LABORATORY AND RADIOGRAPHIC FINDINGS

The ESR and acute-phase reactants are usually elevated during the acute phase of the disease, often markedly so. Mild anemia may be present. Synovial fluid is nonspecifically inflammatory. In most ethnic groups, 30–50% of the patients are B27-positive. The triggering infection usually does not persist at the site of primary mucosal infection through the time of onset of the reactive disease, but it may be possible to culture the organism, e.g., in the case of *Yersinia*- or *Chlamydia*-induced disease. Serologic evidence of exposure to one of the causative organisms with elevation of antibodies is nonspecific and is of questionable utility. Polymerase chain reaction (PCR) for chlamydial DNA in first-voided urine specimens may have high sensitivity in the acute stage but is less useful with chronic disease.

In early or mild disease, radiographic changes may be absent or confined to juxtaarticular osteoporosis. With long-standing persistent disease, radiographic features share those of psoriatic arthritis; marginal erosions and loss of joint space can be seen in affected joints. Periostitis with reactive new bone formation is characteristic, as in all the SpAs. Spurs at the insertion of the plantar fascia are common.

Sacroiliitis and spondylitis may be seen as late sequelae. Sacroiliitis is more commonly asymmetric than in AS, and spondylitis, rather than ascending symmetrically, can begin anywhere along the lumbar spine. The syndesmophytes are described as nonmarginal; they are coarse, asymmetric, and "comma"-shaped, arising from the middle of a vertebral body, a pattern less commonly seen in primary AS. Progression to spinal fusion is uncommon.

DIAGNOSIS

ReA is a clinical diagnosis with no definitively diagnostic laboratory test or radiographic finding. The diagnosis should be entertained in any patient with an acute inflammatory, asymmetric, additive arthritis or tendinitis. The evaluation should include questioning regarding possible triggering events such as an episode of diarrhea or dysuria. On physical examination, attention must be paid to the distribution of the joint and tendon involvement and to possible sites of extraarticular involvement, such as the eyes, mucous membranes, skin, nails, and genitalia. Synovial fluid analysis may be helpful in excluding septic or crystal-induced arthritis. Culture, serology, or molecular methods may help to identify a triggering infection, but they cannot be relied upon.

Although typing for B27 has low negative predictive value in ReA, it may have prognostic significance in terms of severity, chronicity, and the propensity for spondylitis and uveitis. Furthermore, if positive, it can be helpful diagnostically in atypical cases. HIV testing is often indicated and may be necessary in order to select appropriate therapy.

It is important to differentiate ReA from disseminated gonococcal disease (Chap. 181), both of which can be venereally acquired and associated with urethritis. Unlike ReA, gonococcal arthritis and tenosynovitis tend to involve both upper and lower extremities equally, spare the axial skeleton, and be associated with characteristic vesicular skin lesions. A positive gonococcal culture from the urethra or cervix does not exclude a diagnosis of ReA; however, culturing gonococci from blood, skin lesion, or synovium establishes the diagnosis of disseminated gonococcal disease. PCR assay for *Neisseria gonorrhoeae* and *C. trachomatis* may be helpful. Occasionally, only a therapeutic trial of antibiotics can distinguish the two.

ReA shares many features in common with psoriatic arthropathy. However, psoriatic arthritis is usually gradual in onset; the arthritis tends to affect primarily the upper extremities; there is less associated periarthritis; and there are usually no associated mouth ulcers, urethritis, or bowel symptoms.

TREATMENT REACTIVE ARTHRITIS

Most patients with ReA benefit to some degree from high-dose NSAIDs, although acute symptoms are rarely completely ameliorated, and some patients fail to respond at all. Indomethacin, 75–150 mg/d in divided doses, is the initial treatment of choice, but other NSAIDs may be tried.

Prompt, appropriate antibiotic treatment of acute chlamydial urethritis or enteric infection may prevent the emergence of ReA, but is not universally successful. Data regarding the potential benefit of antibiotic therapy that is initiated after onset of arthritis are conflicting, but several trials suggest no benefit. One long-term follow-up study suggested that although antibiotic therapy had no effect on the acute episode of ReA, it helped prevent subsequent chronic SpA. Another such study failed to demonstrate any long-term benefit. A promising recent double-blind placebo-controlled study assessing combination antibiotics showed that a majority of patients with chronic ReA due to *Chlamydia* benefited significantly from a 6-month course of rifampin 300 mg daily plus azithromycin 500 mg daily for 5 days, then twice weekly, or 6 months of rifampin 300 mg daily plus doxycycline 100 mg twice daily. The possibility remains that acute *Chlamydia*-induced ReA might respond more favorably to antibiotic therapy than the postenteric variety.

Multicenter trials have suggested that sulfasalazine, up to 3 g/d in divided doses, may be beneficial to patients with persistent ReA.[1] Patients with persistent disease may respond to azathioprine, 1–2 mg/kg per day, or to methotrexate, up to 20 mg per week; however, these therapeutic regimens have never formally been studied. Although no controlled trials of anti-TNF-α in ReA have been reported, anecdotal evidence supports the use of these agents in severe chronic cases, although lack of response has also been observed.[1]

Tendinitis and other enthesitic lesions may benefit from intralesional glucocorticoids. Uveitis may require aggressive treatment to prevent serious sequelae (see above). Skin lesions ordinarily require only symptomatic topical treatment. In patients with HIV infection and ReA, many of whom have severe skin lesions, the skin lesions in particular respond to antiretroviral therapy. Cardiac complications are managed conventionally; management of neurologic complications is symptomatic.

Comprehensive management includes counseling of patients in the avoidance of sexually transmitted disease and exposure to enteropathogens, as well as appropriate use of physical therapy, vocational counseling, and continued surveillance for long-term complications such as AS. Patients with a history of ReA are at increased risk for recurrent attacks following repeated exposures.

PSORIATIC ARTHRITIS

Psoriatic arthritis (PsA) refers to an inflammatory musculoskeletal disease that has both autoimmune and autoinflammatory features characteristically occurring in individuals with psoriasis.

HISTORIC BACKGROUND

The association between arthritis and psoriasis was noted in the nineteenth century. In the 1960s, on the basis of epidemiologic and clinical studies, it became clear that unlike RA, the arthritis associated with psoriasis was usually seronegative, often involved the distal interphalangeal (DIP) joints of the fingers and the spine and sacroiliac joints, had distinctive radiographic features, and showed considerable familial aggregation. In the 1970s, PsA was included in the broader category of the spondyloarthritides because of features similar to those of AS and ReA.

EPIDEMIOLOGY

Estimates of the prevalence of PsA among individuals with psoriasis range from 5 to 42%. The prevalence of PsA appears to be increasing in parallel with disease awareness; recent data using screening tools suggest that 20% or more of patients with psoriasis have undiagnosed PsA. The duration and severity of psoriasis increase one's likelihood of developing PsA. In white populations, psoriasis is estimated to have a prevalence of

[1]Azathioprine, methotrexate, sulfasalazine, pamidronate, and thalidomide have not been approved for this purpose by the U.S. Food and Drug Administration at the time of publication.