

LONG-TERM RENAL FUNCTION IN LIVER TRANSPLANT PATIENTS WITH POST-OPERATIVE RENAL DYSFUNCTION RECEIVING ANTI-THYMOCYTE GLOBULIN-INDUCTION AND DELAYED CALCINEURIN INHIBITORS

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**Introduction:** The incidence of chronic kidney disease (CKD) requiring chronic dialysis ranges between 5-20% in long-term recipients (>10yrs) of non-renal Tx. Post-operative renal dysfunction is associated with an increased risk of CKD.

**Purpose:** To determine the impact on renal function of delayed initiation of calcineurin inhibitors (CNI) using ATG-induction in LTx pts with post-operative renal dysfunction (RD). **Methods:** We retrospectively analyzed 379 adult LTx performed between 6/90 and 8/04. RD was defined as Scr >150 µmol/L on post-operative day (POD) 1-2. CNI were not initiated until Scr was <150 µmol/L and were combined with either azathioprine or MMF and prednisone +/- ATG-induction. Pts were divided into 3 groups (G). In G1, 112 pts (55±12 yrs) with RD received ATG-induction and delayed CNI; in G2, 209 pts (56±11 yrs) without RD received ATG-induction and in G3, 58 pts (54±11) without RD did not receive ATG-induction. ATG was given every 3-5 days in G1 and daily in G2 (max. dose=6 mg/kg). Pts in G1 and G2 received low-dose CNI and pts in G3 received standard dose-CNI. **Results:** MELD score was 29±12 in G1 (P<0.001 vs. G2 and G3), 22±9 in G2 and 21±9 in G3. CNI were started on POD 12±13 in G1 (P<0.001 vs. G2 and G3), on POD 4±5 in G2 and on POD 5±18 in G3. Pt survival at 1-, 5- and 7-yrs was 73%, 55%, 46% in G1; 83%, 70%, 63% in G2 (P=0.002 vs. G1); 84%, 72%, 69% in G3 (P=0.01 vs. G1). The incidence of acute rejection in the first yr post-LTx was 36% in G1, 28% in G2 (P=0.02 vs. G1 and G3) and 43% in G3. The cumulative incidence of CKD requiring chronic dialysis at 1-, 5- and 7-yrs was 2.0%, 3.4% and 9.8% in G1; 0%, 0.9% and 2.0% in G2 (P=0.08 vs. G2); 0%, 3.3% and 3.3% in G3.

	Creatinine clearance (ml/min) Cockcroft-Gault formula					
	Day 0	POD 2	1-month	1-yr	5-yrs	7-yrs
G1 (RD, ATG)	68±41*	34±14*	67±30**	67±29***	57±30	63±27
G2 (No RD, ATG)	96±40	89±45	83±34	78±32	72±30	64±22
G3 (No RD, No ATG)	102±35	88±40	86±36	80±34	66±30	60±28

\*P<0.001 vs. G2 and G3, \*\*P<0.01 vs. G2 and G3, \*\*\*P<0.05 vs. G2

**Conclusion:** ATG-induction and delayed initiation and low-dose CNI results in a relatively low incidence of CKD requiring chronic dialysis without an increased incidence of acute rejection in LTx pts with post-operative RD. Prospective randomized trials should confirm the benefits of this strategy and combine it with CNI minimization or withdrawal.