Complement-mediated kidney disease: C3 glomerulopathy and IgA nephropathy

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Table of Contents

e1 C3 glomerulopathy
Ali Mehdi, MD, MEd, FACP, FASN; Jonathan J. Taliercio, DO

e5 IgA nephropathy
Jonathan J. Taliercio, DO; Ali Mehdi, MD, MEd, FACP, FASN

From the editor
In this supplement, I have invited 2 experienced clinical nephrologists and medical educators to present overviews of C3 glomerulopathy (C3G) and IgA nephropathy. These 2 disorders are strikingly different in their prevalence. IgA nephropathy is the most common primary glomerulonephritis worldwide, while C3G is rare. They share several characteristics. Both require renal biopsy for definitive diagnosis and both have a variable long-term course, although untreated C3G has a generally poorer prognosis. Progression of both can be slowed by manipulation of renal hemodynamics and, to an often unsatisfying degree, by utilizing broadsword immunosuppression with corticosteroids and other agents including mycophenolate mofetil.

The fascinating observation that further unifies these disorders, as discussed by Mehdi and Taliercio, is that they share as a pathophysiologic mechanism the localized activation of complement via its “alternative pathway.” The activation triggers differ in the 2 disorders, but the rapidly growing understanding of this pathway has already led to the implementation of specific therapeutics in clinical trials.

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