Intermediate term outcome of bortezomib treated resistant Acute Antibody-Mediated Rejection among renal transplant recipients: single center experience

Osama Gheith, Torki Al-Otaibi, Narayanan Nampoory, Medhat Halim, Prasad Nair, Tarek Saied, Jude yagan, Salah Al-Waheeb, Ibraheem Muzeirei, Mona Ibraheim

Introduction:

The most vexing clinical condition caused by antibodies in organ transplants is antibody-mediated rejection. The effects of bortezomib on mature plasma cells may represent a quantum advance in anti-humoral therapy.

Aim of the work:

We aimed to present our relatively long term experience with bortezomib as an anti-plasma cell therapy for the management of renal allograft recipients with resistant episodes of antibody mediated rejection.

Patients and methods: **During the last 4 years, we revised our data base, and collected demographic and clinico-metabolic parameters of those patients who received bortezomib as an anti-humoral agent in renal allograft recipients with resistant acute antibody mediated rejection in Kuwait.**

Results: **In this work, we present the outcome of 7 cases with resistant-acute antibody-mediated rejection to the standard therapies that were managed successfully with one cycle of bortezomib. We tried to evaluate the impact of such new strategy in the management regarding intermediate term graft and patient outcome.**

Table (1) showed demographic data of the studied patients

	Case No.1	Case No.2	Case No.3	Case No.4	Case No.5	Case No.6	Case No.7
DATE AND NUMBER OF TRANSPLANT	15.8.2011 2ND	7.4.2008 1ST	29.7.2007 1ST	19.6.13 1ST	12.9.13 2nd	5.12.12 1ST	27.8.12 2ND
Original kidney disease	DN	? IgA nephropathy	Chronic TID	? Ch GN	VU reflux	DN	idiopathic
Donor type	Unrelated	Brother	Father	Unrelated	Sister	Brother	Unrelated
HLA mismatches	0:01:02	1:01:01	1:01:01	1:2:1	0:1:1	2:1:1	2:2:2
Immunosuppression Induction Maintenance	Thymoglobulin STM	Basilixmab SCM—STM(ACUTE ABMR)	Basilixmab SCM---SRM---STM	Thymoglobulin STM	Thymoglobulin, Rituximab, PE,IVIG STM	Thymoglobulin x3 Basilixmab (DGF) STM	Thymoglobulin, Rituximab, PE STM
Conversion1		10.5.10	4.6.2008				
Conversion2			17.3.2010 (ACUTE ABMR)				

Table 2: showed results of biopsies and management of rejection episodes of the studied patients

	Case No.1	Case No.2	Case No.3	Case No.4	Case No.5	Case No.6	Case No.7
1st biopsy Date Result	23.8.2011 ACUTE ABMR	27.4.2010 ACUTE /CAMR	8.3.2010 ACUTE ABMR	23.6.2013 ACUTE ABMR		16.12.12 ACUTE ABMR	12.9.12 ACR2A
Treatment	PE (14), IVIG(120)+ Rituximab (1)	ST, PE(16), IVIG(120)+ Rituximab (2)+ Valcade(1 cycle)	PE(20), IVIG(120)+ Rituximab (2)+ Valcade(1 cycle)	PE(13), IVIG(120)+ Rituximab(3)+ Valcade(1 cycle)	PE(17)+IVIG (120)+ Rituximab(3)+ Valcade(1 cycle)	PE(17)+IVIG (120)+ RITUXIMAB(4)+ Valcade one dose (Low plat.)	Thymo(10) + PE (10) + Rituximab
2nd biopsy Date Result	21/9/2011 AMR + mild chronic changes	none	none	17.7.2013 Resolving rejection	none	23.12.12 ACUTE ABMR grade 2	ACUTE ABMR grade 2,
Treatment	PE (14), IVIG, Valcade(2cycles)						Valcade (2 cycles)

Table 3: showed laboratory parameters of the studied patients and significant post-transplant complications

Case No.1	Case No.2	Case No.3	Case No.4	Case No.5	Case No.6	Case No.7	Case No.1
PRA (1) Date ELISA(class I,II)% DSA MFI	15.9.2011 30 & 67 Positive 14900	26.5.2010 53 (I) Negative		24.4.13 76 & 0 A2,96,93,DR51 1777-1788	19.9.13 96 & 53 bw4,cw7,A3	23.10.12 100,100 Positive	19.9.12 70 & 47 bw6,DQ5,DR53
PRA (2) Date ELISA(class I,II)% DSA MFI	15/9/2013 30 & 67 Positive 14000	16/6/2010 43(I) Negative		16.6.13 70 &0 DR51 1772	29.9.13 96 &0 cw7	16.12.12 100 &57 DQ2, DQ5	3.3.13 76 &90 bw6
PRA (3) Date ELISA(class I,II)% DSA MFI				9.7.13 100 & 93 DR51 ,DR53 14899&9561		26.12.12 100 & 23 DQ5	
PRA (4) Date ELISA(class I,II)% DSA MFI				17.7.13 94 & 100 DR51 ,DR53 19600 &11650		2.6.13 96 &100 A2, DR52,DQ2 6178, 17200 &17200	
CREATININE BASAL PEAK LAST	186 (21.8.2011) 373 (6.8.2011) 267 (17.10.2013)	90 (10.5.2008) 127 (7.6.2010) 104 (17.9.2013)	110 (29.10.2008) 127 (3.3.2010) 190 (27.10.2013)	77 (21.6.13) 298 (24.6.13) 105 (30.10.13)	52 (17.9.13) 94 (5.10.13) 58 (29.10.13)	180 484 196(6.10.13) On steroid alone	115(4.9.12) 214 (14.9.12) 125 (4.11.13)
Complications	Recurrent salmonella gastroenteritis, Duodenal Neuro-endocrine tumor	Legionella pneumonia within 1 year Recurrent UTI			UTI (once) Urine leak (post-tx)	Wound infection BK infection Mucomycosis of paranasal sinuses (debridement combined antifungal)	CMV infection

Conclusions

Bortezomib represents a rescue therapy for early resistant acute ABMR among renal transplant recipients despite the associated risk of infection. Within the limitation of our small sample, it will need to be evaluated in prospective, randomized, and well-controlled studies.

52 ERA
897--FP
M2) Renal transplantation. Clinical.
osama gheith
DOI: 10.3252/pso.eu.52era.2015
ePosters supported by F. Hoffmann- La Roche Ltd.
52nd ERA-EDTA CONGRESS London2015 UNITED KINGDOM MAY 28TH-31ST
PosterSessionOnline.com