

Table S1. Main features of previously reported cases of crystalloid inclusions in podocytes associated with plasma cell dyscrasia

| Reference | Sex/age (years) | Plasma cell dyscrasia | Clinical diagnosis | Pathologic features on kidney biopsy | Distribution of crystals in the kidney | Staining of intracytoplasmic crystals by IF/IHC |
|--|-----------------|--|---|---|--|---|
| Carstens <i>et al.</i> ¹⁰ | Male/57 | IgG-κ MM | Kidney insufficiency, mild proteinuria | FSGS | Podocytes, lesser degree in MCs, PECs, TECs | IF: Negative for both κ and λ |
| Yamamoto <i>et al.</i> ¹² | Male/71 | IgG-κ MM, systemic crystal storing histiocytosis | Proteinuria (40% Bence-Jones protein) | Interstitial infiltration and acute tubular necrosis | Interstitial histiocytes, podocytes, lesser degree in PECs, TECs | IHC: Positive for both κ and γ heavy chain (performed on the cornea) |
| Matsuyama <i>et al.</i> ²⁰ | Female/40 | IgG-κ MGUS | Nephrotic syndrome, kidney failure | FSGS | Podocytes, lesser degree in PECs, TECs, tubular lumina | IHC: Positive for κ; negative for λ |
| Kowalewska <i>et al.</i> ¹³ | Female/52 | IgG-κ MM | Kidney insufficiency, mild proteinuria | Mild interstitial fibrosis and acute tubular necrosis | Podocytes, PECs, lesser degree in TECs, interstitial monocytes | IF: Negative for both κ and λ IHC: Positive for κ; negative for λ |
| Papla <i>et al.</i> ¹⁴ | Male/51 | IgG-κ MM, systemic crystal-storing histiocytosis | Bence-Jones proteinuria | Nonspecific changes on optical microscopy | Interstitial histiocytes, podocytes, MCs, endothelial cells | IHC: Negative for both κ and λ (performed on bone marrow) |
| Tomioaka <i>et al.</i> ¹⁵ | Female/46 | IgG-κ MM | Kidney insufficiency, albuminuria | FSGS | Podocytes, TECs, interstitial histiocytes | IF: Positive for IgG-κ; negative for λ |
| Keller <i>et al.</i> ¹⁶ | Male/56 | IgG-κ MM | Acute kidney failure | Acute tubular necrosis | Podocytes, TECs, interstitial macrophages, tubular lumina | IF: Negative for both κ and λ |
| Nasr <i>et al.</i> ⁶ | Female/54 | IgG-κ MM | Kidney insufficiency, nephrotic syndrome | Collapsing FSGS and myeloma cast nephropathy | Proximal TECs, podocytes, tubular casts | IF: Negative for both κ and λ IHC: Positive for κ; negative for λ |
| Elliott <i>et al.</i> ²¹ | Male/53 | IgG-κ MGUS | Kidney insufficiency, nephrotic syndrome | Acute tubular necrosis | Podocytes, TECs | IF: Positive for IgG-κ; negative for λ |
| Akilesh <i>et al.</i> ¹⁷ | Male/45 | IgG-κ MM | Kidney insufficiency, nephrotic syndrome | Collapsing FSGS | Podocytes, TECs, mesangial cells | IF: Negative for both κ and λ in crystal areas IHC: Negative for both κ and λ in crystal areas |
| Vankalakunti <i>et al.</i> ²² | Male/63 | IgG-κ MGUS | Kidney insufficiency, nephrotic syndrome | MPGN pattern | Endothelial cells, podocytes | IHC: Positive for κ; negative for λ |
| Jeon <i>et al.</i> ¹⁸ | Female/52 | IgG-κ MM | Mild kidney insufficiency and proteinuria | FSGS | Podocytes, distal TECs, lesser degree in proximal TECs | IF: Negative for both κ and λ IHC: Positive for κ; negative for λ |
| Wang <i>et al.</i> ¹⁹ | Male/71 | IgG-κ MM | Proteinuria | Severe interstitial fibrosis with tubular atrophy | Podocytes | IF: Negative for both κ and λ IHC: Positive for κ; negative for λ |
| Boudhabhay <i>et al.</i> ¹¹ | Male/60 | IgG-κ MM | Kidney insufficiency, nephrotic syndrome | FSGS | PECs, interstitial histiocytes, podocytes, MCs | IF: Positive for IgG-κ; negative for λ |
| Yu <i>et al.</i> ²³ | Female/53 | IgG-κ MGUS | Kidney insufficiency, mild proteinuria | FSGS | Podocytes, TECs | IF: Negative for both κ and λ Immuno-EM: Positive for κ; negative for λ |
| Ito <i>et al.</i> ²⁴ | Female/65 | IgG-κ MGUS | Kidney insufficiency, mild proteinuria | Diffuse interstitial fibrosis | Podocytes, TECs, interstitial histiocytes | IF: Negative for both κ and λ |
| Current case | Male/53 | IgG-κ MGUS, systemic crystal-storing histiocytosis | Kidney insufficiency, nephrotic syndrome | Collapsing FSGS | Podocytes, TECs, MCs | IF: Negative for both κ and λ IHC: Negative for both κ and λ |

Abbreviations: IF= immunofluorescence; IHC= immunohistochemistry; κ = kappa light chain; λ = lambda light chain; MCs= mesangial cells; MGUS= monoclonal gammopathy of unknown significance; MM = multiple myeloma, MPGN= membranoproliferative glomerulonephritis; PECs= parietal epithelial cells; TECs= tubular epithelial cells.