ARE TRANSPLANT ENDARTERITIS (v1, v2) PART OF THE SPECTRUM OF ANTIBODY-MEDIATED REJECTION?

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A group of 21 patients with Antibody-Mediated Rejection (AMR) was studied, including 13 with good outcome (GFR>15ml/min/1.73m^2) and 8 with bad outcome. Overall, 46 biopsies were analyzed on the 21 patients. C4d was positive in all of the first biopsies and in 71.4% of last biopsies. The morphologic determinants of poor graft outcome have been previously reported in this group, including neutrophilic infiltrates in glomeruli and peritubular capillaries (PTC) at first biopsy, and vascular rejection and monocyte infiltrates in glomeruli and PTC at last biopsy. Transplant endarteritis (v1, v2) was present in 8 of 13 good outcome and 3 of 8 bad outcome patients at initial biopsy and had no prognostic significance at that time. However, persistence or development of transplant endarteritis at last biopsy in 5 patients (v1 or v2 in 4 patients, v3 in one patient) was associated with bad outcome in 4 of the 5 patients (Chi^2 = 5.92, p = .015). On multiple regression analysis, the variables most strongly associated with bad outcome were vascular rejection (β = 1.5059, p = .000025) and PTC monocytes (R = 0.7091, p = .00094). Spearman rank order correlations between the presence of vascular rejection and other morphologic parameters revealed the following associations: Glomerular monocytes (R = 0.4428, p = .0016); PTC monocytes (R = 0.3851, p = .007); lymphocytic tubulitis (R = 0.2112, p = .15) and interstitial infiltrate (R = .2964, p = .04). Furthermore, in some patients the interstitial infiltrate contained nodular CD20-positive-cell aggregates associated with CD68-positive macrophages within PTC or transplant endarteritis.

The much stronger association with monocytes than with typical markers of cellular rejection, together with its often-decisive role in bad outcome in AMR, raises the possibility that lower grade vascular rejection (v1, v2) may form a part of the spectrum of lesions due to AMR.