

High- vs Low-Titer Anti-ABO Antibody in ABO Incompatible Living Donor Kidney Transplantation

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BACKGROUND

- The impact of pretransplant anti-ABO antibody titer on the outcomes of ABOi KT is debating.
- Some transplant centers preclude patients with high titer from ABOi KT.

MATERIALS & METHODS

- We compared the incidence of antibody mediated rejection(AMR), specifically anti-ABO-induced AMR, in 35 ABOi KT recipients with initial anti-ABO titer of ≥ 128 (range 128~2096, high-titer group) and 57 patients with initial titer of ≤ 64 (low-titer group).
- Differentiation of anti-ABO- from anti-HLA-induced AMR was made on the basis of the presence of donor specific anti-HLA and the titer of anti-ABO in serum collected at the time of AMR.
- Our ABOi KT protocol consists of pre-transplant rituximab and plasmapheresis(PP) to reduce anti-ABO titer on transplant day to ≤ 8 , and posttransplant preemptive PP during 2 weeks in patients with higher posttransplant Ab titer or graft dysfunction.

RESULTS

- Acute AMR occurred in 7 of 35(20.0%) patients in high titer group and 5 of 57(8.8%, $p=0.218$ by Fisher's exact test) patients in low titer group.
- Acute anti-ABO-induced AMR occurred in 5(14.3%) patients in high titer group and 3(5.3%) in low titer group ($p=0.261$).
- Median follow up duration was 63(5-124) months. Patient and graft survival rate was 100% at 1 year, 98.7% and 96.0%, respectively, at 5 years. No graft was lost due to AMR.

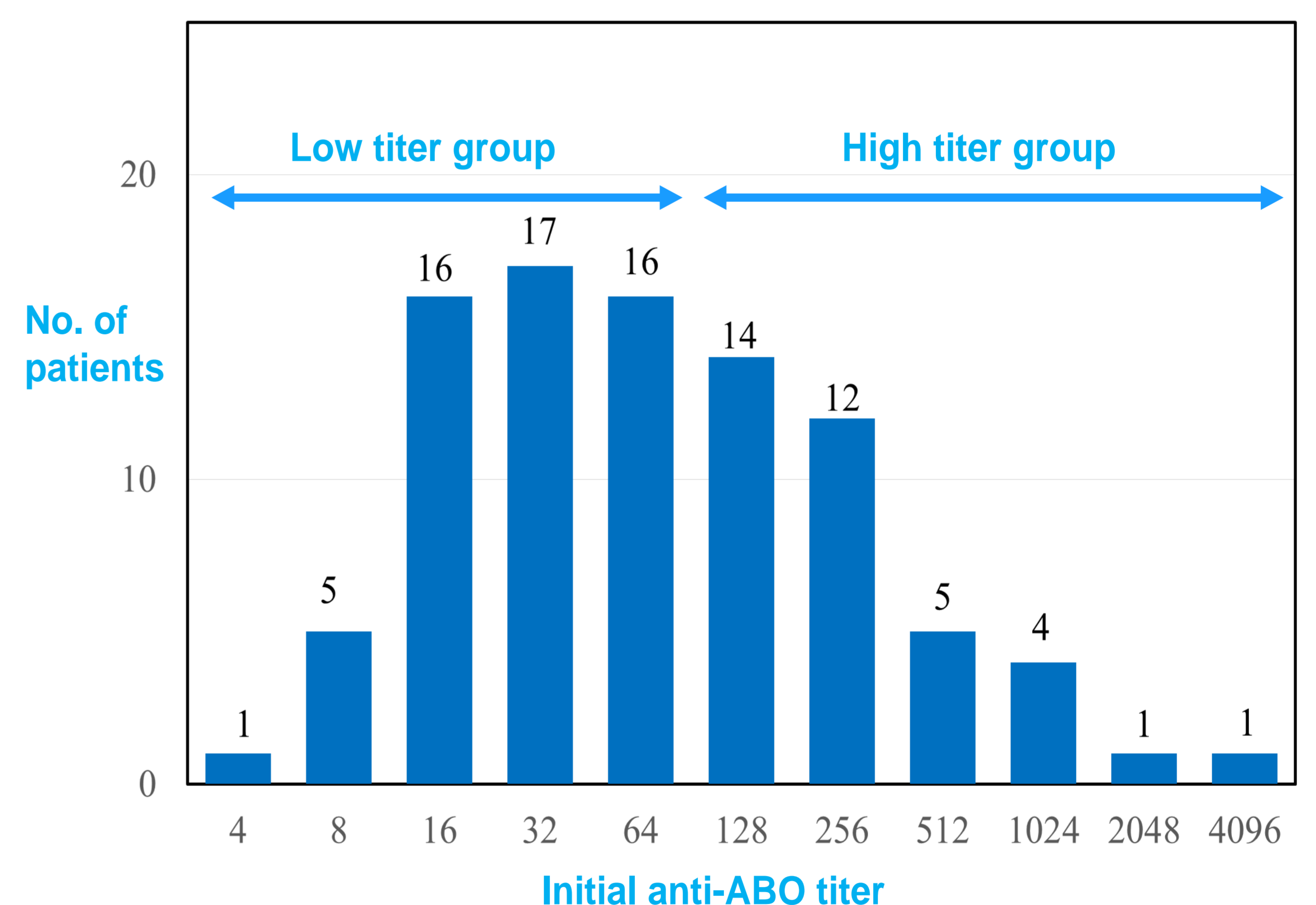
Patient and Graft Outcome

	High Titer N=35	Low Titer N=57	P
Acute Rejection	10 (28.6%)	7 (12.3%)	NS
Acute Antibody-Mediated	7 (20.0%)	5 (8.8%)	NS
Anti-ABO	5 (14.3%)	3 (5.3%)	NS
Anti-HLA	2 (5.7%)	2 (3.5%)	NS
Acute Cell-Mediated	3 (8.6%)	2 (3.5%)	NS
Patient Loss	2*	0	
Graft Loss	0	2**	

* Causes of patient loss; breast CA, ischemic stroke

**Causes of graft loss; medication noncompliance, interstitial nephritis of undetermined etiology

Distribution of Initial Anti-ABO Titer



CONCLUSIONS

- High anti-ABO titer before transplantation dose not significantly impact the outcomes of ABOi KT under the current ABOi protocol.

