

## Charles P. Melone, Jr., M.D Talks About The Hand in

### Scleroderma: Surgical Options

Early onset and progressively debilitating hand disorder is a hallmark feature of both diffuse and limited systemic scleroderma. Small joint contractures, painful Raynaud's phenomenon, calcinosis, recurrent finger ulceration, and repeated infection render the hands increasingly dysfunctional, and, for those afflicted, are major causes of pain and distressing disfigurement.

Patients interested in undergoing surgery on their hands would be best suited if they understand the realities which they are entering into. Scleroderma patients are unique in the care and consideration they need for optimal results with hand, or any other kind of, surgery. They must consider their medical condition and seek out a knowledgeable surgical staff that can provide them with a warm operation room environment, a skilled anesthesiologist that can administer regional-balanced anesthesia which provides a positive vasodilatory effect, a surgeon that understands the need for expeditious surgery time, carefully planned incisions and tension free wound closure. There is also the need for intensive post operative wound care and rehabilitation. Seeking out specially trained wound care nurses and/or physical therapists is often imperative for the scleroderma patient during their surgical recovery. Unfortunately, this surgery is not a cure, but in successful cases can:

- Restore pain free function
- Preserve tissue integrity
- Heal digital ulcers
- Aid in the avoidance of amputation
- Enhance cosmesis (preservation, restoration, or enhancement of physical appearance)
- Overall improvement in patient's quality of life

In patients, whose general medical condition is optimized, specific surgical techniques have proved consistently rewarding for the management of hand disorders associated with scleroderma. Corrective arthrodesis (definition: surgical fusion of a destroyed joint in a more functional and aesthetic position) has been especially beneficial for severely contracted small knuckles, termed the interphalangeal joints; whereas arthroplasty (definition: joint replacement) has successfully restored mobility to the larger knuckles, termed the metacarpophalangeal joints: microsurgical digital sympathectomy (definition: small artery reconstruction that increases blood flow to the digits) has proved beneficial in alleviating painful Raynaud's syndrome and promoting healing of the fingertip ulcerations. Similarly, excision of calcinosis deposits, usually from the finger and thumb tips, has afforded pain relief and permitted healing of associated digital ulcers.

Surgeries that I have performed on scleroderma patients include: IP Arthrodesis, MP Arthroplasty, Micro-digital Sympathectomies and calcinosis excisions. In most of these surgeries that patient satisfaction was high and with the improvement of quality of life, there was often the request for the procedure to be performed bilaterally.

Personal experience with more than 400 surgical cases supports the efficacy of timely and precise reconstructive surgery for the debilitated hand in scleroderma. Moreover, this experience demonstrates that persons with scleroderma, despite a characteristically comprised blood flow, have the capacity to heal skin, soft tissue, and skeletal wounds in an uncomplicated fashion. In these series of cases, well planned surgical procedures consistently resulted in alleviation of pain, prevention of tissue loss, improved function, enhanced aesthetics and uniform patient satisfaction. These results, with their positive impact on quality of life, suggest that reconstructive hand surgery, rather than a last resort and high risk treatment option, should be considered a key component in the comprehensive management of the scleroderma patient.

“With recognition of increased survival rates coupled with awareness of favorable healing capacities in many patients with scleroderma, reconstructive hand surgery has been successfully employed with increasing frequency,” states Dr. Melone.

*Charles P. Melone, Jr., M.D. is a Manhattan-based orthopaedic hand surgeon specializing in sports injuries to the hand & wrist, arthritis of the hand & wrist, wrist fractures, fracture-dislocations, scleroderma, microsurgery and carpal tunnel syndrome. Dr. Melone is Director of the Division of Hand Surgery at Beth Israel Medical Center in New York and Professor of Clinical Orthopaedic Surgery at Albert Einstein College of Medicine and director of the Albert Einstein Hand Fellowship Program. Over the past 25 years in practice, Dr. Melone has gained a reputation as one of the most knowledgeable hand surgeons in the United States. He has served as hand surgery consultant for the majority of New York and New Jersey professional sports teams and the New York City Public School Athletic League.*

PHOTOS: Malone and before and after hand surgery photos.