Message from the President

Submitted by Beth Ruben, MD

We started 2013 with a shake-up of our Annual Meeting with an optional pre-meeting Nail Basics program which drew nearly 60 attendees of which 28 were residents. The total registration was over 100 this year. Our growth in attendance is a testament to the good programming over the past several years by Dr. C. Ralph Daniel and most recently from Dr. Richard Scher and Dr. Phoebe Rich. We owe a special thanks to Dr. Antonella Tosti and Dr. Martin Zaiac for championing the Nail Basics program which was a great success.

Plans for the 2014 meeting on March 20, 2014 in Denver, Colorado are already underway. The preliminary programs are in the newsletter. We will repeat the Nail Basics program and encourage you to send your residents, nurses and others to learn about nail disease from the world’s leading authorities.

In 2011 we introduced the Scher/Baran Award for the best oral presentation by a resi-

Photos from the 17th Annual Meeting

Photos from the 17th Annual Meeting in Miami Beach, Florida on February 28, 2013,
President’s Message

Submitted by Beth Ruben, MD

dent and in 2012 we tripled the number of applicants who all gave outstanding presentations. The 2013 Scher/Baran Award winner was Dr. Caitlyn Carney, a resident at the University of Alabama at Birmingham, for her abstract entitled, “Treatment of onychomycosis using a sub-millisecond 1064-nm Nd:YAG laser “ which was published in the October 2013 issue of the Journal of the American Academy of Dermatology.

The CND awarded two Research Grants given in 2013. The first to C. Herbert Pratt, PhD of the Jackson Laboratory for his research proposal, “The Molecular and Biological Basis for witch nails (whnl)” and the second grant to Dong-Youn Lee, MD of the Department of Dermatology, Samsung Medical Center (South Korea) for his research proposal entitled, “The functional study of onychodermis (specialized nail mesenchyme) in nail morphogenesis”.

The CND Board of Trustees met in San Diego following the meeting and set several goals for 2012 including updating the patient education pamphlets, adding a Lifetime Member category to the membership (details inside the newsletter) and developing a Nail Course separate from the CND Annual Meeting.

The Board of Trustees lost one member and gained three in 2013. Regrettably, Dr. Arai Hiroko resigned from the board leaving us with three open positions to which Dr. Avner Shemer (Israel), Dr. Bianca Piraccini (Italy) and Dr. Brad Glick (US) were appointed to serve through 2015. Dr. Nathaniel Jellinek agreed to serve as the Secretary-Treasurer of the CND. A nominating committee was appointed which will create a slate of nominees for election at the next annual meeting. If interested in serving on the board please contact us at info@nailcouncil.org.

The Board of Trustees met to discuss the Bylaws and amendments to submit to the membership for a vote at the 2014 meeting. Amendments include increasing the number of board members and some general cleaning up of the bylaws. The changes will be posted on the web site and available for discussion at the annual meeting.

As always, your suggestions are welcome on new programs and products that CND can provide to its membership.

Finally, I would like to thank our corporate supporters including:

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Save the Date!
March 20, 2014 ☞ Denver, Colorado
18th Annual Meeting of the Council for Nail Disorders & Nail Basics Review
Nail Tips

Disinfection of Clothing and Shoes Contaminated with Dermatophytes

AK Gupta M.D., Ph.D., F.R.C.P. (C), F.A.A.D.,
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Toronto, Canada.

In fungal infections such as onychomycosis and tinea pedis, the shedding of fungal material onto clothing, laundry and into the environment can be a risk factor for relapse and reinfection.1,2 Clothing, shoes, and surfaces can all act as reservoirs and vectors for further fungal contamination. In order to create optimal conditions to treat and prevent future infection laundry, shoes and accessories need to be disposed of or thoroughly sanitized to kill off any fungal material that may have been shed. Here, we discuss techniques that can be used to disinfect materials contaminated by dermatophytes.

What should be sanitized?

The obvious candidates for sanitization are footwear and clothing that comes in direct contact with the infected area; however, transfer may result in other clothing becoming contaminated. T. mentagrophytes and T. rubrum survive equally well on both leather and canvas surfaces when intentionally inoculated with a swab.3 In addition, dermatophyte fungi were cultured for the footwear of 8 of 10 onychomycosis patients.4 Fungi shed from the skin and nails to sheets and socks may also be transferred to other laundry in laundry baskets through contact. In experiments tracking the transfer of fungal matter from contaminated clothing, 10% of the infectious matter was transferred from the infected textile to the surrounding damp cloth.5 This means that all laundry during an infection can potentially be contaminated.

Laundry Techniques

Clothing, bed sheets and towels are the most straightforward items to disinfect as they can be sanitized by thorough laundering.5 Clothing should be laundered in hot water above 60°C for at least 1 hour to kill any fungal matter present on the material.5 Experiments at 30°C removed Candida species, but not T. rubrum.5 If possible, a cycle with a high level of agitation and an additional rinse cycle should be used to ensure that the fungi are eliminated from the contaminated materials. Laundering may be the most straightforward technique, as it does not require specialty materials to conduct.

Ultraviolet C Light Treatment

Ultraviolet C (UVC) light treatment is a possible mechanism for the sanitization of footwear and other items than cannot be laundered. The SteriShoe device has been tested in footwear infected with T. rubrum and T. mentagrophytes. There was no difference in the residual CFUs reported using scraping or swabbing the infected footwear post-treatment. Treatment with one and two cycles for UVC resulted in significant decreases in T. mentagrophytes contamination, but not T. rubrum infection.

Ozone Treatment

Ozone gas can be used as a treatment for footwear and sports equipment. Ozone gas is effective at killing >99% of T. rubrum and T. mentagrophytes grown in gauze with solid or liquid culture systems.6 Ozone gas is also effective at decontaminating footwear from patients with clinical diagnoses of onychomycosis. The footwear of patients with onychomycosis was swabbed before and after treatment with the SaniSport™ system and cultured to determine the presence of dermatophytes. The ozone treatment performed used either “passive” replacement of the air with ozone gas or a “directed” heating cycle followed by ozone exposure. Passive ozone
Nail Tips

treatment delayed fungal growth of material collected from the shoe lining by 2-3 days. Directed ozone resulted in complete fungal eradication in two patient's footwear, but a paradoxical increase in growth in the third. Under both models, ozone gas decreased fungal load by 87.5%.

The SaniSport system used in the ozone gas experiments is available commercially using the passive ozone technique. It is effective against numerous bacteria, *Aspergillus niger*, and *Candida* spp. in addition to the dermatophytes tested above. There is an additional commercial device that combines ozone gas treatment with nano-silver particles to sanitize shoes and athletic equipment. The Klenz® platform reduces *T. rubrum* CFUs by 98% following a 32 minute cycle. It is also effective against bacteria.

Antifungal Spray Solution

Terbinafine 1% spray powder and solution were compared for the treatment of shoe insoles. The insoles were inoculated with skin scales from patients with *T. rubrum* infections and included felt, foam and leather insoles. After 48 hours growth, the terbinafine solution or spray was applied and the insoles were re-incubated followed by a second drug dose. The cultures were incubated at 27°C and evaluated at 3 and 6 weeks. *T. rubrum* was cultured from all control insoles, but all treated insoles resulted in sterile cultures for both spray and solution formulations.

References:
Nail Clippings

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Elewski BE, Rich P, Pollak R, Pariser DM, Watanabe S,
Sendha H, Ieda C, Smith K, Pillai R, Ramakrishna T,
Olin JT. Efinaconazole 10% solution in the treat-
ment of toenail onychomycosis: Two phase III
multicenter, randomized, double-blind studies.

Topical therapies for onychomycosis are associated
with less adverse events than systemic therapies; how-
ever, the efficacy of topical therapies is limited by poor
nail penetration. Consequently, efinaconazole 10%
nail solution was developed as a novel topical mono-
therapy for onychomycosis. The article reports the effi-
cacy and safety results from two identical multicentre
double-blind vehicle-controlled randomized phase III
clinical trials for efinaconazole 10% nail solution. The
investigative sites were located in the United States,
Canada, and Japan (first study only). The first study
comprised 870 participants, 74.4% were male, 64.9%
were Caucasian, with a mean age of 52.3 years and a
mean area of affected target toenail area of 36.7%,
whereas the second study had 785 participants, 80.5%
were male, 87.8% were Caucasian, with a mean age of
50.6 years and a mean affected area of 36.3%. The nail
solution was administered daily for 48 weeks (without
debridement) to treat mild to moderate toenail distal
lateral subungual onychomycosis caused by der-
matophytes, the most common clinical presenta-
tion of onychomycosis. At the 4 week post-
treatment follow-up, mycological cure rates, de-
ined as negative microscopy and fungal culture,
were 55 and 53% for the efinaconazole arms and
17% for both vehicle arms. The complete cure
rates, defined as 0% clinical involvement of the
target toenail and concomitant mycological cure,
were 18 and 15% for efinaconazole and 3 and 6%
for the vehicle. Both efficacy outcomes were ana-
lysed for the intention-to-treat (ITT) population,
which includes all participants originally ran-
domized to treatment, and these outcomes were
significantly different between the treatment and
the vehicle arms (Cochran-Mantel-Haenszel,
p<0.001). Only mild to moderate adverse events
were observed and those rates were similar be-
tween efinaconazole 10% nail solution and vehi-
cle. Efinaconazole was not associated with red-
ness, swelling, burning, itching or vesiculation;
however, application site dermatitis and vesicles
led to therapy discontinuation in 2-3% of patients
in the efinaconazole arm and in 0-0.5% of pa-
tients in the vehicle arm. No clinically mean-
gful changes in laboratory or vital sign measure-
ments were observed. To summarize, efinacona-
zole 10% nail solution is a safe alternative to sys-
temic antifungals for the treatment of mild to
moderate onychomycosis.

18th Annual Meeting of the CND

The 18th Annual Meeting of the Council for Nail Disor-
ders will meet in the afternoon of March 20, 2013 in
Denver, Colorado at the Westin Downtown Hotel. The
meeting will feature two keynote speakers:

- Kevvan Nouri, MD from the University of Miami
will speak on “Laser for Onychomycosis and Nail
Psoriasis: Does it work?”.
- Angela Christiano, PhD from Columbia Univer-
sity will speak on “Hair/Nail Interactions:
Clinical and Genetic”.

In the morning, co-chairs Martin Zaiac, MD and
Antonella Tosti, MD will host the popular “Nail
Disorders Basics Session” with leading experts in
the field. Registration opens November 15 at
www.nailcouncil.org.
CND Awards for 2014

Clinical Research Award
Due: December 15, 2012

CND is accepting applications for research grants for funding in 2014. Applications are open to dermatologists, podiatrists, residents, fellows and researchers in the field of nail disorders.

Grant applications are available online at www.naildisorder.com.

Mentoring Award
Due: December 15, 2013

The CND Mentorship Award helps to develop young leaders with investigative/clinical interest and expertise in nails through a mentorship with established investigators and clinicians.

Funding up to $2,000 is available for dermatology residents, medical and podiatry students, post doctoral fellows and junior faculty.

For more information go to www.nailcouncil.org.

Scher/Baran Award Application
Due: January 15, 2014

The Council for Nail Disorders is pleased to announce it will present the Richard Scher / Robert Baran Resident Award for the best oral presentation by a resident or medical student at the Scientific Session of the CND Annual Meeting (March 20, 2014) in Denver, Colorado.

The paper selected will receive the Scher/Baran Award in the amount of $1,000.00. Award winners are encouraged to submit an article based on their presentation to an appropriate PubMed listed journal. Award funds will be presented when the article is submitted.

Details and online application are available at www.nailcouncil.org.

My Great Fortune: Dr. Phoebe Rich’s Generosity

Molly Hinshaw, MD Clin Assoc Prof Dermatology; Dermatopathologist Dermpath Diag Troy & Assoc.

They guide, nurture, teach, reflect, share, and collaborate. And some, like Dr. Phoebe Rich, are so genuine in their thoughtfulness for the individual and the specialty that their mentoring appears effortless.

Seven years into my career as a dermatologist and five years into my career as a dermatopathologist, I began to develop a plan to achieve my goal of directing a clinic specializing in disorders of the nail. No such clinic existed at the University of Wisconsin (UWSMPH) where I am a Clinical Associate Professor and I was fortunate that the Chairman Gary Wood, MD was supportive of such an endeavor. In preparing to take care of this population of patients, it was clear that I needed to ask for help from an expert in disorders of the nail. What was not clear was that I would get this help. Instead, I might have to build on my existing knowledge possibly in part by trial and error. And then I talked with Dr. Rich. She did not hesitate in the slightest to offer to teach me and even suggested that I shadow her in her private practice and university clinic. I was stunned because I would have been thrilled had she offered to talk for 15 minutes about how she set up her clinic. I applied for and was awarded a Women’s Dermatological Society Career and Community Advancement Award to sponsor my learning and to develop the nail clinic. I could not know it at the time, but Dr. Rich’s offer of help was just the beginning of her mentorship.

While I was in Portland with her, Dr. Rich took it upon herself to rearrange her entire clinic schedule so that I could see the greatest number of patients with nail disorders. We saw multiple patients with pachyonychia congenita, numerous patients with melanonychia, nail dystrophies, and nail lesions and I was fortunate to observe as she did multiple nail surgeries. Dr. Rich guided me through her thought process in evaluating each patient and patiently answered my questions despite her very busy days.
Mentorship ...

She shared the methods by which she directs a clinical trials unit in her practice. She took me to grand rounds at OHSU, introduced me to the faculty, and even arranged for us read nail specimens together. She did all of this out of the goodness of her heart and for no remuneration. I was speechless at the breadth and depth of her teaching. And, by the end of the experience, I was prepared to start our own clinic.

Today, I am the director of the Nail Clinic at UWSMPH in Madison, WI. We see patients of all ages with any disorder of the nail except untreated onychomycosis (we do, however, see conditions diagnosed as onychomycosis that have failed treatment).

Dermatology residents and medical students learn during each clinic. We are developing a clinical database of patients seen in the clinic including for use in quality assessment/improvement. And, thanks to a kind invitation by Dr. Rich, I was fortunate to teach at her summer 2012 AAD Nail Surgery course. Dermatology is truly fortunate to have as one of their leaders Dr. Phoebe Rich. I know that there are so many ways my experience could have been different save for the fact that Dr. Rich is who she is: a gifted and generous mentor. I will never, ever forget her kindness and mentorship and I will pay it forward.

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