A DAY IN THE LIFE OF A *Nail Expert*

In this month's column, Dr. Stern explores the causes of acute and chronic paronychias and how to treat them.

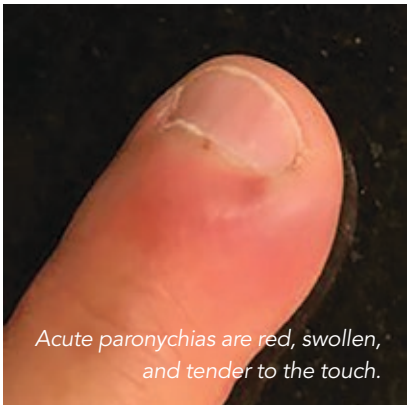
BY **DANA STERN** MD

The other evening, after a full day of patients, I stayed late at the office to catch up on some paperwork and to begin writing this column. In between bites of really messy tacos, I thought about the best way to explain this condition to NAILS' readers as it is probably one of the more common issues that nail professionals see in the salon. The next morning my first patient of the day came in with an acute paronychia and oddly enough, the entire morning was packed with patients with both chronic and acute paronychias. There was clearly something cosmic going on in the nail universe.

Paronychia is an infection of the nail fold or the skin that surrounds the fingernails and toenails. There are two types of paronychia, acute and chronic, depending on what the causal organism is. Each paronychia type has a very different clinical presentation and course. The commonality between the two types is that they are both caused by a breach in the nail's natural protective barrier, the cuticle. Compromise to the cuticle can occur from nail biting, picking, overly aggressive cuticle removal, excessive water exposure, certain chemical exposures, and trauma. Once there is a barrier compromise, there is risk for infection.

ACUTE PARONYCHIAS CAUSED BY BACTERIA

Acute paronychias are caused when bacteria enters the nail fold. This type of infection comes on suddenly. The most common bacteria cultured from these infections are Staphylococcus aureus (Staph). Other common bacterial culprits include Streptococcus species (Strep), Pseudomonas, and gram-negative bacteria.



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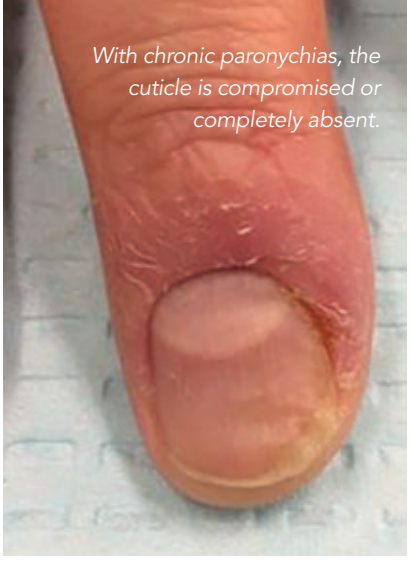
Acute paronychias are red, swollen, and tender to the touch. The area of the infection will often have a pus pocket and the finger can be warm. This type of infection needs to be treated as soon as possible to prevent further bacterial spread. The most effective method and most critical treatment approach is to drain the pus-filled site. Antibiotics alone without drainage are not as effective.

It is also extremely important that the pustular drainage always be cultured. A culture swab is sent to the lab in order to determine the organism that is causing the infection and ideally to know what antibiotics that organism is susceptible to. Bacterial resistance to certain antibiotics can pose a therapeutic challenge and so knowing whether the organism is susceptible to the chosen antibiotic is imperative. For example, we commonly see an organism called MRSA (Methicillin Resistant Staph Aureus). This type of Staph is not responsive to typical antibiotics and so it becomes extremely helpful to have the information provided by an effective culture.

In addition to drainage, the patient will be treated with an oral antibiotic, and possibly a topical antibiotic as well. Soaks in Domeboro's solution can help with inflammation and discomfort. Clinical response and relief of symptoms is usually rapid with effective care.

CHRONIC PARONYCHIAS DUE TO YEAST

In contrast, chronic paronychia is due to yeast entering the nail unit, typically through a breach in the cuticle. Those who work in wet environments or have exposure to chemicals that can erode the cuticle barrier are most at risk. Bartenders, for example, are a classic high-risk group because they have a lot of exposure to water as well as citrus fruits that are acidic and can weaken the cuticle's protective seal. This becomes the perfect set up for yeast to take habitat under the proximal nail fold (the skin behind the cuticle). Once there is an opening, water will seep in and yeast will consequently thrive. The cuticle is analogous to the grout that lies between the tiles in your shower. Imagine what would happen if that grout were absent. Water would be



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able to enter the space between the tiles and all sorts of mold and other organisms would grow.

Chronic paronychias look different than acute paronychias. The cuticle is compromised or completely absent. The proximal nail fold is usually red, swollen, and often has a spongy feel. The nail tends to be abnormal as well. It is typical to see white patches and other surface irregularities along the length of the nail plate. This is because the new, in-growing nail that begins under the nail fold is attempting to grow in a very abnormal, boggy, wet, yeast-colonized environment. As long as the proximal nail fold and cuticle are abnormal, the nail will always grow in abnormally. Because it takes approximately six months for an adult fingernail to replace itself, if the entire length of the nail has these chronic paronychia-induced changes, then it is clear that the patient has had this issue for at least six months.

Diagnosis is usually made clinically and a culture is not necessary as yeast is typically the organism to treat. Treating the yeast alone will not usually be enough however. Remember, the cause is actually due to a barrier compromise and the yeast is a secondary phenomenon. Therefore, treatment must entail repair of the cuticle, treatment of the inflammation, as well as treatment of the yeast. It is this triple-pronged approach that optimizes outcome.

Repairing the cuticle is somewhat of a misnomer. The idea is to try to figure out what is causing the cuticle compromise in the first place and then to stop it. Some previously mentioned common culprits include nail biting, picking, overly aggressive cuticle cutting, exposure to harsh chemicals, and excessive water contact. As long as there is cuticle compromise, there will be chronic paronychia.

Treatment with an anti-inflammatory such as a topical steroid or injections of steroids into the proximal nail fold will be an important component of the therapeutic strategy as well. When the proximal nail fold is no longer swollen, the nail will have a better opportunity to grow in normally. Lastly, a topical antifungal that has good yeast coverage will be imperative. For severe or recalcitrant cases, an oral medication may be needed. **N**

Dermatologists treat skin, hair, and nails. I am a board-certified dermatologist and I specialize in the treatment of nail disorders including nail infections, inflammatory diseases of the nail, cosmetic issues related to the nail, cancers of the nail, and sports-related nail injuries.

Read previous "Day in the Life" articles by Dr. Stern at **www.nailsmag.com/danastern**.

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