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Tacrolimus Plus Low Dose Prednisolone Therapy is More Effective in PLA2R-ve Membranous Glomerulonephritis Patients

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Objectives: Idiopathic Membranous Nephropathy (IMN); an autoimmune concomitant nephrotic syndrome of the adult is mainly associated with PLA2R antibody expressed on podocytes. The lack of exact mechanisms involved in the pathogenesis of IMN is transmitted to its therapeutic management. We propose the efficacy of low dose Tacrolimus (Tac) plus prednisolone and associated changes in anti-PLA2R in adult IMN.

Methods: Total 101 membranous nephropathy patients were treated with combination of prednisolone 1mg/kg alt-day) and Tac 0.1mg/kg/day (trough 6-10 ng/ml first 6M and 4-6 ng/ml for next 3M) then both taper by 1/3 every month up to 12M. Out of 101 patients; 15 diabetic; 7 lupus; 1HBV and 1 ankylosing spondylitis patients were excluded. Finally; 77 Patients were followed and evaluated for the anti-PLA2R level at baseline; 3M; 6M; 12M and end of follow-up (17-61 ; median 38 months). CR; PR; relapse; and side-effects were recorded. Of the 77 patients; at 3M 60(77.92%; CR-37; PR-23); at 6M 61(79.22%; CR-53; PR-8); at 12M 53(68.86%; CR-47; PR-6) achieved remission. Eight (10.38%) relapsed and 16(20.77%) showed no response at 12M.

Results: Out of 77 patients; 51 (66.3%) were anti-PLA2R positive. Remission rate was significantly low in PLA2R+ve than PLA2R-ve (36/51 vs 24/26; p=0.03) at 3M; (36/51 vs 25/26; p=0.009) at 6M and (31/51 vs 22/26; p=0.03) at 12M. (Fig 1) PLA2R level was decreased by 60.38% and 77.56% at 3M and 6M respectively. There were significant correlations between PLA2R level and 24h proteinuria at baseline; 3M and at 6M. During therapy 4 patients develop cutaneous tenia; 1 osteonecrosis of the femur head; 1 corpus tunnel syndrome; 4 onset diabetes; 3 tremor; and 14 patients experienced GI symptoms. To note; 4 females had pregnancy and successful delivery in our cohort of patients.

Conclusions: PLA2R+ve patients showed poor response compare to PLA2R-ve patients. Successful pregnancy was observed on Tac based regimen.

Remission rate at different time point

