

Curriculum Vitae – Charles Weiss

Charles Weiss (b. 1938 in the Bronx, New York) is Chairman Emeritus of the Department of Orthopaedics and Rehabilitation, Mount Sinai Medical Center, Miami Beach, Florida, and Clinical Professor of Orthopaedics at the University of Miami School of Medicine. He received his B.Sc. degree in biology and chemistry from Queens College in New York in 1959 and his MD degree from the Albert Einstein College of Medicine in 1963.

He is board certified in orthopedic surgery (1971). He was on the full-time staff of the Hospital for Joint Disease (Mount Sinai School of Medicine in New York) from 1969-1972, the Massachusetts General Hospital (Harvard Medical School in Boston) from 1972 to 1977, and was associated with Columbia University School of Medicine from 1976 to 1980. From 1977 until 2002, he was at the Mount Sinai Medical Center in Miami Beach, Florida, and the University of Miami School of Medicine. His principal clinical and research interest has been arthritis of the hip and knee.

Clinical Activity

Dr. Weiss specialized in the comprehensive treatment of patients with arthritis. From 1969 to 2001 he saw more than 30,000 patients with arthritis, performed more than 5,000 arthroscopic surgeries, more than 3,000 hip and knee arthroplasties, and more than 20,000 arthrocentesis (including over 4500 viscosupplementation injections from 1997 to 2002). In 1975 he was the first physician to conduct an FDA approved trial of intra-articular hyaluronan (Healon®) for osteoarthritis of the knee in the United States and in 1985 was the first to use intra-articular hylans (Synvisc®) in patients. After approval to use Synvisc® in the U.S. in 1997, his studies on a series of 90 consecutive patients with arthritis of the knee demonstrated that, compared to other clinical trials, viscosupplementation was a successful treatment in patients who were older (>70), obese, had more advanced disease, had effusions, had failed physical therapy, NSAIDs, corticosteroid injection, arthroscopic surgery, and that viscosupplementation significantly decreased the number of patients who progressed to knee arthroplasty. He published studies demonstrating viscosupplementation to be more cost effective than NSAID treatment or joint arthroplasty, and of lower morbidity and mortality.

Another clinical interest of his was adhesion prevention following trauma surgery. In the 1970s he successfully used intra-articular, peritendonous and perineural injections of hyaluronan to prevent or diminish adhesion formation.

Research Activities

He authored 55 research papers and book chapters. In the 1960s and 70s he published the first ultra-structural studies of normal young adult knee articular cartilage and the changes that occur with aging and osteoarthritis. These studies were complemented by additional experiments on cellular metabolism, cell function, matrix composition, water transport and structural changes in animal articular cartilage. In 1980 he, along with Richard St. Onge and Janet L. Denlinger, published the first controlled studies on the use of hyaluronan (Healon®) to reduce adhesions in primate tendon surgery. In the mid-1980s, he, with Janet L. Denlinger, published the first studies utilizing hylan to reduce the incidence and severity of osteoarthritis in animal models and to reduce adhesions in tendon and spinal surgery.