MPGN AND NEPHROTIC SYNDROME (NS) SECONDARY TO LYME DISEASE (LD).

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LD is tick-borne multi-system inflammatory disorder caused by the spirochete *Borrelia burgdorferi*.Diffuse glomerular involvement is extremely rare in LD.Only two cases of MPGN secondary to LD in humans have been reported till date.We report an unusual case of MPGN and NS in a patient as a late clinical manifestation of LD.

A 61 year old Caucasian female presented with complaints of increasing tiredness and bilateral lower extremity(LE) swelling for 4 months.She had been diagnosed with LD 12 years ago following which she developed chronic arthritis and retinitis.She was referred to the hospital to evaluate for worsening LE swelling and fatigue. At presentation,her BP was 176/74mmHg,afebrile and no signs of volume depletion. Physical exam revealed bibasilar crackles and LE pitting edema. Laboratory data showed acute kidney injury (BUN=45,Cr=2.3),hypoalbuminemia,and anemia.Routine urine analysis showed 300+ proteinuria,confirmed by a spot protein/creatinine ration of 3.9 gm/day. Serologic tests showed positive antibodies for LD and hypocomplementemia.Serologies for hepatitis, HIV,syphilis,SLE,&ANCA levels were all negative.SPEP/UPEP showed no monoclonal antibodies.Rh factor and cryoglobulins were falsely elevated.Renal ultrasound was normal.

The patient had a kidney biopsy which showed type1 MPGN.The patient was started on high dose steroids,diuretics and ACE inhibitors.On subsequent follow up,she continued to have worsening renal failure(Cr 5.0-5.8) and increasing proteinuria (upto 9 gm/day).Repeat kidney biopsy was consistent with previous biopsy findings.She was started on hemodialysis(HD) and immunosuppressive therapy,following which her clinical course have been stable.Currently,the patient continues to be HD-dependent.

MPGN has been associated with a number of chronic infectious etiologies.There have been only two cases reported in the literature so far showing association between MPGN and LD. It is possible that immune-complex type MPGN and NS may be manifested as a late complication of LD.