

A Day in the Life of a Nail Expert

In this month's column, Dr. Stern discusses her consultations with patients dealing with retronychia, dysplastic nevus, and glomus tumors.

BY **DANA STERN** MD

As a dermatologist specializing in nails, I love the fact that my day is not predictable. I am constantly meeting new patients from all walks of life and I never know what interesting nail case awaits me when I enter the examination room.

Consult #1

This patient is a 15-year-old female whose chief complaint is issues with her great toenails beginning when she was 10. At that time the nails appeared yellow and thick, and seemed not to be growing. She also described pain in the area of the proximal nail folds. Previous therapies included bleach soaks, Epsom salt soaks, and topical antifungals. She also reports being a tap and ballet dancer since the age of 5. On physical exam, the bilateral great toenails had a layering of the nail plates. Cuticle was notably absent. The nail plates were discolored with blue and yellow areas. **Assessment:** This patient's diagnosis is retronychia. Retronychia is a relatively new term that describes the embedding of the proximal nail plate into the proximal nail fold. The cause is theorized to be persistent minor trauma that interrupts the continuity between the nail matrix and the nail plate. The nail matrix is the anatomical structure that turns into the hard nail plate. The lunula is the distal (outermost) portion of the nail matrix. In retronychia, the new nail growing from the matrix pushes the old one upward, causing inflammation at the proximal nail fold and interrupting the longitudinal growth of the nail.

Beyond being a cosmetic issue, this phenomenon can result in significant pain and inflammation. The treatment is surgical removal of the nail plate, but it is not a guarantee that the nail will grow back normally. In my practice I have observed retronychia much more commonly in females and it skews to younger patients. Usually there is a history of trauma that may be associated with athletes, dancers, and women who wear high heels.

Consult #2

This patient is a 45-year-old female with a history of an abnormal right thumb nail for 20 years. The patient described pain at the digit with pressure and/or touching the nail, but had no pain at rest or with temperature change. The nail had remained stable in appearance, but recently the level of discomfort had increased, prompting the patient to seek a medical opinion. She has no history of skin cancer. On examination the right thumbnail had a 3-mm red longitudinal band with a distal nail plate split. All other fingernails and toenails were normal.

Assessment: A nail biopsy of the right thumb nail was performed to rule out a squamous cell carcinoma (a type of cancer) versus a glomus tumor, and a well-defined, encapsulated tumor was removed. Pathology results were consistent with a glomus tumor. Glomus tumors are rare soft tissue benign tumors that typically present in adults (average ages 20-40 years) as small, blue-to-red growths on the extremities, with most cases involving the nail. These tumors are typically painful, classically causing sudden pain in response to temperature changes or pressure. Treatment is surgical removal.



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. I also perform surgery on the nail including biopsies and excisions.





In retronychia, the new nail growing from the matrix pushes the old one upward, causing inflammation at the proximal nail fold and interrupting nail growth.



The treatment for a glomus tumor — a rare soft tissue benign tumor — is surgical removal.

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Consult #3

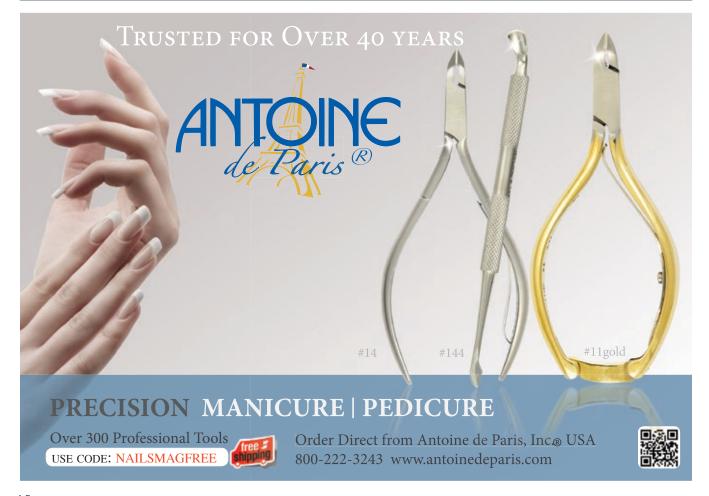
This patient is a 19-year-old female with nail discoloration located on the right third fingernail beginning 14 months prior. She reported that the discolored band seemed to be getting wider. She has a family history of melanoma. She stated there was no trauma to the nail. Examination revealed a brown band with darker brown/black bands within, some with irregular pigment, at the right third fingernail at the central plate. The width of the band measured 1mm and there was no surrounding nail fold involvement. All other fingernails and toenails were within normal limits.

Assessment: Given the irregular clinical features, coupled with the fact that the band seemed to be changing and the patient's positive family history of melanoma, a nail biopsy was advised to rule out a dysplastic nevus (mole with atypical features that could progress to melanoma) versus an early melanoma. Biopsy of this patient showed a mole with irregular features. Given the risk of progression to melanoma, a second procedure was scheduled to excise [remove] the entire band with a margin of normal matrix.

Melanoma is a type of cancer that most people tend to associate with the skin. This type of cancer can be extremely dangerous as it can metastasize and spread to



A biopsy of this nail revealed a mole with irregular features. It was removed due to the risk of progression to melanoma.





other parts of the body. Many don't realize that melanoma can be found in the nails as well. If caught early, nail melanoma is curable. Unfortunately, melanoma in the nail tends to be diagnosed late.

Melanoma occurs when the pigment-producing cells in the nail (melanocytes) begin to grow in an uncontrolled fashion. Although melanoma in the nail typically appears as a single-pigmented brown or black band, pigmented bands are fairly common and usually normal, especially in people with darker complexions. The other causes of single brown-pigmented bands in the nail are often either benign moles or simply the pigment cells "waking up" and producing pigment, much like when a new freckle appears in the skin. Any trauma to the cuticle area — repeated cuticle pushing, cutting, picking, or biting — can also result in stimulation of these pigment-producing cells because the cuticle lies directly over the area where the melanocytes reside.

Because early melanomas are very difficult to distinguish from benign pigmented bands, it is imperative to see a dermatologist for a thorough exam and consultation if you or your client spot one.

Here are some helpful tips and signs to look for:

- Single brown or black pigmented band on a single nail.
- The band is dark in color.
- There is brown pigment on the surrounding skin (around the nail).
- The thumb, index finger, and great toenail are the most common digits to have melanoma. **N**

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