SUBCLINICAL PERITUBULAR CAPILLARITIS AT 3 MONTHS IS ASSOCIATED WITH CHRONIC REJECTION AT 1 YEAR: A PROSPECTIVE STUDY ON 89 RENAL ALLOGRAFT RECIPIENTS

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Objectives: Peritubular capillaritis has been associated with chronic rejection, but the significance of subclinical peritubular capillaritis is unknown. We studied the incidence of acute and chronic antibody-mediated lesions in protocol biopsies.

Methods: 89 renal allograft recipients underwent a protocol biopsy at both 3 and 12 months post-transplantation. Subclinical chronic antibody-mediated rejection (CAMR) at 1 year was diagnosed when ≥3 of 5 criteria were present: basement membrane multilayering of peritubular capillaries (MLPTC), transplant glomerulopathy (TG), increase in intimal fibrosis between 3 and 12 months (Δcv>0), C4d deposition in peritubular capillaries ($C4d_{PTC}$) and the presence of anti-HLA antibodies at 1 year.

Results: Eight (9.0%) patients met these criteria of CAMR. MLPTC was the most sensitive and specific histological criterion. Seven patients (7.9%) had peritubular capillaritis in their 3 months biopsy (PTC1 n=4; PTC2 n=3). Five of them (PTC1 n=3; PTC2 n=2) developed MLPTC at 1 year (p=0.0014). Three patients with early peritubular capillaritis (PTC1 n=1; PTC2 n=2) met the criteria of CAMR at 1 year (p=0.0009).

		CAMR –	CAMR +	p	sensitivity	specificity
anti-HLA_{1year}*	-	71	1	≤0.0001	87.5%	89.9%
	+	8	7			
MLPTC	-	68	1	≤0.0001	87.5%	83.9%
	+	13	7			
Δcv>0	-	57	1	0.0023	87.5%	70.4%
	+	24	7			
TG**	-	61	1	0.0035	83.3%	79.2%
	+	16	5			
$C4d_{PTC}$	-	78	7	NS	12.5%	96.3%
	+	3	1			

* 2 missing values ** 6 cases without glomeruli in the tissue for electron microscopy and no transplant glomerulopathy on light microscopic evaluation.

Conclusion: Early detection of subclinical peritubular capillaritis might identify renal allograft recipients at risk for development of MLPTC. We found MLPTC to be the most sensitive and specific histological criterion of subclinical CAMR at 1 year. In this study, we confirm our earlier preliminary results in a larger series. Longer follow-up data are needed to study the impact on graft function and long-term graft survival.