Contents

1. The History of Dermatology **1**

Ancient history 1
The middle ages 2
Modern age 3
Pioneer dermatologists 4

2. Skin: Structure, Function and Development **10**

Skin types 10
Structure of the skin 10
Epidermis 11
Desmosomes 15
Physiology of keratinisation 16
Characteristics of epidermal differentiation 16
The cell cycle 16
Control of the epidermal proliferation 17
The other cells of the epidermis 18
Basement membrane complex 20
Epidermal appendages 22
Hair 25
Nail 29
Dermis 32
Cellular components of the dermis 37
The cutaneous vasculature 37
Lymphatic circulation 38
Cutaneous nerves 38
Muscles of the dermis 39
Subcutaneous tissue 39
Skin lines 40
Occurrence of skin disease in relation to racial and ethnic characteristics 41
Development of skin 42
Investigations for hereditary disorders of the skin 45
Functions of the skin 46

3. Approach Towards a Dermatological Patient **49**

History taking 49
Examination 50
Some diagnostic hints 51
Special diagnostic procedures 51
Some clinical signs that help in diagnosis 52
Other laboratory investigations 52
Molecular diagnostics 53
Primary and secondary skin lesions 53
Commonly used descriptive terms in dermatopathology 56

4. Bacterial Infections **58**

Infections caused by *Staphylococcus aureus* and *Streptococcus haemolyticus* 59
Ecthyma 64
Infections caused by mycobacteria 70
Tuberculosis 70
Localized tuberculosis 72
Tuberculids 74
Diagnosis of tuberculosis 75
Diseases caused by atypical mycobacteria 77
Leprosy 79
Infections caused by other gram-positive bacteria 87
Corynebacteria 88
Actinomyces 90
Infections caused by gram-negative bacteria 92
Meningococcal infection 93
Glanders (Farcy) 95
Melioidosis (Whitmore's disease) 95
Tularemia (Ohara's disease) 95
Plague 96
Brucellosis (Undulant fever) 97
Rhinoscleroma 97
Rat-bite fever 97
Rickettsia 98
Spirochaetes 100
Chlamydia 104
Mycoplasma 104

5. Fungal Infections **106**

Superficial mycoses 107
Subcutaneous mycoses 128
Systemic mycoses 132
Opportunistic fungal infection 134

6. Viral Infections **136**

Herpes virus infections 137
Poxvirus 148
Human papillomavirus 152
Bowenoid papulosis 157
Picorna virus 158
Myxovirus and paramyxovirus 159
Erythema infectiosum (Fifth disease) 161
Other cutaneous disorders associated with virus infections 161

7. Parasitic Infestation, Diseases Caused by Arthropods and Other Venomous Animals **163**

Protozoal infestation 163
Trypanosomiasis 168
Toxoplasmosis 169

Helminthic infestations 170
Platyhelminths 175
Diseases caused by arthropods 176
Reptiles and other venomous animals 191
Dermatoses caused by aquatic animals 192

8. Sexually Transmitted Diseases 195

Syphilis 195
Latent syphilis 199
Tertiary syphilis 199
Congenital syphilis 202
Gonorrhoea 204
Non-gonococcal urethritis 205
Chancroid 206
Granuloma inguinale 206
Lymphogranuloma venereum 207
Human immunodeficiency virus infection 209

9. Eczema 216

Pathogenesis of eczema 216
Clinical and histological features of eczema 217
Special characteristic of eczema 218
(Secondary dissemination) 218
Treatment of eczema 219
Classification 219
Common contact eczemas 223
Infective eczema 230
Photosensitive eczema 230
Endogenous eczema 230
Seborrhoeic dermatitis 239
Nummular eczema 243
Hypostatic eczema 244
Pompholyx 245
Lichen simplex chronicus 247
Pityriasis alba 248
Asteatotic eczema 249
Juvenile plantar dermatosis 250
Eczematous drug eruptions 250
Hand eczema 251

10. Keratinising and Papulosquamous Disorders 255

Psoriasis 255
Lichen planus 274
Lichen nitidus 280
Lichen striatus 281
Callosity and corn 284
Acrokeratosis verruciformis 287
Follicular keratoses 288
Miscellaneous keratosquamous disorders 290

Porokeratosis 294
Congenital disorders of keratinisation 296

11. Connective Tissue Disorders **307**

Lupus erythematosus 307
Chronic discoid lupus erythematosus 308
Subacute lupus erythematosus 311
Systemic lupus erythematosus 311
Antiphospholipid syndrome 315
(Lupus anticoagulant syndrome) 315
Neonatal lupus erythematosus 316
Dermatomyositis 316
Scleroderma 319
Diffuse systemic sclerosis 321
Mixed connective tissue disease 324
Miscellaneous disorders of collagen tissue 325
Hereditary disorders of collagen and elastic tissue 328
Ehlers-Danlos syndrome 330
Marfran's syndrome 331
Juvenile hyaline fibromatosis 331

12. Bullous Disorders **334**

The pathogenic mechanisms of blister formation 334
Pemphigus 335
Other acantholytic bullous disorders 342
Pemphigoid 344
Dermatitis herpetiformis 348
Other subepidermal bullous disorders 352
Bullous disorders of children 354

13. Sarcoidosis **363**

Aetiology 363
Histopathology 364
Clinical features 364
Diagnosis 366
Treatment 367
Course and prognosis 367

14. Amyloidosis **368**

Aetiology 368
Histopathology 368
Clinical Features 369
Diagnosis 371
Treatment 371
Course and Prognosis 371

15. Diseases of Blood Vessels and Lymphatic System **373**

Vasculitis 373
Classification 373

According to the size of vessel involved 374
Cutaneous and systemic vasculitis 374
Neutrophilic vasculitis 374
Lymphocytic vasculitis 378
Granulomatous vasculitis 379
Vasculitis-miscellaneous 381
Erythemas of the skin 383
Other erythemas 387
Hypersensitivity syndromes (toxic erythemas) 392
Telangiectasia 393
Primary telangiectasia 393
Secondary telangiectasia 393
Disorders of the lymphatic system 396
Lymphoedema 396

16. Urticaria **399**

Aetiology 399
Pathogenesis 400
Classification 400
Differential diagnosis 403
Treatment 404
Angioedema (Quincke's oedema) 404
Mastocytosis 405
Papular urticaria 407

17. Purpura **408**

Aetiology 408
Investigations 409
Systemic causes of purpura 410
Purpura of dermatological interest 412
Miscellaneous purpuric disorders 415

18. Leg Ulcers **417**

Classification of leg ulcers 417
Venous ulcers 417
Arterial ulcer 421
Miscellaneous causes 422

19. Diseases of Pigmentation **425**

Physiology of pigmentation 426
Generalised Hyperpigmentation 426
Localised Hyperpigmentation 427
Reticular pigmentation 430
Generalised Hypopigmentation 432
Localised Hypopigmentation 435

20. Skin and Ultraviolet Radiation **441**

Sites of photosensitive eruption 442
Standard erythema dose 442
Ultraviolet radiation and its interaction with the skin 442

Effects of ultraviolet radiation on the skin at molecular level 443
Effects of solar radiation on the skin 445
Disorders of the skin caused by ultraviolet light 447
Classification 451
Treatment of porphyria 454
Photosensitisation due to abnormalities in DNA repair 457
Skin diseases aggravated by ultraviolet radiation 459
Protection and treatment of skin against UVR 459

21. Cutaneous Reactions to Cold **461**

Reaction of skin to cold—physiology 462
Dermatoses association with cold sensitivity 465

22. Pruritus **469**

Itch receptors 469
Central itch 469
Types of itch 469
Neural pathways of itching 470
Peripheral and central pharmacologic mediators of itch 470
Patterns of itching 472
Influence of skin temperature on itching 472
Causes of pruritus 472
Classification 473
Diagnosis and evaluation of the itching patient 477
Treatment 478

23. Disorders of the Sebaceous, Sweat and Apocrine Glands **480**

Acne vulgaris 480
Rosacea 491
Perioral dermatitis 494
Tumours of the sebaceous glands 495
Diseases of the sweat glands 495
Diseases of the eccrine glands 496
Hyperhidrosis 496
Intertrigo 498
Pitted keratolysis 498
Anhidrosis 499
Tumours of the sweat glands 500
Congenital disorders of the sweat glands 503
Diseases of the apocrine glands 504
Hidradenitis suppurativa (acne inversa) 504
Apocrine bromhidrosis 506
Apocrine chromhidrosis 506
Fox-Fordyce disease 506
Apocrine hidrocystoma 507

24. Hair Disorders **509**

Approach to a patient with hair disorders 509
Hypertrichosis 511
Hirsutism 512
Non-cicatricial alopecia 519
Alopecia areata 523
Cicatricial alopecia 528
Pseudopelade of Brocq 528
Folliculitis decalvans 529
Dissecting cellulitis of the scalp
(Perifolliculitis capitis abscedens et suffodiens) 529
Structural defects of the hair 531
Miscellaneous conditions of the scalp 535
Tumorus of the hair follicle 537
Hair cosmetics 539

25. Nail Disorders **544**

Nail changes in systemic disease 544
Nail changes due to cutaneous disorders 546
Discolouration (chromonychia) 549
Diseases of the nail fold 550
Abnormalities of the nail plate 552
Tumours adjacent to and under the nail 554
Congenital nail disorders 554

26. Diseases of the Subcutaneous Fat **557**

Panniculitis 558
Weber-Christian disease 560
Rothman-Makai syndrome 561
Panniculitis and pancreatic disease 561
(Nodular fat necrosis) 561
A1-antitrypsin deficiency-associated panniculitis 562
Sclerosing panniculitis 563
Dercums disease (Adiposis dolorosa) 563
Lipodystrophy 563
Cellulite 565

27. Tumours of the Skin **567**

Malignant tumours of the skin 567
Cutaneous T-cell lymphoma (Mycosis fungoides) 583
Primary cutaneous B-cell lymphomas 585
Premalignant dermatoses 588
Benign tumours of the skin 592
Tumours associated with congenital diseases 600

28. Naevi and Malformations **605**

Epidermal naevi 605
Epidermal keratinocytic naevi 606
Follicular naevi 609
Naevus sebaceous 610
Epidermal naevus syndrome 610

Vascular naevi 611
Venous malformation 616
Naevus anemicus 616
Blue rubber bleb naevus syndrome 617
Maffucci syndrome 617
Melanocytic naevi 617
Atypical naevus (Dysplastic naevus) 622
Dysplastic nevus syndrome 623
Spitz naevi (Juvenile melanoma) 624
Naevus achromicus 624
Lymphatic malformations 625
Connective tissue naevi 626
Angiokeratomas 627

29. Malnutrition and Skin 630

Hypovitaminosis A 630
Hypervitaminosis A 631
Vitamin B complex 631
Vitamin D 634
Vitamin K 634
Vitamin E (α-tocopherol) 635
Vitamin C (Ascorbic acid) 635
Minerals 635
Essential fatty acids 637
Marasmus 638
Kwashiorkor 639
Plummer-Vinson syndrome 639
Obesity 640

30. Primary Cutaneous Immunodeficiency 641

Innate immunity 641
Adaptive immunity 642
Humoral immunity 643
Classification of harmful allergic reaction 645
Cell-mediated immunity 646
Laboratory diagnosis and assessment of immunological disorders 647
When to suspect immunodeficiency 648
Disorders of phagocytosis 649
Disorders of the thymus and T lymphocytes 651
Diseases due to deficiency of antibodies 651
Combined antibody and T-cell deficiency 652
Severe combined immunodeficiency 653

31. Cutaneous Manifestations of Systemic Diseases 655

Diabetes mellitus 655
Liver disease 657
Pancreatic disease 659
Cutaneous manifestations of malabsorption states 660

Miscellaneous disorders of gastrointestinal tract 660
Renal disease 661
Rheumatoid arthritis 663
Hyperthyroidism 664
Hypothyroidism 664
Cushing's syndrome 664
Addison's disease 665
Xanthomatosis (hyperlipidemias) 665
Disorders of lipid metabolism 667
Disorders of amino acid metabolism 669
Mucopolysaccharidosis 671
Calcinosis cutis 672
Angiokeratoma with systemic disease 673
Cutaneous manifestations of immunosuppression 674
Cutaneous manifestations of internal malignancy 675

32. Systemic Effects of Cutaneous Disease: Erythroderma 678

Causes of erythroderma 678
Manifestations cutaneous 679
Manifestations systemic 679
Treatment of erythroderma 680

33. Ages of Man and their Dermatoses 682

Neonatal dermatology 682
Transient neonatal dermatoses 683
Neonatal dermatoses 684
Specific neonatal dermatoses 685
Panniculitis in neonates 687
Oedema of the newborn 688
Cutaneous changes in pregnancy 688
Specific dermatoses of pregnancy 689
Cutaneous changes at menopause 691
Skin disorders of menopause 692
The ageing skin 692
Skin changes in the ageing skin 693
Histological features of the ageing skin 695
Dermatoses of the elderly 695
Premature ageing syndromes 695
Diagnosis of ageing syndromes 698
Methods of improving the skin in ageing 698

34. Skin and Sports 700

Skin diseases that prevent sports 700
Diseases transmitted to other players 701
Cutaneous injuries due to sport 701
Injuries due to mechanical trauma 701
Heat-induced injuries 704
Cold-induced injuries 705
Injuries due to the sun 705

Contact dermatitis 705
Miscellaneous 706
Skin diseases aggravated by sports 708

35. Skin and Psychiatry 710

Classification of psychocutaneous disorders 710
Psychiatric disorders with dermatologic symptoms 710
Dermatologic disorders that are exacerbated by psychophysiological mechanisms 714
Approach to patients with psychocutaneous disorders 714

36. Diseases of the Oral Cavity 716

Ulcers of the oral cavity 717
White lesions of the oral mucosa 723
Black/brown pigmented lesions of the oral mucosa 727
Red lesions of the oral mucosa 729
Tumours of the oral cavity 730
Cheilitis 732

37. Cutaneous Manifestation of Diseases of External Genitalia 736

Specific disorders of female external genitalia 736
Specific disorders of male external genitalia 740

38. Miscellaneous Disorders 744

Poikiloderma 744
Acanthosis nigricans 745
Pyoderma gangrenosum 747
Malignant atrophic papulosis 748
Sweet's syndrome (Acute febrile neutrophilic dermatosis) 749
Jessner's lymphocytic infiltration 751
Pseudolymphomas 751
Lymphomatoid papulosis 752
Gangrene of the skin 752
Treatment of gangrene 755
Histiocytosis 756
Mucinosis 759
Necrobiotic disorders 761
Perforating disorders 763
Piezogenic papules 766
Rieter's disease 767
Prurigo 771
Atrophy of the skin 772
Anetoderma 773
Cutis verticis gyrata 775
Pachydermoperiostosis 776
Ainhum 777
Pseudoainhum 777
Relapsing polychondritis 777
Cutaneous manifestations of drug abuse 778

39. Occupational Dermatoses 782

Occupational hand dermatitis 782
Contact urticaria 783
Infections 783
Acne 784
Malignancy 785
Heat 785
Cold 785
Vibration syndrome 785
Connective tissue disorders 786
Importance of occupational skin diseases 786
Diagnosis of occupational skin disease 786
Treatment and prevention of occupational skin disease 787
Prognosis of occupational skin disease 788

40. Injuries Due to Burn 789

Assessment of damage caused by burns 789
Clinical assessment of a burn injury 790
Factors to be considered in assessing burn injury 791
Special types of burn 791
Complication of burns 792
Treatment 792
Referral to a burn unit 794

41. Fundamentals of Topical Therapy and Some Common Dermatological Preparations 795

Principles of topical therapy 795
Amount to be dispensed 795
Percutaneous absorption 796
Frequency of application 797
Ingredients in topical preparations 797
Topical preparations 797
Some common dermatological formulae 799

42. Systemic Therapy 804

Corticosteroids 804
Antifungals 810
Retinoids 814
Psoralens 817
Immunosuppressive and cytotoxic drugs 819
Immunobiologics 824
Intravenous immunoglobulin 827
Topical immunomodulators 828
Antimalarials 830
Dapsone 832
Antiviral drugs 833
Ribavirin 837
Promise of the future: Gene therapy 837

43. Cutaneous Drug Reactions **840**

Classification of drug reactions 840
Approach to diagnosis of drug reactions 841
Skin lesions in drug reaction 841
Severe skin reactions 843
Uncommon reactions 845
Prevention 849

44. Physical Modalities in Cutaneous Therapy **850**

Biopsy 850
Curettage 852
Shave excision 852
Electrocautery 853
Electrolysis 853
Thermolysis 853
Iontophoresis 853
Mohs surgery 854
Cryosurgery 854
Lasers 857
Intense pulsed light 862
Photodynamic therapy 862
Cosmetic dermatology 863
Filling agents 866
Botox injections 867

45. Radiotherapy in Dermatology **869**

Types of ionising radiation used in dermatology 869
Treatment regimens 871
Postradiation changes in the skin 871
Indications for radiation 872
Side effects of radiotherapy and skin care 873

Appendices—Differential diagnosis

Appendix 1: Generalized Eruptions 875
Appendix 2: Hair Disorders 877
Appendix 3: Face 879
Appendix 4: Upper and Lower Limb 881
Appendix 5: Flexures 882
Appendix 6: Lesions Differentiated by Colour 883
Appendix 7: Lesions Differentiated by Appearance and Texture 884
Appendix 8: Vascular Reactions 885
Appendix 9: Nail Disorders 886
Appendix 10: Miscellaneous 888

Bibliography *891*

Index *895*