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A Case Report on Podocyte Infolding Glomerulopathy in a Kidney Transplant Patient

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Case Study: Podocyte infolding glomerulopathy (PIG) is a rare disease diagnosed by its characteristic structure on electron microscopy. Its histological findings showed the presence of microtubules and microspheres in the glomerular basement membrane (GBM). Cases of PIG were reported mainly in Japan, with only one case in South Korea, and there are no previous reports on PIG in kidney transplant patients. Here, we report the case of a 47-year-old Korean woman diagnosed with PIG after a kidney transplant. The patient was diagnosed with systemic lupus erythematosus and was suspected to have lupus nephritis. She subsequently underwent kidney transplantation. Routine testing showed increased proteinuria without renal functional impairment. A renal biopsy was performed for the allograft kidney. Light microscopy revealed mild interstitial fibrosis, tubular atrophy, and GBM thickening with intramembranous microspherules and microtubules. Immunofluorescence microscopy showed some tubular deposition of IgA and mesangial deposition of IgM. A few C3 deposits were found in the mesangium, tubules, and glomerular capillary walls. Serum IgG, C1, C4, Kappa, and fibrinogen levels were within the normal range. Electron microscopy showed GBM thickening (464.72–751.71 nm, average: 721.52 nm) with intramembranous microsperules and microtubules. These findings are consistent with PIG. After treatment with steroids and angiotensin receptor blockers, proteinuria decreased.

Figure 1 Light microscopic findings. Periodic acid–Schiff stain. (x200