Looks Can Be Deceiving: A Case of Non-Lupus Full House Membranous Nephropathy

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A 69-year-old woman with diabetes, hypertension, and dyslipidemia presented with five months of peripheral edema and foamy urine. Laboratory tests showed declining renal function (creatinine 2.18 mg/dL) and nephrotic-range proteinuria (9 g/g). Autoimmune and infectious serologies were negative, anti-PLA2R antibodies were elevated (375 U/mL), and cancer screening was unremarkable.

Kidney biopsy revealed thickened glomerular basement membranes with a spike-like pattern (Fig. 1 A-C) Immunofluorescence demonstrated a full-house pattern with granular deposits of IgG, IgA, IgM, C3, and C4 (Fig. 2: A-E). Immunohistochemistry confirmed PLA2R and IgG4 positivity (Fig. 2- F-G).

Since the kidney biopsy findings supported a diagnosis of primary membranous nephropathy (MN) despite the atypical immunofluorescence pattern, she was treated with rituximab due to its high risk.[1] Six months later, renal function stabilized (creatinine 2.3 mg/dL), proteinuria decreased (UPCR 2.5 g/g), and anti-PLA2R antibody levels dropped to 4.5 U/mL. Given the full-house pattern, continued follow-up was recommended to monitor for evolving lupus features or other secondary processes.

This case illustrates the complexity of MN with an unusual immune profile.[2] The coexistence of anti-PLA2R antibodies and a full-house immunofluorescence pattern suggests an intersection of different immune-mediated mechanisms.[3] The occurrence of full-house glomerular deposits in the absence of a clinical diagnosis of systemic lupus erythematosus could indicate a more pronounced defect in immune complex clearance stemming from abnormal immune regulation.[4] Further research is needed to clarify the implications of such overlapping features and to guide the best therapeutic strategies for similar cases.

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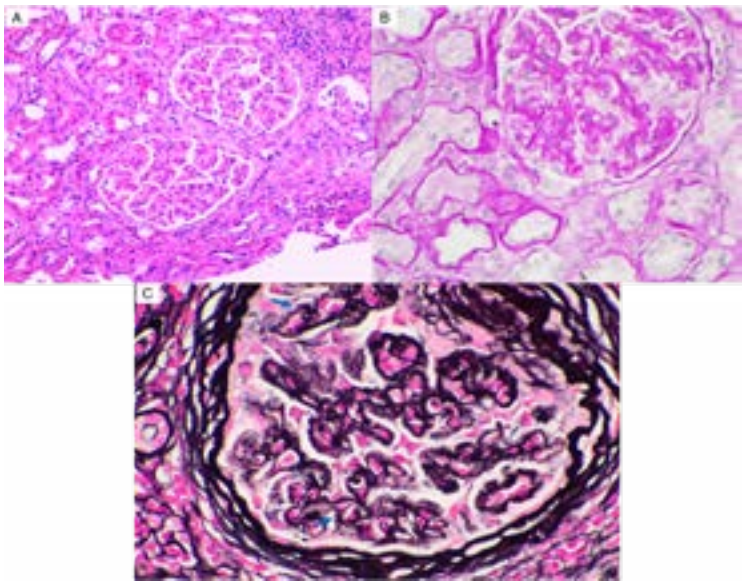

Figure 1. A and B: Kidney biopsy in Hematoxylin and eosin stain. (A: 200 x magnification- B- 400 x magnification): Tubular atrophy and glomeruli showing diffuse and prominent thickening of the glomerular basement membrane.; C- Jones methenamine silver demonstrating a hair-on-end pattern of subepithelial "spikes" (arrows) of the glomerular basement membrane.

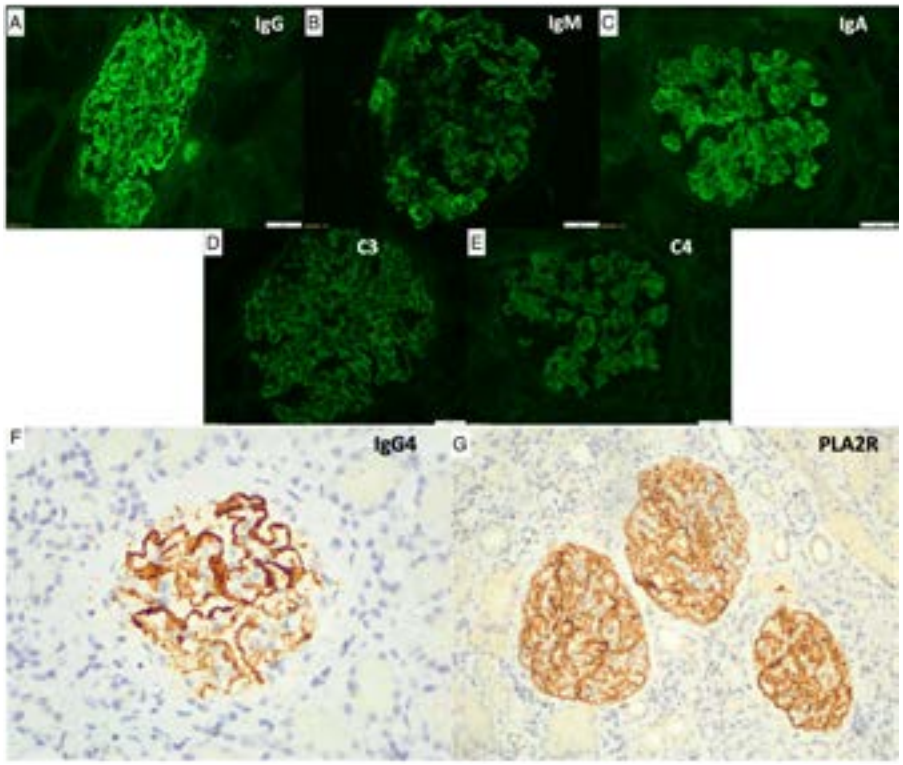

Figure 2. The immunofluorescence study (Immunofluorescence (400x magnification)) in kidney biopsy revealed peripheral granular deposits for, IgG (3+) (A), IgM (2+) (B), IgA (2+) (C), and C3 (1+) (D), C4 (1+) (E). Immunohistochemistry in kidney biopsy study showed reactivity for IgG4 (F) and PLA2R (G) in a peripheral granular pattern.

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