Digital Mucous Cysts

**Background:** Digital mucous cysts (DMCs) are benign ganglion cysts of the digits, where they are typically located at the distal interphalangeal (DIP) joints or in the proximal nail fold. The etiology of these cysts is uncertain but may involve mucoid degeneration. Often, these cysts are asymptomatic and do not require treatment. When treatment is indicated, medical therapies as well as surgical interventions of varying magnitudes may be attempted. **Recurrence is common.**

Historically, little attention has been directed at studying these cysts despite their frequency. In the literature, they have been referred to as mucous cysts, synovial cysts, nail cysts, digital mucoid cysts, and many others.

Ganglion cysts were first appreciated by Hippocrates, who described a knot of tissue full of fluid. In 1746, Eller concluded that ganglia formed from the herniation of the synovial lining of a joint. The digital mucous cyst was first described by Hyde in 1882. Ledderhose (1893) suggested that ganglia arose spontaneously in the subcutaneous tissue. The earliest formulation of the theory that mucoid degeneration may be responsible for digital mucous cysts was proposed by Ritschel in 1895 and popularized by Carp and Stout (1928). Nail deformities caused by the cysts were initially reported by Anderson in 1947.

**Pathophysiology:** The mechanism of formation of digital mucous cysts is unknown. Currently, it is believed that the cysts arise from mucoid degeneration of connective tissue, and that this process in most cases involves communication with the adjacent DIP joint and possible coexistence of osteoarthritis. Clinical and radiographic evidence of osteoarthritis is common at the site of the cysts, and the frequent presence of osteophytes and spurring of the DIP joint were recognized in the 1970s.

**Frequency:** In the US: Ganglia are the most common tumor or cyst of the hand. They account for approximately 70% of all such tumors or cysts, with digital mucous cysts comprising 10-15% of the total.

**Mortality/Morbidity:** Digital mucous cysts are most often asymptomatic and benign. Pain can result from the impingement of cysts on adjacent nerve fibers. Larger cysts can disfigure the affected digit. Nail deformities can occur.

**Sex:** Women are affected more often than men (2-2.5:1).

**Age:** DMCs usually occur in fifth-seventh decades, yet may be seen as early as the teenage years or among the very elderly. The mean age of onset is 60.