



FIG 24-8 Gout. **A**, Deposits of uric acid crystals in the connective tissue have a chemotactic effect and cause exudation of leukocytes into the joint. **B**, Severe joint effusion and periarticular swelling of the proximal interphalangeal joint of the finger. (**A**, From Frazier MS, Drzymkowski JW: *Essentials of human diseases and conditions*, ed 2, Philadelphia, 2000, Saunders; **B**, From Eisenberg RL: *Comprehensive radiographic pathology*, ed 4, St Louis, 2008, Mosby.)

FIBROMYALGIA

Fibromyalgia is a chronic widespread muscle pain syndrome.^{12,19,27,31} Fibromyalgia is defined as widespread pain lasting at least 3 months with physical findings of 11 to 18 tender points (Fig. 24-9).^{12,19,31} Common characteristics of fibromyalgia are chronic widespread pain, aching, fatigue, and stiffness. Patients may also complain of headaches, sleep disorders, mood disorders, irritable bowel syndrome, and paresthesias.⁴⁰ Fibromyalgia is most common in women between the ages of 20 and 50 years.^{12,19,27} The exact etiology and pathogenesis of fibromyalgia are not fully understood, but disturbances in different systems of the body are thought to be involved. One common thought is that pain results from abnormalities of central sensory processing.¹² More recent research characterizes fibromyalgia as a biologic disorder associated with neurohormonal dysfunction of the autonomic nervous system because of the objective biochemical, endocrine, and physiologic abnormalities.¹⁹ Abnormalities in the hypothalamic-pituitary-adrenal axis, reproductive hormone axis, autonomic nervous system, and immune system have been found in patients with fibromyalgia.¹⁹ The onset of fibromyalgia may be due to prolonged stress or anxiety, trauma, rapid steroid withdrawal, hypothyroidism, and viral and nonviral infections.^{12,19} Fibromyalgia may start as localized pain and after months or years become widespread.¹² The pain associated with fibromyalgia is often described as burning or aching and sometimes tender, stiff, throbbing, and sore.^{12,19} Although fibromyalgia pain is widespread, patients have one or two locations that are the worst, which are usually the neck, shoulders, and back.^{12,27,31} Sleep disturbance is another, more common symptom in fibromyalgia.^{12,19,27} Patients complain of exhaustion even after a night of sleep, which is because of the disordered non-rapid eye movement sleep.⁴⁸ Also, patients with fibromyalgia have increased motor activity and restlessness during sleep, which accounts for increased fatigue.⁴⁸ Other common symptoms are fatigue, subjective numbness, chronic headaches, dizziness, Raynaud's phenomenon, and irritable bowel and bladder.^{12,19,27,31} Symptoms tend to be exacerbated with noise, stress, tiredness, weather changes, trauma, noxious smells, and too much or too little exercise.^{12,19,40}

Management of Fibromyalgia

The first step in treating patients with fibromyalgia is to ensure the patients understand they have a diagnosed syndrome that is a legitimate disorder with real symptoms and there is an effective management.^{12,27} The management for fibromyalgia needs to be multidisciplinary and address education, stress management, nutrition, lifestyle training, medication, muscle pain, and exercise.¹⁹ Pharmacologic management focuses on managing the pain and sleep disturbances.¹² Antidepressants are commonly used for fibromyalgia because of their positive effects on pain, sleep, and fatigue.^{12,31} Antidepressants work well with some patients because the chemicals in the body that control pain and sleep also control mood.³¹ Other drugs used to treat fibromyalgia are muscle relaxants, anti-anxiety medications, and sleep aids.¹⁵