IgA Nephropathy and Crohn's Disease: Chicken or the Egg?

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INTRODUCTION

Crohn's disease (CD) is often associated with extra-intestinal manifestations. Common renal complications include nephrolithiasis and tubulointerstitial disease. Renal parenchymal disease is less common, and immune-complex glomerulonephritis is rarely reported in literature. CD usually precedes the nephropathy. We present two patients with CD and IgA nephropathy.

CASE PRESENTATION

Case 1: A 29 year old male presented with hematuria and acute renal failure at age 16. He was diagnosed with IgA nephropathy by renal biopsy and treated with steroids. Ten years later, he developed a perirectal abscess and was diagnosed with Crohn's Ileocolitis.

Case 2: A 29-year-old male with a known history of Crohn's Ileocolitis, on infliximab, developed facial swelling, severe hypertension and renal function abnormalities. Renal biopsy revealed IgA nephropathy. Infliximab was discontinued and he was started on Cyclophosphamide by nephrology. His renal function worsened, and he started hemodialysis. He is being evaluated for a renal transplant and CD remains in remission.

DISCUSSION

The pathophysiology of IgA nephropathy remains unclear. A number of mechanisms have been postulated. Kett et al showed an increase in IgA1 producing cells in the colonic tissue of patients with IBD, suggesting that abnormal helper T cells stimulate plasma cells in the bone marrow to secrete polymeric IgA. It is hypothesized that these intestine derived IgA complexes are deposited in glomerular mesangial cells producing IgA nephropathy. Case 1 is unusual in that the nephropathy preceded CD by many years, calling into question this hypothesis.

It appears that successful treatment of IBD with medications or resection is associated with clinical remission of IgA nephropathy, as seen in case 1 and that IBD associated nephropathy is associated with a worse prognosis as seen in case 2.

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