

TUBULORETICULAR INCLUSION BODIES (TRIs) IN A CASE OF PRIMARY FOCAL SEGMENTAL GLOMERULOSCLEROSIS (FSGS)

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A 20 year old male with no significant past history presented to our clinic for a second opinion of massive proteinuria. Eight months prior, he was diagnosed with nephrotic syndrome after consumption of large doses of non-steroidal anti-inflammatories. The initial renal biopsy revealed mesangial hypercellularity, with diffuse foot process effacement and multiple TRIs on electron microscopy. Immunofluorescence was notable for 2+ IgA, 1+ IgG and IgM and negative for C1q. He was started on prednisone, but was non-compliant with therapy.

At our initial visit, he was normotensive with 4+ bilateral lower extremity edema. His physical examination was otherwise unremarkable. Laboratory analysis revealed 14.5 grams of protein by protein/creatinine ratio and a serum albumin of 1.5 g/dL. His creatinine was 0.9 mg/dL. ANA, anti-DNA, complements, ANCA, hepatitis B and C and HIV (including HIV RNA PCR and CD4 count) were within normal limits or negative. Steroid therapy was continued. A repeat renal biopsy demonstrated significant progression of disease on light microscopy with focal and segmental areas of mesangial sclerosis and mild hypercellularity. Immunofluorescence revealed 2+ IgA, 1+ IgG and IgM and no C1q staining. Electron microscopy did not reveal TRIs but did confirm the diffuse foot process effacement without immune complex deposition.

TRIs are known to be made of ribonucleoprotein with stimulation of their production by alpha-interferon. The three classic situations in which TRIs are prominently found include lupus nephritis, HIV nephropathy and in patients treated with alfa interferon. Although TRIs may theoretically be found in other glomerulopathies, no cases are reported in the literature. To our knowledge, this is the first case of TRIs identified on electron microscopy in a patient with primary FSGS.