

Infection-Related Glomerulonephritis: A Literature Review

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ABSTRACT

Glomerulonephritis (GN) is a term used to describe a set of immune-mediated kidney conditions that influence the glomeruli. This literature review aimed to presents the current literature on Infection-related GN epidemiology, pathophysiology, diagnosis, and treatment. Over the past decades, the epidemiology of IRGN has changed dramatically, including aspects such as incidence, geography, disease burden, age distribution, comorbidities, gender distribution, prognosis, and microbiology. Early diagnosis and timely treatment of IRGN are critical as they may prevent kidney damage. Therapeutic approach followed in many cases, including antibiotics, surgical intervention, immunosuppressive therapy, renin-angiotensin system blockade, sodium glucose co transporter 2 inhibitor, supportive therapy, and renal replacement therapy. Although the overall incidence of IRGN has declined due to improved living standards, access to antibiotics, and the health care system, it remains high in poor areas and increasingly affects adults, especially elderly patients with comorbidities. The pathophysiology of IRGN is predominantly based on the deposition of complement with or without bound immunoglobulins, followed by an immune and inflammatory reaction. Early diagnosis and timely treatment of IRGN can prevent kidney damage. Diagnosing IRGN by clinical features alone is insufficient because it is common in diverse GN classifications. Renal biopsy stays the gold standard for diagnosis, including the detection of subepithelial humps on electron microscopy. The IRGN treatment focuses on eradicating infection, managing complications, supportive care and immunosuppressive therapy in selected cases.

Keywords: Glomerulonephritis; Infection; Kidney; Literature

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