Early vs. late acute antibody mediated rejection among renal transplant recipients in terms of its response to rituximab therapy-single center experience

Osama Gheith, Al-OtaibiT, Nampoory MRN, Medhat H, Tarek Mahmoud, Prasad Naier, Mohamed Abdul-moneim, Salah Al-Waheeb, and Rashad Hassan

Hamed Al-Essa Organ Transplant Center, Kuwait

OBJECTIVES

Acute antibody-mediated rejection (ABMR) is a major cause of early kidney allograft dysfunction.

Recent studies indicate that ABMR is among the most important barriers to improving long-term outcomes.

There are no comparable trials concerning the use of rituximab among renal transplant recipients with ABMR .

We aimed to compare early and late acute ABMR among renal transplant recipients in terms of its response to rituximab therapy.

METHODS

1200 kidney transplant recipients performed in Hamed Al-Essa Organ Transplant Center of Kuwait over the last 10 years

103 developed ABMR(Banff 2007)

PP(1 volume X 10 sessions) + IVIG(1g/kg divided over 5 days)

Group 1 (n=27, early ABMR) — Rituximab 375mg/M2

Group 2(n=38 , late ABMR) — Rituximab 375mg/M2

Group 3(n=20, early ABMR

Group 4(18, late ABMR

Follow up for 24 months

RESULTS

Demographic data of the studied patients

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	Pvalue
Patient age(in years)	30.8±13.6	28.3±13.3	33.1±17	36.7±18	0.07
Patient sex(male/female)	10/17	15/23	7/13	9/9	0.84
Donor age(in years)	36.7±8	34±7.8	33.8±12.2	32.5±10.7	0.29
Donor sex(male/female)	19/8	26/12	14/7	12/6	0.96
Original kidney disease					
• Diabetic nephropathy	4	3	4	4	
• Hypertension	1	1	0	0	
• Glomerulonephritis	12	9	4	4	
• Obstructive	2	5	2	3	
• Idiopathic	8	20	8	9	0.30
Dialysis type					
• Preemptive	3	10	6	3	
• Hemodialysis	21	19	12	11	
• Peritoneal dialysis	2	7	2	4	0.28

Demographic data of the studied patients

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	Pvalue
Donor type:					
• Live related	7	15	2	5	
• Live unrelated	12	13	7	8	
• Deceased	8	10	11	5	0.17
Early graft function:					
• Immediate graft function	12	31	10	13	
• Slow graft function	8	5	3	4	
• Delayed graft function	7	2	7	1	0.016

Demographic data of the studied patients

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	P value
Pre-transplant co-morbidities:					
• Anemia vs. non-anemic	75%	56.5%	73.3%	76.9%	0.48
• TB	18.8%	0 %	0%	15.4%	0.06
• Diabetes mellitus	18.5%	13.5%	31.6%	22.2%	0.44
• Osteopenia	29.5%	27%	35%	38.9%	0.81
• Hypertension	91.7%	86.1%	70%	75%	0.21

Types of immunosuppression among different study groups

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	Pvalue
Immunosuppression					
• Induction					
○ Non	0	5	4	1	
○ IL2 R blocker	10	13	2	6	
○ Thymoglobulin	16	19	13	10	
○ ATG	1	1	1	1	0.21

Types of immunosuppression among different study groups

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	Pvalue
Immunosuppression					
• Maintenance					
○ cyclosporine based	9	23	8	9	
○ Tacrolimus based	16	14	10	8	
○ CNI free	2	1	2	1	0.43

Post-transplant complications among different study groups (after ABMR management)

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	P value
Post-transplant complications:					
-NODAT	3	5	2	4	0.71
-Infections					
CMV	3	2	2	1	0.45
BK viremia	3	8	3	3	0.71
BK nephropathy	1	0	1	0	0.53

Patient and graft outcomes in the studied groups

	Early ABMR with rituximab (n=27)	Late ABMR with Rituximab (n=38)	Early ABMR without rituximab (n=20)	Late ABMR without rituximab (n=18)	P value
Graft outcome					
• Functioning graft	24	26	13	9	
• Failed graft	2(8.3%)	11(42.3%)	7(53.8%)	9(50%)	0.024
Last graft function (cr.micromol/L)	201	289	316	318	0.08
Patient outcome					
• Living	24	33	17	14	
• Died	0	0	1	0	
• Lost follow up	2	3	2	4	0.52

CONCLUSIONS

Early ABMR in renal transplant recipients had significantly better outcome when rituximab was added to the standard management.

53 ERA 635-SP

Renal transplantation. Experimental, immune-tolerance of allogenic and xenogenic transplants.

Osama Gheith

DOI: 10.3252/pso.eu.53era.2016

ePosters supported by F. Hoffmann- La Roche Ltd.

53rd CONGRESS ERA-EDTA VIENNA AUSTRIA MAY 21-24, 2016

PosterSessionOnline.com