

# **Diseases of the Hair and Nails**

**HOWARD P. BADEN**

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*To my wife Violeta, for her  
patience, support, and  
encouragement.*

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## Preface

The structure, composition, and physiology of the appendages is discussed as a basis for understanding the pathophysiology of the various diseases. This is followed by chapters on evaluation and classification of hair and nail problems, which are particularly helpful in directing the physician to a differential diagnosis. The remaining chapters are concerned with individual disorders or groups of disorders.

The book contains a large number of figures that clearly illustrate the various diseases. This is an important feature of the book that allows the physician to readily compare the clinical problem with which he is faced and the several disorders he is considering in the diagnosis.

The text is not intended as a definite treatise and has been kept to manageable size. Key references are included at the end of the chapters to allow the practitioner to pursue individual topics in greater depth. The book should be read through to familiarize the physician with hair and nail diseases, and then kept handy for consultation.

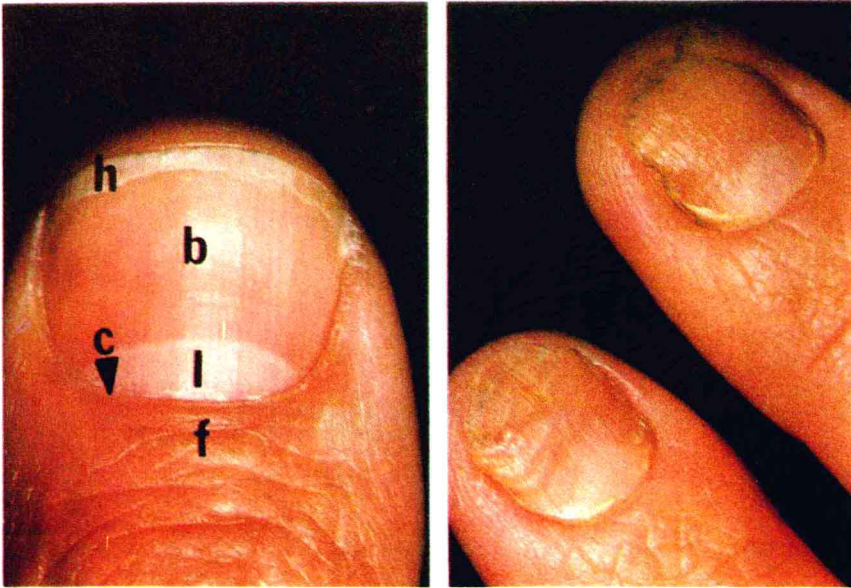
Hair and nail problems are consistently less well managed than other dermatologic diseases which in part results from difficulty in arriving at the correct diagnosis. *Diseases of the Hair and Nails* has been written to help correct that deficiency and to assist the practitioner in recognizing the numerous disorders of these appendages.

The book is directed primarily to dermatologists and physicians in training for dermatology but will also be helpful to primary care physicians, internists, and pediatricians. Terminology has been clearly and carefully defined so there will be no difficulty in understanding the text.

I would like to acknowledge the invaluable assistance of Bonnie Carroll who spent hours typing the manuscript and correcting the proofs.

HOWARD P. BADEN, M.D.





**PLATE 1 (left).**—Nail showing various components: *f*, fold, *c*, cuticle, *l*, lunula, *b*, bed, and *h*, hyponychium.

**PLATE 2 (right).**—Chronic paronychia. The fold is red and edematous and is not attached to the nail plate, which shows irregularities of the surface.



**PLATE 3 (left).**—The yellow nail. There is marked thickening of the plate.

**PLATE 4 (right).**—Onycholysis. There is separation of the nail plate from the bed distally resulting in a white scalloped appearance.



**PLATE 5 (left).**—*Candida albicans* infection. There is swelling of the fold and loss of the cuticle. The nail is discolored and shows irregularities in shape.



**PLATE 6 (right).**—*Pseudomonas* involvement of the nail. There is a green discoloration of the nail plate.



**PLATE 7 (left).**—Acute paronychia. The fold is red and swollen and shows a greenish-yellow pustule.



**PLATE 8 (right).**—Gonococcemia. A purpuric lesion is seen lateral to the nail fold.



**PLATE 9 (left).**—An ingrown nail. The lateral nail fold on the medial side of the first toe is red and swollen and shows exuberant granulation tissue. A similar lesion had been present on the medial side of the toe, but responded to topical treatment and excision of the lateral edge of the nail. Note, however, that the nail groove is not normal but bulges up.

**PLATE 10 (right).**—Psoriasis of the nails. Onycholysis is associated with a yellow stain surrounded by erythema.



**PLATE 11 (left).**—Psoriatic arthritis. Swelling of the proximal and distal interphalangeal joints are accompanied by dystrophic nail changes.

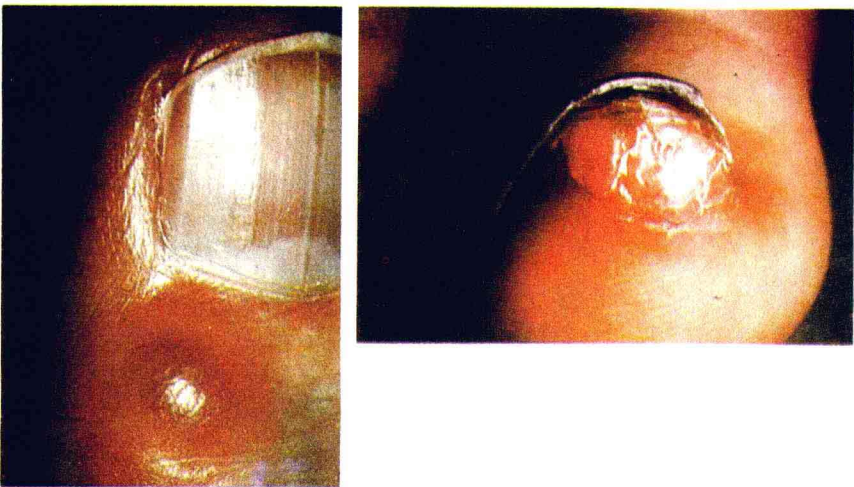
**PLATE 12 (right).**—Lichen planus of the nail. There is an erythematous band running the length of the nail bed. Longitudinal grooving and splitting of the nail plate are apparent.





**PLATE 13 (left).**—Pyogenic granuloma of the nail bed of the large toe. The nail plate is partially removed to reveal exuberant granulation tissue. The patient complained of increasing pain. (From Gibbs RC: Foot notes—mostly about toenails. *J Dermatol Surg Oncol* 1979; 5:267. Reproduced by permission.)

**PLATE 14 (right).**—Glomus tumor. There is a painful red nodule under the nail plate. (From Preaux J: Glomus tumor. *J Dermatol Surg Oncol* 1976; 2:306. Reproduced by permission.)



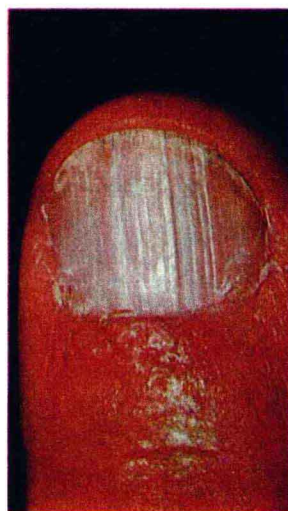
**PLATE 15 (left).**—Mucoid cyst of the proximal nail fold. The expression of the tumor varies depending on its size and exact location, but usually produces a groove of the nail plate.

**PLATE 16 (right).**—Subungual exostosis. A smooth nodule arising from the bed is pushing up the plate. (Courtesy of Dr. W.N. Morley.)



**PLATE 17 (left).**—Pigmented band. This patient showed such lesions on several digits, and is not an unusual occurrence in blacks.

**PLATE 18 (right).**—Pigmented malignant melanoma. Tumor began in the nail bed and spread into the periungual skin. (Courtesy of Dr. Arthur J. Sober.)

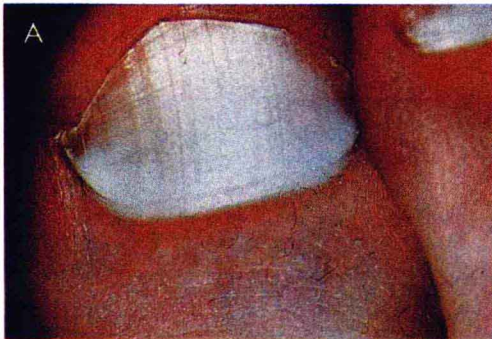


**PLATE 19 (left).**—Kaposi's sarcoma. There is purplish discoloration of the periungual skin and nail bed in this otherwise healthy elderly man.

**PLATE 20 (right).**—Darier-White disease. White and red longitudinal striations are present in the nail.



**PLATE 21.**—Hidrotic ectodermal dysplasia. Various shapes and sizes of the plate can be seen in a single patient, and onycholysis as well as absence of the cuticle may be observed.



**PLATE 22.**—Leukonychia. The white color can be total (**A**), partial (**B**), or striate (**C**).





**PLATE 23 (left).**—Terry's nails. The proximal two thirds of the nail is white and the distal third red or reddish brown.



**PLATE 24 (right).**—Muehrcke's nail. Two parallel white bands are seen distal to the lunula.



**PLATE 25 (left).**—Half and half nail. The proximal half of the nail bed is white and the distal half pink.



**PLATE 26 (right).**—Cyanotic nail. A blue color is seen in this patient with cyanotic heart disease.





**PLATE 27 (left).**—Splinter hemorrhages.

**PLATE 28 (right).**—Hemochromatosis. There is a blue-gray color to the nail bed.



**PLATE 29 (left).**—Argyria. The lunula is blue due to the deposition of silver. (Courtesy of Dr. Gerd Plewig.)

**PLATE 30 (right).**—Telangiectasia of the nail fold. Redness and telangiectasia are seen in this patient with dermatomyositis.



**PLATE 31 (top).**—Rheumatoid arthritis. There is redness of the proximal lunula. (From Jorizzo JL: Red lunulae in a patient with rheumatoid arthritis. *J Am Acad Dermatol* 1983; 8:713. Reproduced by permission.)

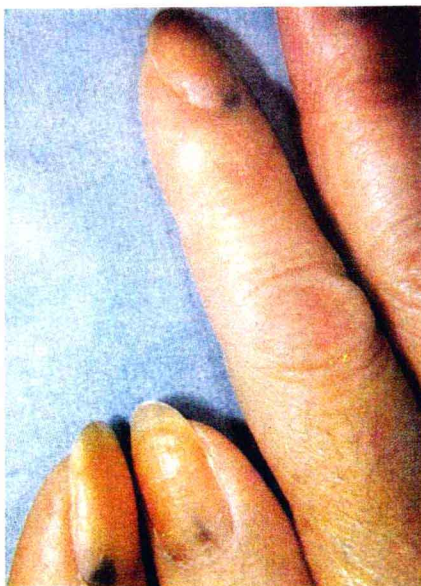
**PLATE 32 (bottom).**—Erythema multiforme. In the early stage erythematous plaques and hemorrhagic vesicles are present.



**PLATE 33 (top).**—Atabrine effect. This patient developed blue discoloration of the nail beds and an orangish-yellow color of the plates after receiving the drug for many months.

**PLATE 34 (bottom).**—Tetracycline effect. There is an orangish discoloration of the bed and nail plates. (Courtesy of Dr. Suzanne Olbricht.)





**PLATE 35 (left).**—Psoralens and UV-A radiation. There is a brown pigmentation of the proximal bed. (Courtesy of Dr. Ernesto Gonzalez.)

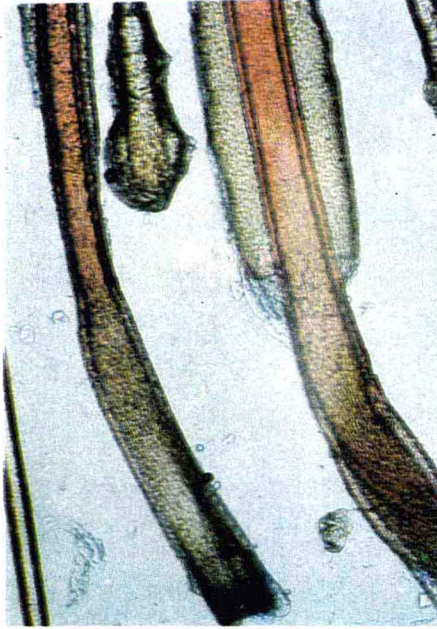
**PLATE 36 (right).**—Doxorubicin effect. There is brownish-black hyperpigmentation of the nail bed.



**PLATE 37 (left).**—Phototoxic reaction to demeclocycline. There is redness and onycholysis of the distal nail bed.

**PLATE 38 (right).**—Brown discoloration of the nail plate from polish. The proximal end of the color is convex, corresponding to the shape of the fold.





**PLATE 39 (top).**—Appearance of plucked hairs stained with 1% dimethylcinnamaldehyde. The anagen hairs stain red due to the presence of the internal root sheath, which is rich in peptide-bound citrulline. The unstained layer outside of this is the external root sheath. The club hair is not red because of the absence of the internal root sheath.

**PLATE 40 (bottom).**—Impetigo of Bockhart. There are several perifollicular pustules surrounded by erythema.