IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 3, December 2025
Impact Factor: 7.67

Tubulointerstitial Nephritis Uncovered: From Cause to Cure

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Abstract: *Tubulointerstitial nephritis (TIN) represents a significant cause of acute kidney injury (AKI) and may progress to chronic kidney disease (CKD) if not recognized and managed. It is characterized by immune-mediated inflammation of the renal interstitium, often resulting in fibrosis over time. Clinical manifestations are usually non-specific, mostly leading to diagnostic delays and suboptimal treatment outcomes.The etiology of TIN is diverse, including drug-induced, infectious, idiopathic, and genetic causes, as well as associated with systemic inflammatory disorders such as tubulointerstitial nephritis and inflammatory bowel disease, and IgG4-related multiorgan autoimmune disease (MAD)uveitis (TINU) syndrome,. A high index of clinical suspicion is therefore essential to identify and remove potential causative agents and to manage any underlying systemic condition effectively.Management strategies for TIN are primarily guided by the underlying etiology. Although randomized controlled trials are lacking, corticosteroids remain the cornerstone of therapy, with emerging evidence supporting the use of mycophenolate mofetil in certain cases. Urinary biomarkers, including alpha-1 microglobulin and beta-2 microglobulin, show promise for both diagnosis and monitoring of disease activity. Routine screening for TIN should be considered in pediatric patients with inflammatory bowel disease, uveitis, or IgG4-related systemic autoimmune disorders.[1].*

Keywords: Tubulointerstitial Nephritis, Acute Kidney Injury, Chronic Kidney Disease, TINU Syndrome, Inflammatory Bowel Disease, Treatment

DOI: 10.48175/568