

Terry nails in a patient with chronic alcoholic liver disease

A 45-YEAR-OLD MAN with chronic alcoholism for the past 20 years and chronic liver disease for the past 2 years was admitted to the hospital with abdominal distention, yellowish discoloration of the eyes, itching all over the body, decreased appetite, and fresh rectal bleeding.

He had the classic signs of chronic liver disease, including icterus, pallor, parotid swelling, gynecomastia, spider angiomas, sparse axillary and pubic hair, transverse stretched umbilicus, divarication of the rectus abdominis muscles, caput medusae, small testes, and bilateral pedal edema.

Examination of the fingernails revealed a distal thin pink-to-brown transverse band 0.5 to 2.0 mm in width, a white nail bed, and no lunula (**FIGURE 1**)—the characteristic findings of Terry nails.

Systemic examination revealed moderate ascites (shifting dullness present), splenomegaly, and external hemorrhoids suggestive of portal hypertension.



FIGURE 1. The nail bed was white, with only a narrow zone of pink at the distal end.

TERRY NAILS

In 1954, Dr. Richard Terry first reported the finding of a white nail bed with ground-glass opacity in patients who had hepatic cirrhosis.¹ The condition is bilaterally symmetrical, with a tendency to be more marked in the thumb and forefinger.¹

In 1984, Holzberg and Walker² consecutively studied 512 hospitalized patients and observed Terry nails in 25.2% of them. Based on their findings, they redefined the criteria for Terry nail as follows:

- Distal thin pink-to-brown transverse band, 0.5 to 3.0 mm in width
- Decreased venous return not obscuring the distal band
- White or light pink proximal nail
- Lunula possibly absent
- At least 4 of 10 nails with the above criteria.

Patients who do not have the findings on all fingernails commonly have involvement of the thumb

and forefinger. Holzberg and Walker confirmed a statistically significant association of Terry nails with cirrhosis, chronic heart failure, and adult-onset diabetes, especially in younger patients.² Terry nails have also been observed in thyrotoxicosis, pulmonary eosinophilia, malnutrition, actinic keratosis, and advanced age.¹⁻⁴

Using the updated diagnostic criteria, Park et al⁵ studied fingernails in 444 medical inpatients with chronic systemic disease, and only 30.6% had Terry nails. There were statistically significant associations with cirrhosis (57%), congestive heart failure (51.5%), and diabetes mellitus (49%); the associations with chronic renal failure (19%) and cancer (18%) were not statistically significant.⁵ They were more common in older patients. The average number of nails affected per patient tended to be higher in frequency close to the thumb; 28.7% patients had all nails affected.⁵

Terry nails should alert the clinician to the possibility of an underlying systemic disease, especially

advanced liver disease. Possible explanations for the clinical changes observed in Terry nails include abnormal steroid metabolism, abnormal estrogen-androgen ratio, alteration of nail bed-to-nail plate attachment, hypoalbuminemia, increased digital blood flow, and overgrowth of the connective tissue between nail bed and the growth plate. The pathologic study of longitudinal nail biopsy specimens shows telangiectasia in the upper dermis of the distal nail band.³

Important differential diagnoses are Lindsay (half-and-half) nails, associated with chronic renal failure, and Neapolitan nails, associated with aging.³

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