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James E. Fitzpatrick, MD

FIFTH EDITION

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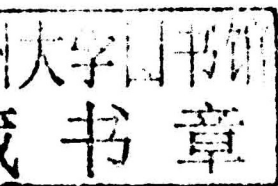
FIFTH EDITION

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This book is dedicated

To my loving wife, Lois, and my granddaughter, Megan

—JEF

and

To William and Dorothy Morelli

—JGM

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PREFACE

"I cannot teach anybody anything, I can only make them think."

—Socrates, 470-399 BC

It is once again fitting to preface the fifth edition of *Dermatology Secrets Plus* with a quote from Socrates, the eminent Athenian philosopher and the father of the Socratic method, also known as *elenchus*. The Socratic method of utilizing a series of questions has been used by attending physicians at the patient bedside, on rounds, or in the clinic for centuries to teach medical students, interns, residents, and fellows. In philosophy, this method was used to examine important moral concepts by a series of questions, while in medicine this method is used to augment classroom teaching and reading of the medical literature. Rather than learning by rote memory, the questions posed in this book force the reader to think about an answer, with the ultimate goal being able to understand, correctly diagnose, and treat dermatologic diseases.

Dermatology is a visual specialty that requires a correlation of the patient history and examination of the skin to arrive at a diagnosis. To that end, this edition is lavishly illustrated with numerous color photographs, including more than 100 new photographs compared with the last edition. Other changes to this edition include combining and condensing the chapters on Hansen's disease (leprosy) and mycobacterial infections into one chapter, and adding two new chapters, "Disorders of the Male Genitalia" and "Disorders of the Oral Mucosa." Hundreds of questions, answers, and references have been revised or updated.

Socrates also said, "Education is the kindling of a flame, not the filling of a vessel." This *Secrets* series focuses on questions that students of dermatology will be asked by their teachers. It is not comprehensive, and answers are kept deliberately short. Readers are encouraged to refer to one of the many comprehensive textbooks of dermatology to round out their education.

James E. Fitzpatrick, MD

Joseph G. Morelli, MD

CONTENTS

TOP 100 SECRETS 1

I. GENERAL

- CHAPTER 1** STRUCTURE AND FUNCTION OF THE SKIN 9
Scott D. Bennion, MS, MD, FAAD
- CHAPTER 2** MORPHOLOGY OF PRIMARY AND SECONDARY SKIN LESIONS 17
Donna M. Corvette, MD
- CHAPTER 3** DIAGNOSTIC TECHNIQUES 26
Stephen Thomas Spates, MD

II. INHERITED DISORDERS

- CHAPTER 4** DISORDERS OF KERATINIZATION 37
Lori D. Prok, MD
- CHAPTER 5** NEUROCUTANEOUS DISORDERS 46
Israel David Andrews, MD, FAAD, and Anne R. Halbert, MB BS (Hons), FACD
- CHAPTER 6** MECHANOBULLOUS DISORDERS 53
Anna L. Bruckner, MD

III. INFLAMMATORY DISORDERS

- CHAPTER 7** PAPULOSQUAMOUS SKIN ERUPTIONS 61
Meena Julapalli, MD, FAAP, FAAD, and Jeffrey B. Travers, MD, PhD
- CHAPTER 8** ECZEMATOUS DERMATITIS 70
Thomas J. McIntee, MD
- CHAPTER 9** CONTACT DERMATITIS 82
Leslie A. Stewart, MD
- CHAPTER 10** VESICULOBULLOUS DISORDERS 89
Todd T. Kobayashi, MD, Col, USAF, MC
- CHAPTER 11** PUSTULAR ERUPTIONS 99
James E. Fitzpatrick, MD

- CHAPTER 12** LICHENOID SKIN ERUPTIONS 106
Whitney A. High, MD, JD, MEng
- CHAPTER 13** GRANULOMATOUS DISEASES OF THE SKIN 114
James E. Fitzpatrick, MD
- CHAPTER 14** DRUG ERUPTIONS 122
Alexandra Theriault, MD
- CHAPTER 15** VASCULITIS 132
Curt P. Samlaska, MD, FACP, FAAD, and James E. Fitzpatrick, MD
- CHAPTER 16** DEPOSITION DISORDERS 141
Lisa E. Maier, MD, and Lori Lowe, MD
- CHAPTER 17** PHOTOSENSITIVE DERMATITIS 149
Todd T. Kobayashi, MD, Col, USAF, MC
- CHAPTER 18** DISORDERS OF PIGMENTATION 160
Tracy Funk, MD, and Joseph Yohn, MD
- CHAPTER 19** PANNICULITIS 170
Melissa D. Darling, MD, and James W. Patterson, MD
- CHAPTER 20** ALOPECIA 179
Leonard C. Sperling, MD
- CHAPTER 21** ACNE AND ACNEIFORM ERUPTIONS 185
Arelis Burgos, MD, and Joanna M. Burch, MD
- CHAPTER 22** AUTOIMMUNE CONNECTIVE TISSUE DISEASES 196
Todd T. Kobayashi, MD, Col, USAF, MC
- CHAPTER 23** URTICARIA AND ANGIOEDEMA 208
Marc Serota, MD, and Rohit K. Katial, MD

IV. INFECTIONS AND INFESTATIONS

- CHAPTER 24** VIRAL EXANTHEMS 217
Carla X. Torres-Zegarra, FAAP, MD, and William L. Weston, MD

- CHAPTER 25** BULLOUS VIRAL ERUPTIONS 221
Carla X. Torres-Zegarra, FAAP, MD, and Sylvia L. Brice, MD
- CHAPTER 26** WARTS AND MOLLUSCUM CONTAGIOSUM 229
Nicholas V. Nguyen, MD, and Barbara R. Reed, MD
- CHAPTER 27** BACTERIAL INFECTIONS 235
James E. Fitzpatrick, MD
- CHAPTER 28** SEXUALLY TRANSMITTED DISEASES 244
James E. Fitzpatrick, MD
- CHAPTER 29** MYCOBACTERIAL INFECTIONS 252
Wendi E. Wohltmann, MD, Karen E. Warschaw, MD, and Loren E. Golitz, MD
- CHAPTER 30** SUPERFICIAL FUNGAL INFECTIONS 266
Richard A. Keller, MD, and Deborah B. Henderson, MD, MPH
- CHAPTER 31** DEEP FUNGAL INFECTIONS 275
Wendi E. Wohltmann, MD, and Karen E. Warschaw, MD
- CHAPTER 32** PARASITIC INFESTATIONS 287
Jeffrey J. Meffert, MD
- CHAPTER 33** ARTHROPOD BITES AND STINGS 296
Ryan A. Stevens, MD

V. CUTANEOUS MANIFESTATIONS OF INTERNAL DISEASES

- CHAPTER 34** CUTANEOUS MANIFESTATIONS OF INTERNAL MALIGNANCY 311
Ryan A. Stevens, MD
- CHAPTER 35** CUTANEOUS MANIFESTATIONS OF ENDOCRINOLOGIC DISEASE 322
Shayla Francis, MD
- CHAPTER 36** SKIN SIGNS OF GASTROINTESTINAL DISEASE 330
Christina S. O'Hara, MD, CPT, MC, USA, and Paul M. Benson, MD, Col (Ret), MC, USA
- CHAPTER 37** CUTANEOUS MANIFESTATIONS OF RENAL DISEASE 340
Todd T. Kobayashi, MD, Col, USAF, MC

- CHAPTER 38** CUTANEOUS MANIFESTATIONS OF AIDS 348
George W. Turiansky, MD, Col, MC, USA, and William D. James, MD
- CHAPTER 39** CUTANEOUS SIGNS OF NUTRITIONAL DISTURBANCES 357
Carl W. Demidovich, MD

VI. BENIGN TUMORS OF THE SKIN

- CHAPTER 40** BENIGN MELANOCYTIC TUMORS 365
Michael R. Campoli, MD, PhD, FAAD, FACMS
- CHAPTER 41** VASCULAR AND LYMPHATIC NEOPLASMS 374
Joseph G. Morelli, MD
- CHAPTER 42** FIBROUS TUMORS OF THE SKIN 379
James E. Fitzpatrick, MD

VII. MALIGNANT TUMORS OF THE SKIN

- CHAPTER 43** COMMON CUTANEOUS MALIGNANCIES 389
Mariah Brown, MD, Dominic Ricci, MD, and Milton J. Schleve, MD
- CHAPTER 44** MELANOMA 398
Michael R. Campoli, MD, PhD, FAAD, FACMS
- CHAPTER 45** LEUKEMIC AND LYMPHOMATOUS INFILTRATES OF THE SKIN 413
Theresa R. Pacheco, MD
- CHAPTER 46** UNCOMMON MALIGNANT TUMORS OF THE SKIN 425
Renata Prado, MD, and J. Ramsey Mellette, MD
- CHAPTER 47** CUTANEOUS METASTASES 434
James E. Fitzpatrick, MD

VIII. TREATMENT OF SKIN DISORDERS

- CHAPTER 48** SUNSCREENS AND PREVENTION OF SKIN CANCER 441
Laura S. Huff, BS, MD, and Joseph Yohn, MD
- CHAPTER 49** TOPICAL STEROIDS 446
T. Minsue Chen, MD, and Olubusayo K. Obayan, MD, MPH

CHAPTER 50 FUNDAMENTALS OF CUTANEOUS SURGERY 454*Dieter K.T. Schmidt, MD, FAAD, FACMS, and Mike Wentzell, MD***CHAPTER 51 CRYOSURGERY 462***Mariah Brown, MD***CHAPTER 52 MOHS SURGERY 465***Mariah Brown, MD, Dominic Ricci, MD, and J. Ramsey Mellette, MD***CHAPTER 53 LASERS IN DERMATOLOGY 469***Stephen W. Eubanks, MD***CHAPTER 54 THERAPEUTIC PHOTOMEDICINE 478***Todd T. Kobayashi, MD, Col, USAF, MC***CHAPTER 55 RETINOIDS 486***Julie Schwartz Green, MD, PhD, and James E. Fitzpatrick, MD***IX. SPECIAL PATIENT POPULATIONS****CHAPTER 56 NEONATAL INFECTIONS 495***Israel David Andrews, MD, FAAD, and Elizabeth R. Shurnas, MD***CHAPTER 57 PEDIATRIC DERMATOLOGY 500***Joseph G. Morelli, MD***CHAPTER 58 GERIATRIC DERMATOLOGY 506***James E. Fitzpatrick, MD***CHAPTER 59 DERMATOSES OF PREGNANCY 515***Misha D. Miller, MD, FACOG, FAAD***CHAPTER 60 DISORDERS OF THE FEMALE GENITALIA 523***Misha D. Miller, MD, FACOG, FAAD***CHAPTER 61 DISORDERS OF THE MALE GENITALIA 529***Sahand Rahnema-Moghadam, MD, and Vineet Mishra, MD***CHAPTER 62 DISORDERS OF THE ORAL MUCOSA 537***Robert O. Greer, DDS, ScD, and John D. McDowell, DDS, MS***CHAPTER 63 SPECIAL CONSIDERATIONS IN SKIN OF COLOR 550***Whitney A. High, MD, JD, MEng***CHAPTER 64 CULTURAL DERMATOLOGY 561***Scott A. Norton, MD, MPH, MSc, and Ali Damavandy, MD***X. EMERGENCIES AND MISCELLANEOUS PROBLEMS****CHAPTER 65 DERMATOLOGIC EMERGENCIES 571***Scott D. Bennion, MS, MD, FAAD***CHAPTER 66 OCCUPATIONAL DERMATOLOGY 583***Leslie A. Stewart, MD***CHAPTER 67 PSYCHOCUTANEOUS DISEASES 588***James E. Fitzpatrick, MD***CHAPTER 68 APPROACHING THE PRURITIC PATIENT 594***Theresa R. Pacheco, MD***CHAPTER 69 NAIL DISORDERS 600***Brian J. Gerondale, MD, and Daniel C. Dapprich, MD***CHAPTER 70 DERMATOLOGIC TRIVIA 609***Scott A. Norton, MD, MPH, MSc, and Ali Damavandy, MD***INDEX 615**

TOP 100 SECRETS

1. Ichthyosis vulgaris, with an incidence of 1:250, is by far the most common ichthyosis.
2. Multiple Lisch nodules (melanocytic hamartomas of the iris) are pathognomonic of neurofibromatosis (NF)-1.
3. Hypomelanotic macules are a useful diagnostic skin sign for tuberous sclerosis in infants with seizures.
4. Squamous cell carcinoma is the most common cause of death in adults with recessive dystrophic epidermolysis bullosa.
5. Seborrheic dermatitis can be found not only on the scalp, but also on the face around the nares, central chest, axillae, and even on the penis.
6. Pityriasis rosea has oval papules and plaques that tend to line up along skin lines ("Christmas tree" pattern) with trailing scale (scale does not reach the end of the lesion).
7. Skin barrier dysfunction is a basic component of atopic dermatitis pathophysiology.
8. Dilute bleach baths are an effective therapy to decrease *Staphylococcus aureus* colonization in atopic dermatitis.
9. Eighty percent of contact dermatitis reactions are due to irritation, and 20% are due to allergic causes.
10. Patch testing is the only way to distinguish between allergic and irritant contact dermatitis.
11. Immunobullous diseases are acquired and are due to autoantibodies directed at protein components of the epidermis or dermoepidermal junction.
12. Direct immunofluorescent studies on biopsies from perilesional skin are required to diagnose and differentiate between the immunobullous diseases.
13. Systemic corticosteroids are a common implicating factor in precipitating the onset of generalized pustular psoriasis in patients with classic plaque-type psoriasis.
14. Erythema toxicum neonatorum, a benign pustular eruption on a background of erythema, develops in about 20% of neonates shortly after birth.
15. The primary lesion of lichen planus is a flat-topped, pruritic, purple, polygonal papule.
16. Lichen planus frequently demonstrates the isomorphic response (Koebner phenomenon), which refers to the development of new lesions in sites of minor trauma.
17. Cutaneous sarcoidosis occurs in 20% to 35% of patients with sarcoidosis.
18. Heerfordt's syndrome, or uveoparotid fever, is a variant of sarcoidosis presenting as uveitis, facial nerve palsy, fever, and parotid gland swelling.
19. Consider a fixed drug eruption in a patient who presents with bullous or hyperpigmented lesions that are recurrent at the same site.
20. The clinical signs of a potentially life-threatening drug eruption include high fever, dyspnea or hypotension, angioedema and tongue swelling, palpable purpura, skin necrosis, blistering, mucous membrane erosions, confluent erythema, and lymphadenopathy.
21. Cytoplasmic antineutrophil cytoplasmic antibody (c-ANCA) is found in up to 90% of patients with granulomatosis with polyangiitis (Wegener's granulomatosis); high titers often correlate with increased disease activity.
22. Pretibial myxedema is associated with Graves' disease.
23. Life-threatening calciphylaxis usually occurs in the setting of renal disease.
24. Phototoxic reactions clinically and symptomatically resemble sunburn, while photoallergic reactions resemble dermatitis.

25. Photosensitive drug reactions may occur in either the UVA or UVB spectrum. Because UVA passes through window glass, patients may develop photosensitive drug reactions even while they are in their homes or cars.
26. Sunlight stimulates human epidermal melanocytes to increase melanin synthesis and stimulates increased melanocyte transfer of melanosomes to keratinocytes. This melanocyte response to sunlight is called *tanning*.
27. The action spectrum of sunlight that causes tanning is the ultraviolet spectrum (wavelengths 290 to 400 nm).
28. Lesions of erythema nodosum occur most commonly on the anterior lower legs (shins), while lesions of erythema induratum occur most commonly on the posterior lower legs (calves).
29. In widespread subcutaneous fat necrosis of the newborn, it is prudent to monitor calcium levels for the first 3 to 4 months of life.
30. An inflamed or scaly bald spot in a child should be considered tinea capitis unless proven otherwise.
31. Bacterial resistance to benzoyl peroxidase does not occur. Benzoyl peroxide used concomitantly with antimicrobial therapy for acne (as a leave-on or as a wash) is effective in limiting antibiotic resistance.
32. Drug-induced acne is caused most often by anabolic corticosteroids. It is differentiated from acne vulgaris by its sudden onset, distribution mainly on the upper trunk, and its monomorphous pustular appearance without comedones.
33. Gottron's papules (erythematous to violaceous papules over the knuckles) are a cutaneous finding that strongly supports a diagnosis of dermatomyositis.
34. Between 10% and 50% of adult patients that present with dermatomyositis have an underlying malignancy.
35. Chronic urticaria is most often idiopathic and not due to an allergic etiology, but it has an autoimmune basis in up to 50% of cases.
36. In angioedema without urticaria, one should screen for both hereditary and acquired angioedema by obtaining a C4 level.
37. Erythema infectiosum, caused by parvovirus B19, is characterized by bright erythema of the cheeks ("slapped cheeks") and a lacy erythematous eruption that most commonly affects the extremities.
38. Gianotti-Crosti syndrome and papular acrodermatitis of childhood are synonyms for a viral eruption characterized by the acute onset of a symmetrical, erythematous papular eruption that is accentuated on the face, extremities, and buttocks.
39. Asymptomatic shedding occurs in both orolabial and genital herpes simplex virus infections.
40. Postherpetic neuralgia is a common complication of herpes zoster, especially in older individuals.
41. Most human papillomavirus (HPV) infections are not carcinogenic, but persistent infections with some genotypes, especially HPV-16 and HPV-18, are associated with a high risk of epithelial neoplasia.
42. Syphilis is a sexually transmitted disease produced by the spirochete *Treponema pallidum* ssp. *pallidum* that can also be transmitted from the mother to the fetus.
43. Atypical mycobacteria infections are acquired from ubiquitous acid-fast bacilli that are found in soil, water, and domestic and wild animals. The presentation of these infections is variable, leading to frequently missed diagnoses.
44. Patients with tuberculoid leprosy have a high degree of immunity against *Mycobacterium leprae* and have few skin lesions and few organisms in their skin, while patients with lepromatous leprosy have low immunity against *M. leprae* and have many skin lesions and millions of organisms in their skin.
45. Azole antifungal agents block the cytochrome P-450 enzyme lanosterol 14- α demethylase, which depletes ergosterol from cell membranes, whereas allylamine antifungals block ergosterol production through inhibition of squalene epoxidase.
46. The differential diagnosis of lymphocutaneous (sporotrichoid) spread includes **SLANTS**: Sporotrichosis, Leishmaniasis, Atypical mycobacteria, Nocardia, Tularemia, and cat-Scratch disease.
47. While most cases of leishmaniasis seen in the United States are acquired elsewhere, a form of cutaneous disease caused by *Leishmania mexicana* may be acquired in central Texas and Oklahoma, nicknamed "Highway 90 disease" by those familiar with its distribution.

48. The brown recluse spider (*Loxosceles reclusa*) is the most common cause of dermonecrotic arachnidism.
49. *Cheyletiella* is a nonburrowing mite that presents as "walking dandruff" on pets and manifests as nonspecific pruritic papules and plaques on affected patients.
50. Acanthosis nigricans is a common condition, and most cases are associated with insulin resistance. Paraneoplastic acanthosis nigricans is rare, may be of explosive onset, and associated with tripe palms and the sign of Leser-Trélat.
51. The presence of eruptive xanthomas always indicates the presence of high levels of serum triglycerides.
52. Bilirubin has a strong affinity for tissues rich in elastic tissue, which is why it accumulates earliest in the sclera of the eye, followed by the skin (especially the face), hard palate, and abdominal wall.
53. Clinically apparent jaundice is not noticeable until the serum bilirubin exceeds 2.0 to 2.5 mg/dL in the adult.
54. Small vascular lesions called angiokeratoma corporis diffusum are most commonly found in a bathing suit distribution area. These angiokeratomas are characteristic of Fabry's disease, a genetic disorder that affects the kidney.
55. Nephrogenic systemic fibrosis is a recently described disease characterized by papules, plaques, and thickened skin of the trunk and extremities. It is associated with impaired renal function and deposition of gadolinium in tissues from gadolinium-based contrast media.
56. Atypical molluscum contagiosum manifestations in the HIV-infected population include giant molluscum, disseminated lesions, confluent lesions, lesions distributed in atypical sites such as the perianal area, and lesions mimicking warts, skin cancers, and keratoacanthomas.
57. The classic tetrad of pellagra all start with the letter D: **d**iarrhea, **d**ermatitis, **d**ementia, **d**eath.
58. Casal's necklace is the distinctive photosensitive eruption seen in pellagra that presents as a "necklace" around the neck.
59. There appears to be a small increased risk (1% to 4%) of melanoma in patients with giant congenital melanocytic nevi greater than 40 cm in diameter adult predicted size.
60. Patients with a large number (>100) of atypical melanocytic nevi should be followed closely for the possible development of melanoma.
61. Kasabach-Merritt syndrome (platelet trapping and consumption coagulopathy associated with a vascular tumor) is seen with kaposiform hemangioendothelioma and tufted angioma.
62. Dermatofibromas often demonstrate dimpling with lateral pressure. This has been called a "dimple" or "Fitzpatrick" sign.
63. The presence of pigmentation extending onto the nail fold from a band of linear melanonychia (Hutchinson's sign) is a strong indication for biopsy and histopathologic evaluation of the nail matrix.
64. Mycosis fungoides is an indolent epidermotropic lymphoma with a median survival of 12 years for patients with patch- or plaque-stage disease.
65. Sézary syndrome is the term applied to the leukemic subtype of cutaneous T-cell lymphoma.
66. Merkel cell carcinoma is an aggressive neuroendocrine malignancy of the skin with frequent recurrences and metastasis.
67. Epithelioid sarcoma is an aggressive soft tissue malignancy that most commonly presents on the volar distal extremities of young adults as a slow-growing dermal or subcutaneous nodule.
68. Approximately 9% of all patients who die from internal malignancy will demonstrate metastatic tumors in the skin.
69. Reducing ultraviolet radiation exposure is the single best strategy for reducing skin cancer. —
70. Approximately 2% total body surface area (TBSA) requires 1 fingertip unit (FTU) or 0.5 gram of topical steroid medication. One percent of the patient's TBSA can be estimated as 1 palmar surface, including the fingers.
71. The safe total maximum dose of 1% lidocaine for adults is 7 mg/kg if combined with epinephrine, and 4.5 mg/kg if given without epinephrine.

72. Damage to the temporal branch of the facial nerve when cutaneous surgery is performed will result in an ipsilateral brow ptosis and ipsilateral lack of forehead animation.
73. Mohs micrographic surgery is indicated for basal cell and squamous cell carcinomas arising on the face and other sites where the maximal preservation of normal skin and cosmesis are important goals.
74. The wavelengths of common lasers are as follows: KTP, 532 nm; pulsed dye, 585 nm; ruby, 684 nm; alexandrite, 755 nm; diode, 810 to 1450 nm; Nd:YAG, 1064 nm; erbium:YAG, 2490 nm; and carbon dioxide, 10,600 nm.
75. The pulsed dye laser is the gold standard for treatment of vascular lesions, but the KTP, Nd:YAG, and alexandrite lasers are also useful.
76. Narrowband UVB is now the phototherapy treatment of choice for psoriasis, vitiligo, and possibly mycosis fungoides (patch stage) and atopic dermatitis (in some experts' opinions), given its superior efficacy to broadband UVB and decreased side effects compared with oral PUVA.
77. Phototherapy exerts its effects primarily through immunomodulation (T-cell apoptosis within the epidermis and dermis, and suppression/depletion of Langerhans cells within the epidermis).
78. Systemic retinoids, which are used for the treatment of many cutaneous diseases, including acne vulgaris, psoriasis, and disorders of keratinization, are very potent teratogenic drugs.
79. The **TORCHES** infections are **T**oxoplasmosis, **O**ther (varicella-zoster virus, parvovirus B19), **R**ubella, **C**ytomegalovirus, **H**erpes simplex virus and **HIV**, **E**nteroviruses and **E**pstein-Barr virus, and **S**yphilis.
80. The classic triad of congenital rubella syndrome consists of congenital cataracts, deafness, and congenital heart malformations.
81. Pyogenic granulomas are neither pyogenic nor granulomatous; they are neovascularizations.
82. Aging of the skin may be divided into that due to intrinsic aging (normal maturity and senescence) and that secondary to extrinsic aging (external factors such as ultraviolet light).
83. Xerosis (dry skin, asteatosis, dermatitis hiemalis) is the most common geriatric dermatosis and the most frequent cause of pruritus in the elderly.
84. The umbilical area is preferentially affected in pemphigoid gestationis and can be a clue to the diagnosis.
85. Circinate balanitis is a cutaneous manifestation of reactive arthritis (Reiter's disease).
86. Oral smokeless tobacco keratoses have little malignant potential, and the vast majority of such lesions are reversible if the tobacco habit is discontinued.
87. Human papillomavirus (HPV) is considered causal in nearly 20% of oral squamous cell carcinomas.
88. Erythema may be more difficult to appreciate on darkly pigmented skin, and this must be considered during clinical examination.
89. Pigmentation of the oral mucosa, benign-appearing palmoplantar macules, or multiple longitudinal pigmented streaks of the nails may represent normal variants in persons with darker skin types.
90. Many cutaneous diseases may present with follicular accentuation or other unusual clinical aspects in persons with darker skin types.
91. Skin signs of toxic epidermal necrolysis, a life-threatening mucocutaneous disease, include diffuse and severe skin tenderness and "cayenne pepper" nonblanching erythema that evolves into widespread blistering and superficial ulcers.
92. Contact dermatitis is the most common form of occupational skin disease, with irritant contact dermatitis being more common than allergic contact dermatitis.
93. Patients with delusions of parasitosis have monosymptomatic hypochondriacal psychosis; their other mental functions are typically normal.
94. Munchausen syndrome is a chronic factitious disorder in which patients totally fabricate their symptoms, self-inflict lesions, or exaggerate or exacerbate a preexisting physical condition.
95. Trauma is the most common cause of splinter hemorrhages of the nail.

96. Squamous cell carcinoma is the most common malignant tumor of the nail unit.
97. Cantharidin ($C_{10}H_{12}O_4$), a vesicant therapy for molluscum contagiosum and warts, is a semipurified extract from blister beetles from the family Meloidae.
98. The nine-banded armadillo (*Dasypus novemcinctus*) is an animal reservoir in the United States for *Mycobacterium leprae*, the cause of leprosy.
99. Tungiasis refers to parasitization by the gravid female flea (*Tunga penetrans*), which burrows into the skin where the eggs mature, and she passes them through an opening in the skin to the environment.
100. It has been calculated that we shed about 35,000 skin cells per minute, which calculates to more than 50 million per day!

