Greetings fellow nail aficionados,

It is an exciting time to be involved in the Council for Nail Disorders. After having served as the secretary-treasurer for several years, it is my honor to take on the role of CND president. And it is with great enthusiasm that I welcome Adam Rubin as the new secretary-treasurer. Together, Adam, I and the Board are motivated to advance the CND to greater heights.

In the next year and beyond, I see the Council evolving in several important ways.

1) There is movement towards organizing a regional meeting separate from the annual (one-day pre-AAD) meeting. As details emerge, you will all receive advance notification with more information.

2) We are going to be moving to a new website platform. This will feature new member-only content, including audio-visual lecture materials from previous CND annual meetings, as well as handout downloads, and more streamlined connectivity.

3) We are attempting to expand our membership to a greater number of dermatologists, podiatrists, and any medical specialists with an interest in nail diseases.

As always, the annual meeting prior to the AAD will remain as the singular place to gather and exchange onychologic information. This past year’s content featured an “afternoon at the movies” with different surgical approaches to common problems as well as 2017-2018 nail literature updates. This format will be expanded next year and feature more room for “debate” about topics of great interest.

Please feel free to reach out to me with suggestions for the CND at wine-nut15@yahoo.com. We are only as strong as our membership, and as the Council evolves, active membership involvement is encouraged.
Interview with Dr. Ralph Daniel

Aditya Gupta, MD

Our featured expert for this newsletter issue is Dr. Ralph Daniel, a fellow member of the Council for Nail Disorders. Dr. Daniel is a leading expert in the field of nail disorders; co-authoring over 100 publications that cover a wide array of nail related topics. In recent years, he has co-authored articles on onychomycosis, psoriasis and disappearing nail beds (Skin Appendage Disorder 2017;3(1):15-17; Mycoses 2017;60(1):6-10).

Dr. Daniel has a passion for teaching and has routinely taken time out of his schedule to allow residents to rotate throughout his practice. He has severed as the Clinical Professor of Medicine (Dermatology) at the University of Mississippi as well as the Clinical Professor of Dermatology at the University of Alabama. In addition to his professorships, Dr. Daniel has written and edited several chapters in fundamental dermatology textbooks such as the recently published Scher and Daniel’s Nails: Diagnosis, Surgery, Therapy, 4th edition. This textbook is considered one of the main texts on nails, providing a wealth of information on nail surgery, nail pathology, nail cosmetics, and diagnostic techniques. In addition to his academic career, Dr. Daniel is an established clinician with decades of expertise in the field of nail disorders. To ascertain more information on his clinical views and experience we asked him the following questions.

How did you become interested in nails?

[In] 1974 I had a National Kidney Foundation Fellowship and my project was nail signs of renal failure. A number of national organizations, news services and magazines picked up the paper.

What nail disorders are you most commonly asked to evaluate in consultation?

Onycholysis, onychomycosis, tumors, trauma, and psoriasis.

What nail procedure is most enjoyable for you to perform?

Biopsies and fungal tests.

What nail procedure is your least favorite to perform?

None.

What is the most challenging nail disorder for you to treat?

Disappearing nail bed.

What do you consider to be the top three most important advances in the evaluation and management of nail disorders which have developed since you have been practicing?

Onychomycosis, disappearing nail bed, [and] psoriasis.

What tips do you have for managing a practice which has a focus on nail disorders?

Decrease trauma to nail apparatus [and] educate the patient.

What do you do to ensure that you get high quality interpretation of your nail biopsy specimens?

Send specimen to a dermpath familiar with nails.

Are there any lessons related to nails that you have learned the hard way?

No.

What advice do you have for early career dermatologists and podiatrists who would like to improve their knowledge of nail disorders?

Read [all] the background info and spend time with a nail person.

What is your most fulfilling nail “moments”?

Figuring the reason one hand two foot tinea is just on one hand.

Opportunities to mentor and help up and coming Derms, especially those interested in nails.
Nail Tips—Myth or Reality?

Tracey Vlahovic, DPM

Myth or Reality? The use of Vicks Vapo Rub and Mycotic Toenails

Honestly, when I read anything about Vicks Vapo Rub (Proctor and Gamble) and onychomycosis, my “mythbusters” mind gets activated. I can’t even count the times I have heard physicians and patients extol the positives of this over the counter ointment. I understand the cost benefit of using an easily attainable product, but I want evidence for or against it before recommending it.

What are the components of Vicks Vapo Rub? Thymol, menthol, camphor, and oil of Eucalyptus seem to be broad spectrum anti-infectives that have shown activity in vitro against Candida, Aspergillus, and some dermatophytes (1). That said, in a recent literature search for a chapter I am writing on the myths of onychomycosis, I came across several articles on the use of the mentholated ointment for toenails; one of which was a clinical trial.

The first clinical trial completed using Vicks Vapo Rub on mycotic nails is a pilot study that was performed by a Family Medicine group (1). Eighteen subjects who had nail disease completed the 48 week study. There are some positive aspects of this study, but it did not follow all of the protocols that are normally done for topical antifungal studies. Unlike Phase 3 clinical trials for toenail onychomycosis, this study did not exclusively enroll patients who cultured dermatophytes like T. rubrum or T. mentagrophytes and did not limit the percent of affected nail to 50 or 60%. Instead, they allowed patients who cultured organisms like: “Fungal Elements”, Cryptococcus, Candida, Penicillium, and Fusarium and allowed up to 100% of the nail affected visually.

Of the 18 patients, only 9 subjects cultured either T. rubrum or T. mentagrophytes.

Their results were the following: 5 of the 18 (27.8%) had a mycological and clinical cure, and 10 (55.6%) had “partial clearance”. But let’s dissect this further: if we were to look at the 9 subjects who cultured the most common dermatophytes causing onychomycosis, those who had T. rubrum fared the worst: 5 had partial clearance (at times only a 10% change in the nail appearing clearer at week 48) and one had no change at all. T. mentagrophytes infected toenails did the best with all 3 subjects going onto a complete cure, but a complete cure was not defined as 0% surface area affected—these patients still had 5% or more of the nail visually affected at 48 weeks. Of the other organisms involved, both subjects who had Candida parapsilosis went onto a complete cure, but Penicillium species and Candida albicans (1 subject each) had no change.

10 of the 18 subjects had greater than 60% nail affected at the beginning of the study—with some having 89% or 100% affected nails. This is highly unusual for a toenail clinical trial, and certainly can be argued that a 48 week treatment period isn’t long enough to manage a nail that is totally dystrophic. Adding a modality such as nail debridement could be synergistic for a topical study that enrolls nails as involved as these.

Did this study convince me to recommend Vicks Vapo Rub to my toenail onychomycosis patients? No. While I think this study is a positive start in supporting or shattering the use of a mentholated ointment for mycotic nails, a study that controls percent nail involvement, nail thickness, nail debridement, organisms cultured, and product use (some patients used it daily; some only 3-5 times per week) while having a vehicle arm and a larger sample size, would be more convincing to me. Time will tell if this ointment truly can eradicate fungus, or by virtue of its ointment properties, simply create a more hydrated nail unit which gives the appearance of a healthier nail.

Reference:

Nail Clippings

Aditya Gupta, MD


Fungal species present in a nail sample can be easily identified using subungual hyperkeratotic debris however this type of sample is not compatible with histologic processing. As an alternative to traditional testing, this article examines the novel use of a liquid-based cytopathology system that analyzes subungual debris for the purposes of confirming onychomycosis. In this study, the subungual debris from negative samples (no fungal elements identified by histologic nail plate examination) were re-examined using cytopathology. A total of 184 nail specimens were examined; 150 were deemed positive using either histologic examination (132/150 = 88%) or sequential cytologic examination (18/150 = 12%). Fungal elements (e.g., hyphae, fungal forms etc.) were confirmed using a cytologic examination of subungual debris in all positive control samples (11/11 = 100%). Based on the result of this study, it is recommended that both nail clippings and subungual debris are used to confirm the presence of onychomycosis.


Pediatric nail diseases have inherent diagnostic challenges which can be exasperated by physicians unfamiliar with the differential diagnoses associated with onychomycosis and psoriasis. In the first case study presented, a 5 year old girl was referred to the clinic for onychomycosis but had a negative KOH and culture. Upon closer inspection, toe malpositions were noted. In another case study, a 9 year old girl was treated unsuccessfully with antifungal nail lacquer. Upon examination, a toe malposition was also observed. As evident in these two case studies, toe malposition could be a misdiagnosed cause of nail abnormalities in children. It is recommended that mycological examination is always performed in suspected nail disease cases with a more thorough examination undertaken in pediatric populations (e.g., biomechanical evaluation, gait analysis etc.).


As per the US Food and Drug Administration (FDA) product label, laboratory monitoring should be undertaken periodically during systemic terbinafine treatment. However, laboratory monitory recommendations for pediatric patients have not yet been incorporated into FDA labelling. Upon an examination within 269 pediatric patients it was found that 53.5% (144/269) underwent laboratory monitoring (e.g., liver function panels, complete blood cell counts). These tests were primarily conducted prior to treatment and at week 6 (102/144 = 70.8%). A grade 1 laboratory abnormality was observed in 12.5% (18/144) of patients with 6 of these patients reporting an abnormality during treatment. Based on this result, the authors recommend baseline transaminase monitoring in pediatric populations.


Comparing reported efficacy rates between phase 3 clinical trials of topical antifungal drugs used to treat onychomycosis may not be an appropriate comparison. This article reviewed the Phase 3 trials of tavaborole, efinaconazole and ciclopirox and found significant differences. Mycotic nail involvement, age of participants, presence of tinea pedis and nail trimming/debridement protocols were among the main differences found. These differences can affect efficacy outcomes. As an alternative, the authors recommend using efficacy rates reported in head-to-head trials when comparing between antifungal options.
Nail Clippings


This article discusses onychomycosis in the context of nail psoriasis. Psoriasis could be considered a predisposing factor to onychomycosis. However, conflicting evidence suggests that the presence of psoriasis may actually protect the nail against fungal infection by encouraging a fast nail turnover and inhibit dermatophytes through secreting an inhibitory substance (serum-like glucoprotein). The authors stipulate that onychomycosis could act as a type of Koebner phenomenon, aggravating nail psoriasis. A statistically significant relationship between onychomycosis and treated nail psoriasis patients has been reported, resulting in a higher incidence of onychomycosis in patients treated with anti-TNF-α drugs. The authors suggest using digital dermoscopy and histological examinations to help differentiate onychomycosis from nail psoriasis.


This article captures the results found from a survey conducted in members of the European Nail Society and the Council for Nail Disorders. Irrespective of biopsy type, members chose hematoxylin and eosin as their routine stain (12/12 = 100%) with 4 to 9 µm the most common thickness used in biopsies (62.5%). For punch biopsies with no nail, most members do not use colored ink when orienting the specimen (18/31 = 58.1%) and fixed their sample with 10% formalin for less than 6 hours (6/28 = 21%). For punch biopsies with nail, 77.5% (24/31) responders did not mark their sample and fixed their sample with 10% formalin for 12 to 24 hours (7/27 = 25.9%). The most common softening materials used by members was Mollifex Gurr (3/24 = 12.5%), 10% potassium hydroxide solution (3/24 = 12.5%) and 10% potassium thioglycolate cream (3/24 = 12.5%). This survey showed variations in nail histopathology techniques among members, providing guidance on the techniques used in clinical practice.


Digital myxoid cysts are localized dermal masses of myxoid stroma and collagen that are theorized to have a traumatic, metaplastic, degenerative, or neoplastic etiology. In the case study presented, a 34 year old man developed a myxoid cyst 8 months after undergoing a hemi-en bloc excision of his diseased nail tissues. This is the first article to present the formation of a myxoid cyst after en bloc excision of nail melanoma in situ. The authors suggest that the cyst occurred through injury or weakening of the joint capsule during surgery. This potential complication should be considered when performing digital surgery.


This study captures the efficacy and safety of adalimumab as a treatment of moderate to severe fingernail psoriasis. In this study, 40 mg of adalimumab was administered subcutaneously every other week for 26 weeks in a multicenter, randomized, placebo-controlled fashion followed by a 26 week open label extension trial. Adalimumab treated patients demonstrated a significantly higher response rate (> 75% improvement in total fingernails based on the modified Nail Psoriasis Severity Index, NAPSI75) as compared to placebo treated patients at week 26 (46.6% and 3.4%, respectively) (p < 0.001). Adalimumab treated patients also achieved a greater response rate (mNAPSI75) in their target fingernail as compared to placebo treated patients at week 12, 16, 21 and 26 (p < 0.01 for all weeks). Additionally, adalimumab had a greater improvement in nail psoriasis physical functioning severity scores and psoriasis pain as compared to placebo at week 26 (p < 0.001 and p < 0.001, respectively). Serious adverse events were more frequent in adalimumab treated patients as compared to placebo treated patients reporting a prevalence.
Nail Clippings continued...

rate of 7.3% and 4.6%, respectively. This study suggests that adalimumab could be used successfully to treat nail psoriasis.


Although dermatophytomas are a negative prognostic factor for mycological cure when treating conditions like onychomycosis, effective techniques for diagnosing dermatophytomas have not been standardized. In this article, the use of optical coherence tomography to identify the presence of dermatophytoma was evaluated as a potential diagnostic technique. In 13 nails, a VivoSight Dx dermatologic optical coherence tomography scanner was used to capture nail images; six nails contained dermatophytomas, one nail contained distal subungual onychomycosis (DSO) and six were disease free. Nails with dermatophytoma had an avascular mass immediately above the vascular nail bed and had a rough-contoured, disorganized, inhomogenous nail plate. In the DSO nail sample, multiple, poorly defined streaks were present that ran parallel to the nail surface. Conversely, healthy nails showed a clear distinction between their avascular nail plate and vascular nail bed. Due to the distinct differences observed between these nail samples, the authors believe optical coherence tomography will allow clinicians to diagnose dermatophytoma in the context of onychomycosis.

Reports and Award Announcements

2017 Mentorship Report

Vivian Wong

I was fortunate to rotate with Dr. Bianca Maria Piraccini, a world-renowned nail specialist at the University of Bologna, Italy, in October 2017 through the support of the Council for Nail Disorders Mentoring Award. During my elective, I worked with her wonderful team, and saw patients referred to her from all over Europe. I learned about common and rare nail disorders, including pyogenic granuloma, ingrown nails, subungual exostosis, chemotherapy-induced onycholysis, onychomycosis, nail melanoma, onychomadesis, koilonychia, onychomatricoma, and onychotillomania. I observed various procedures, including chemical matricectomy, nail biopsy and nail excision. Dr. Piraccini taught me how to perform proper documentation of nail disorders using professional photography and onychoscopy. During my time in Italy I also performed a retrospective chart review on a cohort of 33 Italian patients with onychopapilloma. We studied the clinical onychoscopic and histopathological features of onychopapilloma. We found that onychopapilloma is a difficult diagnosis and presents with multiple tricky presentations, including longitudinal erythronychia and melanonychia. We are preparing a manuscript on this series together and are planning on presenting our findings at the 2018 Council for Nail Disorders Annual Meeting.

Dr. Piraccini and her team are fantastic teachers, kind individuals and extremely hospitable hosts. We enjoyed expresso and pastries together during busy clinics and bonded over interesting cases. Her team is composed of numerous hard-working, knowledgeable and smart dermatologists and podiatrists, who shared passion for academics and are deeply invested in learning about nail disorders. In my free time, I learned Italian and enjoyed the fantastic Bolognese cuisine. My favorite dishes were tagliatelle, tortellini and mortadella, paired with local wines. I visited the historical campus of University of Bologna, which hosts one of the oldest medical schools and anatomy classroom in the world.
I cannot express enough gratitude for this opportunity through the Council of Nail Disorders. My comfort level with nail diseases and procedures has increased tremendously as a result of this mentorship program. I would like to thank Dr. Piraccini and her team for their time and investment in my education. I aspire to be a mentor like Dr. Piraccini someday. She inspires me to be a dedicated teacher who fosters knowledge sharing and encouragement. I hope to one day share my knowledge of nail diseases and cultivate the next generation of young physicians who are interested in nails. Attached is a photograph of me and Dr. Piraccini (Dr. Piricinni on the left). Many thanks.

Scher / Baran Award

The 2018 Sher/Baran Award recipient is Vivian Wong, MD, PhD with her presentation, “Clinical, onychoscopic and histopathological features of fingernail and toenail onychopapilloma”.

The research was conducted during a CND funded Mentorship Award in 2017 with Dr. Bianca Piraccini. Dr. Wong is a resident at the Department of Dermatology at Brown University.

2018 Ralph and Melissa Daniel Young Physician Nail Merit Award

The first Ralph & Melissa Daniel Young Physician Nail Merit Award was given to Aurora Maria Alessandrini of the University of Bologna, Italy. Dr. Bianca Piraccini cited Dr. Alessandrini’s enthusiasm and generosity as key personal characteristics to her success. Furthermore, she is well-rounded in providing excellent patient care, training to residents and medical students and being involved in research projects, even when there is no obligation.

In creating the award, Ralph and Melissa Daniel (pictured to the left) stated that they, “have greatly benefited from the medical field, especially in dermatology and nail disorders. When we began writing about nails and nail research in the 1970’s, there were only a handful of us that concentrated on nail disorders. We were able to partner early on with Dick Scher who kindly helped foster our burgeoning interest. We also appreciated the work of Robert Baran and Nardo Zaias. Now we hope, in some modest fashion, to assist the next generation of onychologists”.

The concept of the award is to encourage a Dermatologist or Podiatrist who has demonstrated scholarship and initiative in the study of people with disorders of the nails to further pursue a career related to nail disease.

To apply for the 2019 Daniel Young Physician Nail Merit Award, click here or go to the link at www.nailcouncil.org. Applications are due June 30, 2018.
Announcements

Council for Nail Disorders Corporate Support

Support from corporate partners helps fund programs of the CND. This year we received support with exhibits at our annual meeting plus above and beyond support from Cutis Diagnostics for an unrestricted educational grant for the Annual Meeting. Ortho Dermatologics also provided support for the development of online recorded educational materials including talks from the Annual Meeting.

Silver Sponsors

- Cutis Diagnostics
- Ortho Dermatologics

Exhibit Support

- 3Gen Inc.
- Dr. Remedy
- EPI Health

2018 Annual Meeting of the Council for Nail Disorders

Announcements

Save the dates!

Annual Meeting of the Council for Nail Disorders
February 28, 2019
Washington, DC

Nail Congress
December 5-7, 2019
Eliat, Israel
CND Welcomes New Members

Alex Azoulay  
Resident  
Davie, FL

Andrea Ha  
DPM Trainee  
Voorhees, NJ

John Martucci  
DPM Trainee  
Temple University  
Philadelphia, PA

William Scherer, DPM  
Boca Raton, FL

Kyle Bartlett, MD  
Hofstra Northwell Dept of Dermatology  
Lake Success, NY

Steve Hall  
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Sandoz  
Palmyra, PA

Denise Mendes, MD  
Sao Paulo, Brazil

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Office Phone: 386/437-4405  
Fax: 386/437-4427  
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