

사구체 질환에서 내피세포의 tubuloreticular inclusions의 임상병리학적 의의

충남대학교 병원 병리과¹, 신장내과²

서광선¹ · 이창주¹ · 최대은² · 나기량² · 이강욱² · 신영태²

The Clinicopathologic Significance of Endothelial Tubuloreticular Inclusions in Glomerular Diseases

Kwang-Sun Suh¹, Chang-Joo Lee¹, Dae-Eun Choi²
Gee Ryang Rha², Kang Wook Lee², Yong Tae Shin²

Department of Pathology¹, Nephrology², Chungnam National University Hospital

Background: The presence of tubuloreticular inclusions (TRIs) in endothelial cells (ECs) always evokes suspicion of their association with underlying viral infections or autoimmune diseases, such as systemic lupus erythematosus (SLE). However, other underlying diseases can be associated with TRI expression. Since identification of the underlying disease is of primary consideration for management of glomerulonephritis (GN), it is important to clarify the clinical significance of TRI expression.

Methods: We studied 104 renal biopsy cases having the ultrastructural appearance of TRI in glomerular ECs. We investigated their clinical and pathological profiles and focused on potential connections with underlying diseases.

Results: Among 104 renal biopsy cases with TRIs in glomerular ECs, 62 cases (59.6%) were associated with lupus nephritis (LN) and 20 cases (18.3%) were associated with a viral infection (HBV 13, HCV 4, and HIV 3 cases). Other underlying disease groups and their number of associated cases included membranous GN (7), IgA nephropathy (7), Henoch-Schoenlein purpura (HSP) (1), ANCA-associated glomerulopathy (1), and others (7). Among 7 membranous GN cases, one case was associated with lung cancer, another case with ANCA, and the others showed no evidence of systemic disease. Among 7 membranous GN cases and 7 IgA nephropathy cases, one membranous GN case and two IgA nephropathy cases exhibited a decrease in the serum C3 level with no clinical or laboratory evidence of SLE. One HSP case was associated with stomach cancer.

Conclusion: TRIs were identified in idiopathic membranous GN and other glomerular diseases, including IgA nephropathy and ANCA-associated glomerulopathy. However, a diagnosis of LN should be considered and the patient should be evaluated for clinical and immunological evidence of SLE because TRIs associated with a full-house immunofluorescence pattern are usually found in LN.

Key Words: Tubuloreticular inclusions, 내피세포
Tubuloreticular inclusions, Endothelial cells, ANCA