

ALLERGIC INTERSTITIAL NEPHRITIS

Although biopsy-proven AIN accounts for no more than ~15% of cases of unexplained acute renal failure, this is likely a substantial underestimate of the true incidence. This is because potentially offending medications are more often identified and empirically discontinued in a patient noted to have a rising serum creatinine, without the benefit of a renal biopsy to establish the diagnosis of AIN.

Clinical Features The classic presentation of AIN, namely, fever, rash, peripheral eosinophilia, and oliguric renal failure occurring after 7–10 days of treatment with methicillin or another β -lactam antibiotic, is the exception rather than the rule. More often, patients are found incidentally to have a rising serum creatinine or present with symptoms attributable to acute renal failure (Chap. 334). Atypical reactions can occur, most notably nonsteroidal anti-inflammatory drug (NSAID)-induced AIN, in which fever, rash, and eosinophilia are rare, but acute renal failure with heavy proteinuria is common. A particularly severe and rapid-onset AIN may occur upon reintroduction of rifampin after a drug-free period. More insidious reactions to the agents listed in Table 340-1 may lead to progressive tubulointerstitial damage. Examples include proton pump inhibitors and, rarely, sulfonamide and 5-aminosalicylate (mesalazine and sulfasalazine) derivatives and antiretrovirals.

Diagnosis Finding otherwise unexplained renal failure with or without oliguria and exposure to a potentially offending agent usually points to the diagnosis. Peripheral blood eosinophilia adds supporting evidence but is present in only a minority of patients. Urinalysis reveals pyuria with white blood cell casts and hematuria. Urinary eosinophils are neither sensitive nor specific for AIN; therefore, testing is not recommended. Renal biopsy is generally not required for diagnosis but reveals extensive interstitial and tubular infiltration of leukocytes, including eosinophils.

TREATMENT ALLERGIC INTERSTITIAL NEPHRITIS

Discontinuation of the offending agent often leads to reversal of the renal injury. However, depending on the duration of exposure and degree of tubular atrophy and interstitial fibrosis that has occurred, the renal damage may not be completely reversible. Glucocorticoid therapy may accelerate renal recovery, but does not appear to impact long-term renal survival. It is best reserved for those cases with severe renal failure in which dialysis is imminent or if renal function continues to deteriorate despite stopping the offending drug (Fig. 340-1 and Table 340-2).

SJÖGREN'S SYNDROME

Sjögren's syndrome is a systemic autoimmune disorder that primarily targets the exocrine glands, especially the lacrimal and salivary glands, and thus results in symptoms, such as dry eyes and mouth, that constitute the "sicca syndrome" (Chap. 383). Tubulointerstitial nephritis with a predominant lymphocytic infiltrate is the most common renal manifestation of Sjögren's syndrome and can be associated with distal RTA, nephrogenic diabetes insipidus, and moderate renal failure. Diagnosis is strongly supported by positive serologic testing for anti-Ro (SS-A) and anti-La (SS-B) antibodies. A large proportion of patients with Sjögren's syndrome also have polyclonal hypergammaglobulinemia. Treatment

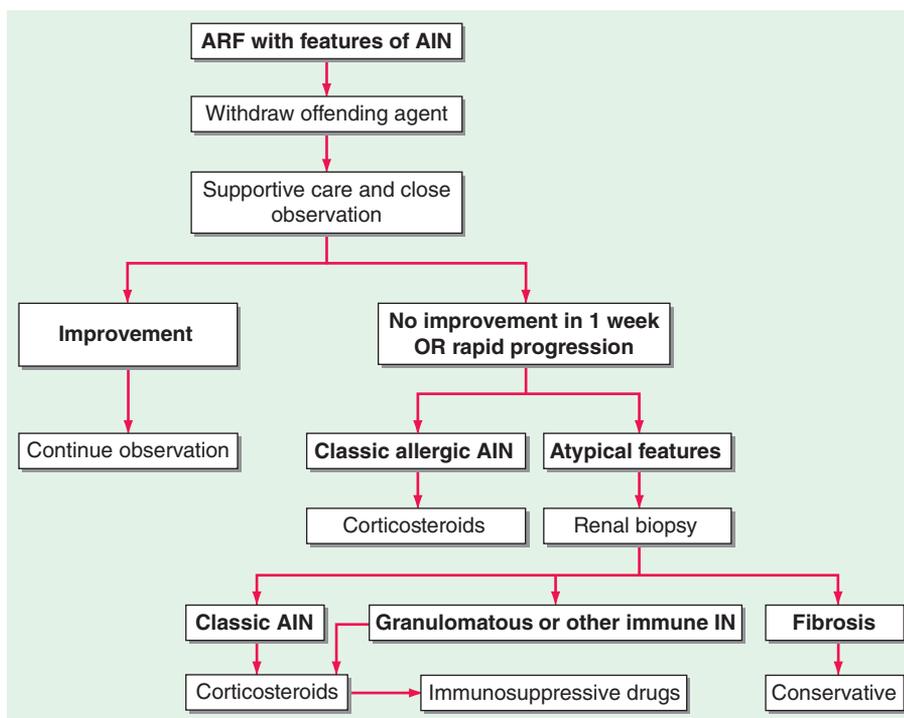


FIGURE 340-1 Algorithm for the treatment of allergic and other immune-mediated acute interstitial nephritis (AIN). ARF, acute renal failure; IN, interstitial nephritis. See text for immunosuppressive drugs used for refractory or relapsing AIN. (Modified from S Reddy, DJ Salant: *Ren Fail* 20:829, 1998.)

is initially with glucocorticoids, although patients may require maintenance therapy with azathioprine or mycophenolate mofetil to prevent relapse (Fig. 340-1 and Table 340-2).

TUBULOINTERSTITIAL NEPHRITIS WITH UVEITIS (TINU)

TINU is a systemic autoimmune disease of unknown etiology. It accounts for fewer than 5% of all cases of AIN, affects females three times more often than males, and has a median age of onset of 15 years. Its hallmark feature, in addition to a lymphocyte-predominant interstitial nephritis (Fig. 340-2), is a painful anterior uveitis, often bilateral and accompanied by blurred vision and photophobia. Diagnosis is

TABLE 340-2 INDICATIONS FOR CORTICOSTEROIDS AND IMMUNOSUPPRESSIVES IN INTERSTITIAL NEPHRITIS

Absolute Indications

- Sjögren's syndrome
- Sarcoidosis
- SLE interstitial nephritis
- Adults with TINU
- Idiopathic and other granulomatous interstitial nephritis

Relative Indications

- Drug-induced or idiopathic AIN with:
 - Rapid progression of renal failure
 - Diffuse infiltrates on biopsy
 - Impending need for dialysis
 - Delayed recovery
- Children with TINU
- Postinfectious AIN with delayed recovery (?)

Abbreviations: AIN, acute interstitial nephritis; SLE, systemic lupus erythematosus; TINU, tubulointerstitial nephritis with uveitis.

Source: Modified from S Reddy, DJ Salant: *Ren Fail* 20:829, 1998.