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Anti-PLA2R antibody in membranous nephropathy: How useful is it

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Membranous nephropathy (MN) is the commonest cause of nephrotic syndrome in adults, with male preponderance. Immunosuppressive agents are the main treatment. However, ≈40% patients progress to end-stage renal disease and ≈15% develop recurrence post-renal transplantation. It is important to differentiate MN in to primary/ idiopathic (pMN) and secondary (sMN) type since their treatment and prognosis are different. Morphologically it can be differentiated with the aid of light, immunofluorescence (IF) and electron microscopy. Antibody against M-Type Phospholipase A2 Receptor (anti-PLA2R) which is the target antigen present in the glomerular basement membrane is commonly associated with pMN. PLA2R antigen in glomerulus can be located by through IF/immunohistochemistry (IHC). Renal biopsy is an invasive procedure, hence non-invasive biomarkers like the anti-PLA2R antibody in serum can be helpful and preferable to differentiate and monitor pMN vs sMN. It can be detected in serum by various assays like western blot, indirect immunofluorescence (IIF) -Cell-based assay and enzyme-linked immunosorbent assay (ELISA). Each method has its own advantages and limitations. ELISA is commonly used assay with 70-75% sensitivity and >95% specificity. Our experience of 70 patients has shown that anti-PLA2R antibody by ELISA may be positive in both pMN as well as sMN with 39.13% sensitivity. Negative anti- PLA2R antibody titer does not exclude the possibility of primary or idiopathic MN and such cases require further evaluation. Larger sample size with follow-up would be required to establish the role of anti- PLA2R antibody titer as a prognosticator in MN.

Biography

Kamlesh Suthar completed his MD in 2006 from Gujarat University, India. He qualified with a post-doctoral certificate course (PDCC) of Renal and Transplant Pathology (Indian College of Pathologists) in 2009 and has >10-years experience in the field. Currently, he is Associate Professor in the Department of Pathology, Laboratory Medicine, Immunohematology, and Transfusion services at IKDRC-ITS, Ahmedabad, India. He has >30 publications, several oral and poster presentations at national and international conferences. He serves as reviewer and editorial board member of various journals. He received "Young Investigator Award" in "Transplant Update-2015" for his research on BKV nephropathy in renal transplantation.

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