Hands-On®

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NON-MELANOMA SKIN CANCER OF THE HAND

by Roger H. Stewart, M.D.

Squamous cell carcinoma (SCC) of the hand is a very common entity in sunbelt areas like South Florida. The incidence of SCC continues to rise exponentially. Diagnosis is usually quite simple. The lesions resemble warts, nodules, or erythematous patches on obviously sun-damaged skin. Standard treatment is surgical excision with margin control with subsequent hand therapy. The cure rate approaches 98% following surgical excision.

Etiology:

Virtually all of the skin cancers seen on the hands in our combined clinical practice of 60 years are squamous cell carcinomas (SCC). Although basal cell carcinoma and melanoma occasionally involve the hand, we will limit this discussion to SCC.

The frequency of skin cancer is rising exponentially with nearly one million cases reported in the U.S. each year. This is directly related to the cumulative effect of sun exposure since ultraviolet radiation does cause the vast majority of SCCs. We now appreciate that even one severe adolescent sunburn can result in the development of skin cancer 10, 20 or more years later. The use of artificial tanning beds has resulted in an increased incidence both of SCC and melanoma on non-exposed parts of the body as well. A recent study demonstrated a large number of SCCs in patients receiving long wavelength ultraviolet A radiation from nail drying devices used during manicures. Again, these SCCs of the digits and hands occur because of the cumulative effect of ultraviolet radiation in people getting their nails done over a period of many years.

Of historic interest, the author has treated patients for SCC of the hand arising from exposure to medicinal arsenic two decades prior

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Roger H. Stewart, MD

(About the Contributor)

Roger H. Stewart, M.D.

After graduating from the University of Michigan, Phi Beta Kappa, and from its Medical School, Alpha Omega Alpha, Dr. Stewart completed a one year internship at UCLA Medical Center followed by one year of dermatology residency at the University of Virginia and two years at Henry Ford Hospital, Detroit. After residency, he served in the U.S. Army Medical Corp as a dermatologist for two years prior to establishing a practice in northeast Ft. Lauderdale which includes general dermatology, dermatopathology and dermatologic surgery. As the Director of the Cutaneous Laser and Surgery Center and the Cosmetic Dermatology Center, Dr. Stewart, who has surgically treated a total of more than 75,000 skin cancers chiefly affecting the face, neck and hands, now limits his practice to Mohs surgery, reconstructive surgery and cosmetic dermatology.

CASE AT HAND - FROM THE THERAPIST'S PERSPECTIVE

Post-Operative Therapy for Squamous Cell Carcinoma

Jessica Bedoya, OTR/L, CHT

The post operative therapy treatment of a squamous cell carcinoma is necessary for preventing stiffness in the hand, reducing edema, monitoring signs of an infection and improving the functional use of the hand. The term "stiff" is commonly used to describe the absence of full mobility. Any surgical procedure can cause tissue injury especially in the hand which creates a relatively extended period of healing time.

Understanding the causes of post surgical stiffness and choosing the type and timing of intervention is fundamental to successful mobilization of the hand. A gentle approach to the tissues of the hand aimed at reducing edema and not stimulating the continuation of inflammation is required.

The specific techniques used to promote resolution of edema in the initial post surgical inflammatory stage are cold, compression, elevation and active motion. Patient education is the key. Monitoring the patient and knowing the signs of wound infection are also important. These signs are increased redness, increased temperature of the skin at the surgical site and edema.

Maintaining the hand in an elevated position at all times is essential. For elevation to be effective, a gentle decline from distal to proximal with the entire upper limb above the level of the heart should be achieved. This should be completed in conjunction with active range of motion exercises. This creates muscle pumping, soft tissue movement and compression of the veins and lymphatic vessels, all of which are helpful in edema control.

Manual stretching, active motion and use of the hand can effectively transform the newly stiff hand into a mobile one. The delicate balance between tissue glide and freedom of motion can be restored, even after severe hand injuries and surgical procedures, if the therapist provides a program of treatment based on a sound understanding of and a respect for tissue response and the healing continuum. ■

HANDY TIP

We Need Our Hands EVERYDAY!!

Chris W. Smethie, Assistant Clinical Director, OTR/L, CHT

Our iPhone, BlackBerry®, computer and video games are all vying for our hands' attention! Text messaging is on the increase – no wonder hand, thumb and wrist pain are becoming all too common.

We all know we need these portable electronics to work, to play and to communicate. What can we do to make sure we do not injure ourselves in the process?

First, we can shorten our messages and that would reduce our keying. We can take mini-vacations from our hand held devices, computers and video games giving our hands a rest. Take a Saturday or an evening break from our electronic devices. Break down the activity itself – get up and do something else – give yourself some time away from the device – then go back to the game or email. Stretching exercises may help relieve discomfort. Applying ice for pain and swelling is a good modality. Changing position or providing support to forearms and wrists may help. Sometimes a properly fitted splint immobilizing an inflamed joint or soft tissue is needed.

Just remember to be good to yourself – we need our hands everyday! ■

A congratulatory toast to Chris W. Smethie, OTR/L, CHT at our recent luncheon honoring her 25 years of dedicated, skillful and professional expertise par excellence to the Fort Lauderdale Hand Clinic.

NON-MELANOMA

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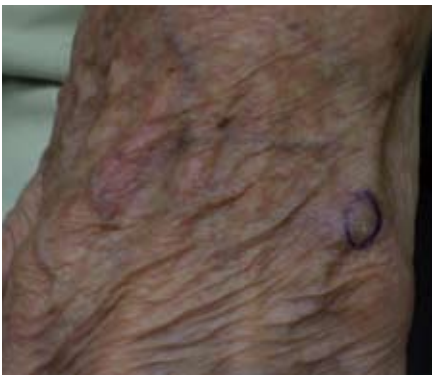
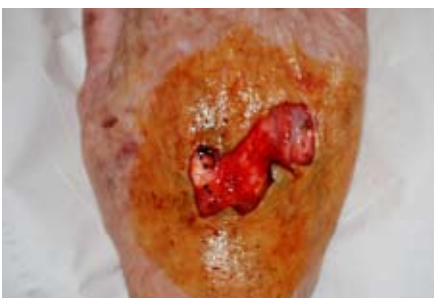
to clinical onset of the tumor. One of these patients expired because he neglected a curable tumor of the hand, which subsequently caused distant metastases.

Diagnosis:

Most SCCs are superficial in nature sparing subcutaneous structures in the hand. Many of them are wholly in situ or have both an in situ and microscopically invasive component. The in situ component may have subclinical extensions going several centimeters beyond the visible margin of the lesion (image 2). Most of the lesions show a hyperkeratinization, thus resembling ordinary warts. In situ lesions are slightly erythematous or pinkish macules or patches often with a thread-like border. More invasive SCC presents as indurated nodules (image 1). A variety known as keratoacanthoma has a striking appearance resembling a volcano. Such lesions may grow very rapidly but are biologically very low-grade malignancies. SCC of the hand usually presents on severely sun-damaged skin most often with multiple other lesions, especially in the elderly. Diagnosis is confirmed by pretreatment skin biopsy.



(image 1) Typical SCC



(image 2) Large defect after Mohs excision of SCC in situ.

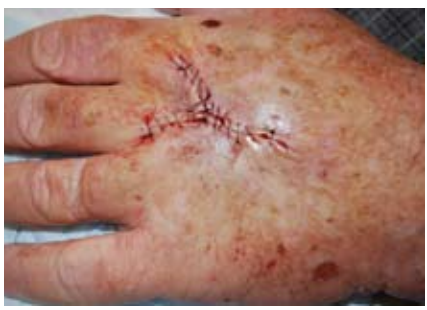
TREATMENT

Excision:

Whereas some lesions may be treated with radiation therapy or cryosurgery with tissue temperature monitoring, the concerns of slow healing or fibrosis affecting underlying structures usually results in treatment of these lesions by surgical excision. We strongly recommend margin control particularly if the pretreatment biopsy shows an SCC in situ. Frequently these lesions extend centimeters beyond the clinically normal margins. In our own practice, we excise these lesions by Mohs micrographic surgery.

Wound Closure:

Most defects on the dorsum of the hand can be closed directly with layered closures. Wide undermining in the fascial plane enables mobilization of adequate skin to close most defects directly without tension. Caution is taken to avoid crossing over the MP joints wherever possible to avoid any subsequent scarring which might limit range of motion. In some cases, local flaps are useful to avoid tension or traction on joints. We most often use advancement and transposition flaps and find M-plasties (image 3) useful to avoid crossing over MP joints. In our cases, full-thickness skin grafts are rarely required except on the digits. Whenever possible we do our primary wound closures parallel to the metacarpals to minimize any restriction in range of motion of the MP joints.



(image 3) M-plasty flap to avoid MP joint

PROGNOSIS

With Mohs micrographic surgery cure rates approach 98%. With conventional excision cure rates are 95%, except in carcinoma in situ. ■

HANDS ON THE MOVE

We would like to wish Jay Dennis, MD the best of everything in his new office at the University of Miami Miller School of Medicine.

HANDS UP NEWS

HANDLE WITH CARE - ADVOCACY/MANAGED CARE

Lesley R. Sankin, Communications Director

Accreditation Requirement for DMEPOS Suppliers

As a result of the Medicare Modernization Act of 2003, CMS developed new quality standards for DMEPOS suppliers. These standards required suppliers that bill Medicare Part B with a National Supplier Clearinghouse DMERC number for Durable Medical Equipment, Prosthetics, Orthotics and Supplies (DMEPOS) to become accredited as a supplier. The deadline for this accreditation was established as September 30, 2009.

This requirement was modified in July 2008 when the House and Senate passed HR 6331 – the Medicare Improvements for Patients and Providers Act (MIPPA). One provision in the law states that eligible professionals and other persons are exempt from meeting the September 30, 2009 accreditation deadline until CMS determines that the quality standards are specifically designed to apply to such professionals and other persons. MIPPA also states that CMS may exempt such professionals and other persons from the quality standards based on the licensing, accreditation or other mandatory quality requirements that may apply.

CMS interpreted how to proceed with this law and held an Open Door Forum on Wednesday, September 3, 2008 to discuss their determinations. During this Open Door Forum call, CMS announced that eligible professionals (which include OCCUPATIONAL THERAPISTS and PHYSICAL THERAPISTS) are EXEMPT at this time from the mandatory accreditation requirement for DMEPOS suppliers. Thus, it is not necessary to become accredited in order to either maintain or obtain a National Supplier Clearinghouse number for DMEPOS.

The National Board of Accreditation for Orthotic Suppliers (NBAOS) has been in close contact with CMS regarding this law and the impact of this law on occupational therapists, physical therapists and physicians. NBAOS supports the decision CMS has made regarding providers not meeting supplier quality standards.

NBAOS will continue to operate in its current capacity as a deeming authority until CMS further determines the quality standards specifically designed to apply to our profession. NBAOS encourages all therapists to monitor the cms.gov website for specific information on this new development and future changes affecting providers.

Therapy Cap Repeal Legislation

The current therapy cap exceptions process is due to expire on December 31, 2009. Contact your Representatives and Senators and urge them to co-sponsor the Medicare Access to Rehabilitation Services Act of 2009 that would repeal the Medicare therapy caps that limit coverage of outpatient rehabilitation services to $1,840.

AOTA Advocacy Success

CMS stated in the January 2009 press release that occupational therapists are now exempt from the Medicare DMEPOS $50,000 surety bond requirement. ■

FLORIDA HAND SOCIETY

Marriott Orlando Airport Hotel, April 16 & 17, 2010

The next annual meeting of the **Florida Hand Society** will be held in Orlando on April 16 & 17, 2010 at the Marriott Orlando Airport Hotel. On Friday, April 16, 2010, the meeting will begin with a light buffet lunch at noon, followed immediately with a series of educational presentations. All those interested in presenting may contact **Richard Curtis, MD** at **jaxhanddoc@aol.com.** Friday's events will conclude around 5 p.m. followed by cocktails and a gala dinner social event. The meeting resumes early Saturday morning with a buffet breakfast and continued educational presentations. It will conclude around noon with a brief business meeting to discuss plans for the following year. Instructional courses following the meeting will be announced at some time in the future. Anyone wishing to present or attend may contact either Dr. Curtis for presentations or the FHS administrative office for membership/attendance information. Remember to "Save the Date" for this educational and fun meeting – the 2009 meeting was a huge success highlighted by the exceptional presentations given by our very special guest speakers **Dr. Robert Beckenbaugh** and **Dr. Ed Homan** and **Paige Kurtz, OTR/L, CHT** and a lively dinner social event with jazz music by "String Sessions".

JOINT ANNUAL MEETING OF AMERICAN SOCIETY FOR SURGERY OF THE HAND (ASSH) AND AMERICAN SOCIETY OF HAND THERAPISTS (ASHT)

San Francisco, California, September 2 - 5, 2009

The **ASSH** and **ASHT** will be holding their Joint Annual Meeting at the Parc 55 Hotel in San Francisco, California, September 2-5, 2009.

The **American Society for Surgery of the Hand (ASSH)** announced its new affiliate membership category beginning October 1, 2008 for licensed allied healthcare professionals, especially hand therapists, to join the organization.

INTERNATIONAL FEDERATION OF SOCIETIES FOR HAND THERAPY (IFSHT)

Orlando, Florida, June 24 - 27, 2010

The **International Federation of Societies for Hand Therapy (IFSHT),** sponsored by **American Society of Hand Therapists (ASHT),** will be holding its 8th Triennial Congress "Entwining the World of Hand Therapy" at the Caribe Royale Hotel in Orlando, Florida, June 24-27, 2010.

UPCOMING GRANT AND AWARD DEADLINES:

AHTF BURKHALTER NEW INVESTIGATOR GRANT

The **AHTF BURKHALTER NEW INVESTIGATOR GRANT** was established in honor of **Dr. William Burkhalter** (1928-1992), a long time advocate and promoter of hand therapy. **AHTF** established the grant in 1993 for any hand therapist in order to provide seed grants to therapists conducting scientific clinical research related to hand and upper extremity rehabilitation. Because of the generous unrestricted contributions received by the Foundation in 1996, the **Burkhalter Grant** was increased to $4,000 from the initial amount of $1,000.

AHTF grant submissions are now due on February 28 of the calendar year awarded. Applications for any of the **AHTF** grants can be accessed at **www.ahtf.org**

EVELYN MACKIN GRANT FOR RESEARCH IN HAND THERAPY

Information on how you can apply for the **$3000 Evelyn Mackin Grant for Research in Hand Therapy,** funded by **ASHT,** is now available.

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ANNOUNCEMENTS

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Grant seekers eligible for this award include practitioners, graduate students, and tenured/untenured faculty members. Faculty members must be affiliated with accredited occupational/physical therapy programs.

Visit http://**www.asht.org/education/research_grant.cfm** to download an application.

HAND SURGEON-SCIENTIST AWARD

AFSH, OREF and **PSEF** are now offering the Hand Surgeon-Scientist Award to recognize one young orthopaedic hand surgeon and one young plastic hand surgeon who have demonstrated success as both a clinician and a researcher, and provide a base of financial support that will ensure sufficient protected time to develop a long and productive career in academic surgery.

Applications are now being accepted and must be received by the **American Foundation for Surgery of the Hand** no later than December 1, 2009. For more information, please contact **Sarah Meyer Hughes** at **(847) 384-1436** or **smeyerhughes@assh.org.**

AT FIRST HAND

The Fort Lauderdale Hand Clinic held its first Art Contest combining patient and physician involvement with the spirit of the 2009 Holiday season. We would like to thank Dr. David Blum, "Judge" and our talented patient Sevigne Wilichinsky, "Winner" for her creative "Thanks to Hand Therapy Holiday Hand Turkey" which graced our holiday card this year. We hope all of you enjoyed the beautiful result.

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Please send inquiries to:
Robin E. Miller, OTR/L, CHT
Fort Lauderdale Hand Clinic
2000 W. Commercial Blvd. Ste. 101
Fort Lauderdale, FL 33309-3060

Owner/Clinical Director
Robin E. Miller, OTR/L, CHT
Assistant Clinical Director
Chris W. Smethie, OTR/L, CHT
Communications Director
Lesley R. Sankin

Therapists at the Fort Lauderdale Hand Clinic are certified by the Hand Therapy Certification Commission (HTCC). *Established in 1981, by Robin E. Miller, OTR/L, CHT, the Fort Lauderdale Hand Clinic is therapist-owned and specializes in upper extremity splinting and rehabilitation.*