sd)	36 ± 11
Gender (n, Male/Female)	39/25
Living / Deceased Donor (n)	14/50
Mismatch Number (median) (minimum, maximum)	3 (0-6)
PRA Class 1 positivity (n, +/-)	12/50
PRA Class 2 positivity (n, +/-)	11/51
Dialysis vintage (months) (mean ± sd)	48 ± 59
Previous Transplantation (n, +/-)	11/53

CONCLUSION:

Our findings suggest that treatment of patients with TCMR and AMR have distinct effects on long-term graft survival. Long-term graft survival was decreased in patients with AMR despite treatment.

