

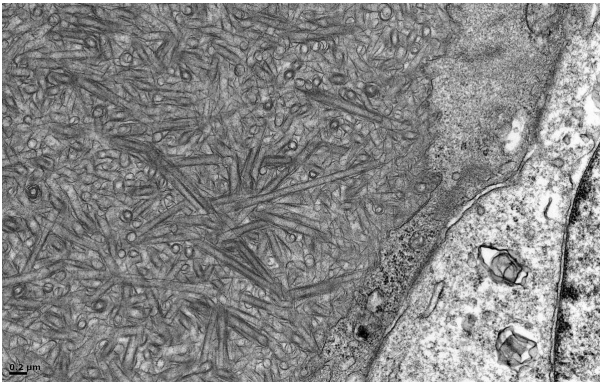
A Case of Lambda Light Chain Cast Nephropathy with Unusual Tubular Deposits

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Abstract

Cast nephropathy is the most common renal disease associated with multiple myeloma. The case presented is of an elderly female with acute kidney injury and raised globulins. Renal biopsy revealed a light chain cast nephropathy by light microscopy and immunofluorescence microscopy. Unusual organised deposits composed of randomly orientated double-walled cylinders measuring approximately 90nm in diameter were identified within the tubular casts by electron microscopy. The cylinders were ultrastructurally consistent with cryofibrinogen. Lesser amounts of homogeneous electron-dense material were also identified within the tubular lumens. The ultrastructural aspects of this case are discussed, with references to recent publications of light chain-only immunotactoid glomerulopathy [1] and a monoclonal gammopathy of renal significance (MGRS) caused by M-protein-dependent cryofibrinogenemia [2].



Intraluminal material identified by electron microscopy in a patient diagnosed with lambda light chain cast nephropathy. Organised deposits composed of randomly orientated double-walled cylinders measuring approximately 90nm in diameter are illustrated.

References

1. Bu L, Javaugue V, et al. Light Chain-Only Immunotactoid Glomerulopathy: A Case Report. *Am J Kidney Dis.* 2023 May;81(5):611-615.
2. Gant C, Koelman C, et al. Cryoglobulinemic Vasculitis in Disguise: Cryofibrinogenemia as Variant of Monoclonal Gammopathy of Renal Significance. *Am J Kidney Dis.* 2024 March;83(3):415-419.