

GOUT

Gout is an inherited metabolic defect characterized by a deficiency of one or more enzymes that control urate concentration in the blood. The result is the development a high concentration of urate in the blood and body fluids (hyperuricemia), ultimately causing the development of monosodium urate crystals (tophi) in and around various joints (*gouty arthritis*). High maintained levels and duration of hyperuricemia increase the chances of crystal deposition and an acute gout attack.

Acute *gouty arthritis* may be precipitated by minor trauma, overindulgence in food or alcohol, surgery, emotional stress, fatigue, infection, or the administration of antibiotics, insulin or mercurial diuretics. The initial symptom is usually a mono- or polyarthritic pain, generally at night. As the condition develops, the pain may become progressively more severe and persistent. Patients variously describe the pain as throbbing, crushing, or excruciating. The affected site will resemble an acute infection with swelling, warmth to the touch, redness (often), and “exquisite” tenderness. The metatarsophalangeal (MP) joint of the big toe is the joint most frequently affected, initially, but the joints of the instep, knee, wrist, and elbow are also commonly affected sites. Initially, only a single joint may be involved, but in later attacks other joints may additionally be involved. Systemic reactions vary, but may include fever, tachycardia, chills, malaise, and leukocytosis

Gouty arthritis is common to the degree that it is ranked second only to non-specific joint degeneration as a cause of arthritis. Untreated, the resultant arthritis may become chronic and deforming.

Treatment

Treatment of *gouty arthritis*, in our context here, is simply the relief of pain caused by the crystalline buildup in the involved joints. This can be at least temporarily accomplished through the application of ultrasound and the phonophoresis of an effective nonsteroidal anti-inflammatory. Coat the selected site with the anti-inflammatory and then ultrasound it at between 1.2 and 1.8 w/cm² for an adequate period of time (six minutes per joint is usually sufficient). A second session, repeated at least 30 minutes after the first, may increase effectiveness. The number of sessions per day should be limited to two.

As a personal note, I was the first time I treated a gout patient, to see the crystals in the involved joint “*dissolve*” under the sound head as the treatment proceeded. Although I’ve had this experience many times now, I still find the experience highly gratifying.