

IgA/ λ Plasma Cell Myeloma with λ Light Chain Amyloidosis: A Case Report

Authors : Kai Pei Huang, Ting Chung Hung, Li Ching Wu

Abstract : Amyloidosis refers to a variety of conditions wherein amyloid proteins are abnormally deposited in organ or tissues and cause harm. Among the several forms of amyloidosis, the principal types of that in inpatient medical services are the AL amyloidosis (primary) and AA amyloidosis (secondary). AL Amyloidosis is due to deposition of protein derived from overproduction of immunoglobulin light chain in plasma cell myeloma. Furthermore, it is a systemic disorder that can present with a variety of symptoms, including heavy proteinemia and edema, hepatosplenomegaly, otherwise unexplained heart failure. We reported a 78-year-old female presenting dysuria, oliguria and leg edema for several months. Laboratory data showed proteinuria (UPCR:1679.8), leukocytosis (WBC:16.2 x 10³/uL), results of serum urea nitrogen (39mg/dL), creatinine (0.76 mg/dL), IgG (748 mg/dL), IgA (635 mg/dL), IgM (63 mg/dL), kappa light chain(18.8 mg/dL), lambda light chain (110.0 mg/dL) and kappa/lambda ratio (0.17). Renal biopsy found amyloid fibrils in glomerular mesangial area, and Congo red stain highlights amyloid deposition in glomeruli. Additional lab studies included serum protein electrophoresis, which shows a major monoclonal peak in β region and minor small peak in gamma region, and the immunotyping studies for serum showed two IgA/ λ type. We treated sample with beta-mercaptoethanol which reducing the polymerized immunoglobulin to clarify two IgA/ λ are secreted from the same plasma cell clone in bone marrow. Later examination confirmed it existed plasma cell infiltration in bone marrow, and the immunohistochemical staining showed monotypic for λ light chain and are positive for IgA. All findings mentioned above reveal it is a case of plasma cell myeloma with λ Light Chain Amyloidosis.

Keywords : amyloidosis, immunoglobulin light chain, plasma cell myeloma, serum protein electrophoresis

Conference Title : ICCCLM 2016 : International Conference on Clinical Chemistry and Laboratory Medicine

Conference Location : Venice, Italy

Conference Dates : August 08-09, 2016