Ethnic Dermatology

Principles and Practice

Ethnic Dermatology

Principles and Practice

EDITED BY

Ophelia E. Dadzie
BSc (Hons), MBBS, MRCP, DipRCPath (Dermpath)
Department of Dermatology
North West London Hospitals NHS Trust; and
Centre for Clinical Science and Technology
University College London Division of Medicine
London, UK

Antoine Petit
MD
Service de Dermatologie
APHP Hôpital Saint-Louis
Paris, France

Andrew F. Alexis
MD, MPH
Director, Skin of Color Center
Department of Dermatology
St Luke's-Roosevelt Hospital Center; and
Associate Clinical Professor
Columbia University College of Physicians and Surgeons
New York, NY, USA

FOREWORD BY

Nina G. Jablonski

WILEY-BLACKWELL
A John Wiley & Sons, Ltd., Publication

Blackwell Publishing was acquired by John Wiley & Sons in February 2007. Blackwell's publishing program has been merged with Wiley's global Scientific, Technical and Medical business to form Wiley-Blackwell.

Registered Office
John Wiley & Sons, Ltd, The Atrium, Southern Gate, Chichester, West Sussex,
PO19 8SQ, UK

Editorial Offices
9600 Garsington Road, Oxford, OX4 2DQ, UK
The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, UK
111 River Street, Hoboken, NJ 07030-5774, USA

For details of our global editorial offices, for customer services and for information about how to apply for permission to reuse the copyright material in this book please see our website at www.wiley.com/wiley-blackwell

Library of Congress Cataloging-in-Publication Data

Ethnic dermatology : principles and practice / edited by Ophelia E. Dadzie, Antoine Petit, Andrew F. Alexis.
p. ; cm.
Includes bibliographical references and index.
ISBN 978-0-470-65857-4 (hardback : alk. paper) – ISBN 978-1-118-49778-4 (O-book) –
ISBN 978-1-118-49779-1 (Mobi) – ISBN 978-1-118-49783-8 (epub) – ISBN 978-1-118-49784-5 (ePDF/ebook)
I. Dadzie, Ophelia E. II. Petit, Antoine. III. Alexis, Andrew F.
[DNLM: 1. Skin Diseases–ethnology. 2. Ethnic Groups. 3. Skin Diseases–diagnosis.
4. Skin Diseases–therapy. WR 140]
616.5–dc23

2012029833

A catalogue record for this book is available from the British Library.

Wiley also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Cover image: © Sergej Khackimullin – Fotolia.com
Cover design by Andy Meaden

Set in 9/12pt Minion by SPi Publisher Services, Pondicherry, India

1 2013

Contents

List of Contributors

Nita Agar
Consultant Dermatologist, Royal Prince Alfred Hospital
Senior Lecturer, University of Sydney
Sydney, Australia

Fatima Al-Faresi
Specialist Dermatologist, Associate Program Director
Dermatology Residency Program
Tawam Hospital/Johns Hopkins Medicine
Al Ain, United Arab Emirates

Mahreen Ameen
Department of Dermatology
Royal Free London NHS Foundation Trust
London, UK

Brian Berman
Professor of Dermatology and Medicine
University of Miami Miller School of Medicine
Miami, FL, USA

Marcelyn Coley
Resident
Department of Dermatology
State University of New York Downstate
Medical Center
New York, NY, USA

Moussa Diallo
Services Médicaux
Hôpital Principal
Dakar, Senegal

Viktoria Eleftheriadou
Research Associate
Centre of Evidence-Based Dermatology
University of Nottingham
Nottingham, UK

Ousmane Faye
Assistant Professor of Dermatology
Faculty of Medicine
University of Bamako
CNAM Ex Institut Marchoux
Bamako, Mali

Leila Ferguson
Dermatology Specialty Registrar
Basildon University Hospital Essex
Basildon, UK

Kristian Figueras
Senior Research Associate
Baumann Cosmetic and Research Institute
Miami Beach, FL, USA

Camille Fitoussi
Consultant Dermatologist
Groupe Médical Charcot
256 Rue de Belleville
Paris, France

Hassan I. Galadari
Assistant Professor of Dermatology
Faculty of Medicine and Health Sciences
United Arab Emirates University
Tawam Hospital/Johns Hopkins Medicine
Al Ain, United Arab Emirates

Richard H. Huggins
Senior Staff Physician
Department of Dermatology
Henry Ford Hospital
Detroit, MI, USA

Nonhlanhla P. Khumalo
Associate Professor of Dermatology
Division of Dermatology
Groote Schuur and Red Cross Children's Hospitals
University of Cape Town
South Africa

Henry W. Lim
Chairman, Department of Dermatology
C.S. Livingood Chair in Dermatology
Henry Ford Hospital
Detroit, MI, USA

Fatimata Ly
Head, Department of Dermatology
Institute for Social Hygiene
Dakar, Senegal

Antoine Mahé
Department of Dermatology
Hôpital Pasteur (HCC) – Colmar
Colmar, France

Jean-Jacques Morand
Professor of Dermatology
Department of Dermatology
Military Hospital Sainte Anne
Toulon, France

Sanjeev V. Mulekar
Specialist Dermatologist
National Center for Vitiligo and Psoriasis
Riyadh, Saudi Arabia

Dupe L. Odunsi
Senior House Officer
King's College Hospital
London, UK

Bridget Ogawa
Consultant Dermatologist
Ghana Health Service
Accra, Ghana

Frederick N. Quarles
Practitioner
Quarles Dermatology
Hampton, VA, USA

Anthony Rossi
Department of Dermatology
St. Luke's Roosevelt Hospital
New York, NY, USA

Jean-Claude Roujeau
Emeritus Professor
Université Paris-Est
Créteil, France

Jack Smadja
Department of Dermatology
APHP Hôpital Saint-Louis
Paris, France

Ameet Tailor
Charing Cross Hospital
Imperial College Healthcare NHS Trust
London, UK

Patricia A. Treadwell
Professor of Pediatrics
Indiana University School of Medicine
Indianapolis, IN, USA

Martha H. Viera
Department of Dermatology and Cutaneous Surgery
University of Miami Miller School of Medicine
Miami, FL, USA

Alejandra C. Vivas
Department of Dermatology and Cutaneous Surgery
University of Miami Miller School of Medicine
Miami, FL, USA

Heather Woolery-Lloyd
Director of Ethnic Skin Care
University of Miami
Department of Dermatology and Cutaneous Surgery
Cosmetic Medicine and Research Institute
Miami, FL, USA

Foreword

Ethnic Dermatology is being published during a renaissance in the study of human variation, when studies of the significance of variation in human skin have gained new importance and legitimacy. For most of the history of dermatology, human skin was "White," northern European skin. White skin was the normal human condition, from which all others deviated. Dermatology rose as an independent discipline during the late 18th and early 19th centuries, at the same time as naturalists and anthropologists were describing human races and philosophers were arguing for hierarchical ranking of those races. People with moderately or darkly pigmented skin were viewed by many at that time as lesser beings and the normal properties of their skin were seen as pathological by definition. The need for books like *Ethnic Dermatology* today arose from the misconceptions about the nature of normal variation in human skin that developed in those benighted times. As institutional and governmentally sanctioned racism declined worldwide in the late 20th century, knowledge and appreciation of the importance of variation in the properties of human skin increased. This promising trend was retarded, ironically, by the power of popular social movements which advocated equality among races and sexes in all matters and which viewed the study of human variation as inherently divisive and socially destructive. Dermatology, more than other medical specialties, is subject to the vicissitudes of social and political movements because it deals with the organ that is humankind's most visible interface with the physical and social environment.

Dermatologists working to describe and study "ethnic" skin or skin of color and its diseases face many practical problems, one of the most serious being an impoverished vocabulary with which to describe variation. The glossary of descriptive medical terms for skin pigmentation is bereft of accurate and precise words to describe hues, shades, and tints of skin color. "Darkly," "richly," and "moderately" pigmented are commonly used in medicine and are socially acceptable, but are miserably imprecise and are less exact than the rich colloquialisms they seek to replace. The Fitzpatrick scale of skin phototypes, which has dominated dermatology for nearly a half century, is also deficient because it is based on subjective assessment of one phenotypic trait, tanning ability. While this classification method can broadly inform us of an individual's sun sensitivity and likelihood of developing skin cancer, tanning ability is not determined by a single gene or a single unique set of genes nor is it necessarily informative of other immunological or physiological properties of skin that are relevant to disease susceptibility. Genetic and genomic studies have revealed that pigmentation phenotypes have evolved multiple times as modern humans have dispersed out of and back into the tropics. We now know that lightly pigmented ("White") skin seen in natives of Berlin and Beijing, for example, was the product of two independent genetic mutation events leading to the evolution of two depigmented human lineages that came to inhabit northwestern Europe and northeastern Asia. The classification of these two individuals as Fitzpatrick type II is of limited usefulness. Similarly, natives of Brasilia, Cape Town, and Naples who are classified as Fitzpatrick type IV are likely to have three different sets of pigmentation gene polymorphisms contributing to their enhanced tanning abilities. The point here is that we are in need of new ways of defining and describing the normal range of variation present in healthy human skin because the current vocabulary and scales for describing variation are inadequate and outdated. The genetic bases for the complex mixtures of melanins and keratins found in skin, and for the interaction of these with various immunoglobulin isotypes, are now beginning to be understood and their significance for health and disease appreciated. As this body of information grows, and our understanding of individual responses to environmental insults develops apace, dermatology will truly come of age.

The synthesis of knowledge on skin and skin diseases presented in *Ethnic Dermatology* is inspiring and provides the foundation for a modern and comprehensive science of dermatology that is based on an inclusive concept of "normal human skin," including its aging and scarring characteristics and susceptibility to disease. Specialists in ethnic dermatology will find this book to be an excellent guide, but also a call to action. This field requires much more research and many more avid clinicians and scientists interested in carrying out that research. This book is your starting point.

Nina G. Jablonski, PhD
Distinguished Professor of Anthropology
Pennsylvania State University
Pennsylvania, PA, USA

Preface

In the face of life's many challenges we have to ask ourselves why do we do what we do? This simple question is one we have had to reflect upon prior to and during the writing and editing of this textbook. For us the answer to this question is simple: a need to make a difference and/or impact in our community, combined with a genuine interest and passion for the subject matter.

Broadly speaking, mainstream dermatology in most western countries continues to have a eurocentric standard and viewpoint, despite an increasing interest worldwide in the issue of ethnic dermatology. This has primarily been driven by the changing demographics of most western countries, coupled with the emerging economies of many African and Asian countries. While several textbooks now exist on this topic, most originate from the USA, giving an American perspective to this issue.

The purpose of *Ethnic Dermatology: Principles and Practice* is to provide a comprehensive, yet practical perspective of the subject matter. Both medical and cosmetic dermatology are extensively covered in this textbook. Ample use of good-quality clinical images supplements the text, which are all clinically relevant. Furthermore, there is an excellent foreword written by Professor Nina Jablonski discussing the issue of terminologies pertaining to ethnic dermatology.

This textbook will suit clinical dermatologists, primary care physicians, physicians from other specialties, and specialist nurses. It is our hope that all will find this book of direct relevance to their daily clinical practice. Long-term, we also hope that textbooks such as this will encourage acceptance and incorporation of ethnic dermatology into mainstream dermatology forums in many western countries.

Ophelia E. Dadzie
Antoine Petit
Andrew F. Alexis

List of Abbreviations

AD	atopic dermatitis
AJCC	American Joint Committee on Cancer
AKN	acne keloidalis nuchae
ALM	acral lentiginous melanoma
AP	actinic prurigo
ARV	antiretroviral drugs
ART	antiretroviral therapy
ATL	adult T-cell lymphoma
ATLL	adult T-cell lymphoma/leukemia
AZT	zidovudine
BCC	basal cell carcinoma
BMZ	basement membrane zone
CAD	chronic actinic dermatitis
CBPL	cutaneous B-cell pseudolymphoma
CCCA	central centrifugal cicatricial alopecia
CCLE	chronic cutaneous lupus erythematosus
CGPD	childhood granulomatous periorificial dermatitis
CPK	creatine phosphokinase
CRP	confluent and reticulate papillomatosis
cSLE	childhood-onset systemic lupus erythematosus
CTCL	cutaneous T-cell lymphoma
CTGF	connective tissue growth factor
CTPL	cutaneous T-cell pseudolymphoma
DCS	dissecting cellulitis of the scalp
DEJ	dermo-epidermal junction
DFSP	dermatofibrosarcoma protuberans
DLCO	diffusing capacity of the lung for carbon monoxide
DMSO	dimethylsulfoxide
DOC	disorders of cornification
DPN	dermatosis papulosa nigra
DRESS	drug reactions (or rashes) with eosinophilia and systemic symptoms
DRI	disseminate and recurrent infundibulofolliculitis
EASI	Eczema Area and Severity Index
EBV	Epstein-Barr virus
ECM	extracellular matrix
EGFR	epidermal growth factor receptor
ENT	ear, nose, and throat
EV	epidermodysplasia verruciformis
EVCH	eruptive vellus hair cysts
FACE	facial Afro-Caribbean childhood eruption
FAMMM	familial atypical multiple mole melanoma syndrome
FBGCR	foreign body giant cell reaction
FPHL	female pattern hair loss
FD	folliculitis decalvans
FDE	fixed drug eruptions
FFA	frontal fibrosing alopecia
FHP	facial hyperpigmentation
FKN	folliculitis keloidalis nuchae
FSP/FST	Fitzpatrick skin phototype/type
FUE	follicular unit extraction
FVC	forced vital capacity
G6PD	glucose-6-phosphate dehydrogenase
GA	glycolic acid
GRK	G-protein-coupled receptor kinase
GVHD	graft-versus-host disease
GWAS	genome-wide association studies
HAART	highly active antiretroviral therapy
HHV	human herpes virus
HIFU	high-intensity focused ultrasound
HIV	human immunodeficiency virus
HLA	human leukocyte antigen
HPV	human papilloma virus
HS	hidradenitis suppurativa
HSE	hydrocortisone, silicon and vitamin E lotion
HSV	herpes simplex virus
HT	hair transplantation
HTLV	human T-lymphotropic virus
HTS	hypertrophic scars

IGA	Investigator Global Assessment
IGH	idiopathic guttate hypomelanosis
IH	infantile hemangioma
IK	inverse keratoderma
IP	inflammatory pigmentations
IPL	intense pulsed light
IRS	immune reconstitution syndrome
ISD	infantile seborrheic dermatitis
IUS	intense ultrasound
IVIG	intravenous immunoglobulin
KP	keratosis pilaris
KPC	keratosis punctata of the palmar creases
KS	Kaposi's sarcoma; keloid scars
LE	lupus erythematosus
LED	light-emitting diode
LN	lichen nitidus
LP	lichen planus
LPP	lichen planopilaris
MAI	*Mycobacterium avium-intracellulare*
MAP	magnesium-L-ascorbyl-2 phosphate
MASI	Melasma Area and Severity Index
MB	multibacillary
MED	minimal erythema dose
MF	mycosis fungoides
MFU	multifollicular unit
MK	marginal keratoderma
MKTP	melanocytes-keratinocytes transplantation
MPHL	male pattern hair loss
MSH	melanocyte stimulating hormone
MTB	*Mycobacterium tuberculosis*
MTZ	microthermal zone
NB-UVB	narrowband-UVB
NLE	neonatal lupus erythematosus
NNRTI	non-nucleoside reverse transcriptase inhibitor
NRTI	nucleoside reverse transcriptase inhibitor
NSV	nonsegmental vitiligo
OTC	over-the-counter
PA	pityriasis alba
PAR-2	protease-activated receptor 2
PASI	psoriasis area and severity index
PB	paucibacillary
PCA	primary cutaneous amyloidosis; principal component analysis
PCBCL	primary cutaneous B-cell lymphoma
PCFCL	primary cutaneous follicle centre lymphoma
PCMZL	primary cutaneous marginal zone lymphoma
PDGF	platelet-derived growth factor
PDGFR	platelet-derived growth factor receptor
PDIR	premature desquamation of the inner root sheath
PDL	pulsed dye laser
PET	positron emission tomography
PFB	pseudofolliculitis barbae
PHACES	Posterior fossa abnormalities, Hemangioma-large, segmental, Arterial lesions, Cardiac/coarctation findings, Eye abnormalities, and Sternal abnormalities
PIH	postinflammatory hyperpigmentation
PMLE	polymorphous light eruption
PPARγ	peroxisome proliferator-activated receptor gamma
PPD	paraphenylenediamine
PPE	papular pruritic eruption
PPK	palmoplantar keratoderma
PR	pityriasis rosea
PUVA	psoralen plus ultraviolet light-A
PUVAsol	psoralen plus sunlight
PV	pityriasis versicolor
RegisCAR	Registry of severe cutaneous adverse reactions to drugs and collection of biological samples
RF	radiofrequency
RLX	relaxin
RSTL	relaxed skin-tension line
SA	*Staphylococcus aureus*
SCC	squamous cell carcinoma
SCLE	subacute cutaneous lupus erythematosus
SCORAD	Scoring Atopic Dermatitis Scale
SD	seborrheic dermatitis
SJS	Stevens-Johnson's syndrome
SLE	systemic lupus erythematosus
SLNB	sentinel lymph node biopsy
SM	subungual melanoma
SMAS	superficial musculoaponeurotic system
SNP	single-nucleotide polymorphism
SPF	sun protection factor
SS	Sézary's syndrome
SU	solar urticaria
SV	segmental vitiligo
TA	traction alopecia
TAC	triamcinolone acetate
TC	tinea capitis
TCA	trichloracetic acid
TEN	toxic epidermal necrolysis

TEWL transepidermal water loss
TIS Three-Item Severity Scale
TGF transforming growth factor
TLR toll-like receptors
TNM tumor-node-metastasis
TNPM transient neonatal pustular melanosis
TPMT thiopurine S-methyltransferase
UVA ultraviolet light-A
UVB ultraviolet light-B
UVR ultraviolet radiation
VDRL Venereal Disease Reference Laboratory
VETF Vitiligo European Task Force
VZV varicella zoster virus

1

CHAPTER 1
Defining Ethnic Dermatology: Challenges, Limitations, and Merits

Ophelia E. Dadzie
Department of Dermatology, North West London Hospitals NHS Trust and Centre for Clinical Science and Technology, University College London Division of Medicine, London, UK

Ethnic dermatology is a term used to describe an aspect of dermatology pertaining to individuals of diverse racial and ethnic backgrounds, who have richly pigmented skin and who share broadly similar cutaneous characteristics, notably the risk of scarring and dyspigmentation in response to cutaneous trauma. The term is analogous to skin of color, which is commonly used in North America. Defining the ethnic dermatology/skin of color cohort is challenging. However, broadly speaking and in this textbook, this cohort equates to individuals with Fitzpatrick skin phototypes (FSP) IV–VI and/or those of African, Asian, Middle Eastern, and/or Hispanic ancestry [1–2].

Unfortunately the use of terminologies such as ethnic dermatology and/or skin of color is not without its critics [3–4]. This is because of the problems and limitations of defining individuals by race, ethnicity, and/or skin pigmentation (an inherent problem in any scientific endeavor, which Richard Dawkins refers to as "the tyranny of the discontinuous mind") [5]. Essentially humans do not fit into neat racial or ethnic categories, but represent a continuum. Thus, at what point does someone become "black" or "white"? Since evidence indicates that modern humans originate from Africa [6], are we not all of African ancestry? Furthermore, in advocating separating and defining specific groups based on racial, ethnic and/or skin pigmentation, are we contributing to a divisive society? After all, at a genetic level, humans share more similarities than differences [6]. In addition, the use of FSP has specific limitations when applied to pigmented skin (see Box 1.1 for discussion on this issue).

There is also a risk that terms such as ethnic dermatology will justify studies that use skin color and/or ethnicity to validate a biological construction of race that is actually rooted in socio-historical processes [7], e.g., "scientific studies" that supported the notion that people of African race are less prone to contact sensitization and hence better able to handle certain noxious substances [8].

All the above represent challenging questions and difficulties that we have had to navigate before embarking on this ethnic dermatology/skin of color "journey." In response to these challenges we first have to consider the problems faced by practicing dermatologists.

First, epidemiological studies and data obtained from hospital and/or private practices indicate that there are differences in the observed dermatoses in different ethnic/racial groups [9–10]. For instance, hair and scalp disorders are one of the major concerns in individuals with Afro-textured hair. Cultural factors also impact the range of dermatoses observed (e.g., the misuse of skin lightening agents in certain racial and/or ethnic groups and the occurrence of prayer nodules in Muslims [Fig. 1.1]). Thus, as practicing dermatologists, we need to be aware of these observed differences and the implications for managing our patients. Second, studies have highlighted deficiencies in dermatological educational resources and the training of dermatologists with regard to the field of skin of color/ethnic dermatology [11–12]. Finally, the demographics of most western countries is changing. This means that

Ethnic Dermatology: Principles and Practice, First Edition. Edited by Ophelia E. Dadzie, Antoine Petit and Andrew F. Alexis.

Box 1.1 Fitzpatrick skin phototype

The Fitzpatrick skin phototype (FSP) classification system (see also Box 1.2) [15] is used routinely by dermatologists to categorize and classify different skin types. It was initially developed by Thomas Fitzpatrick in 1975 to classify persons with "white skin" in order to select the correct initial dose of UVA for an upcoming large-scale oral PUVA photo-chemotherapy trial in the US in the mid-1970s. It was based primarily on a brief personal interview to evaluate individuals' history of sunburn and tanning and not on phenotype (hair and eye color) [15]. The initial classification system placed all non-white/pigmented skin in one category, skin type V. Over time this classification system evolved and skin type V was divided into three sub-groups (IV, V, and VI) to encompass the diversity observed in those with pigmented skin. Furthermore, over time phenotype has had a greater impact on this classification system. It is the author's opinion that often phenotype is the prime method used to categorize skin types, instead of proper evaluation of ultraviolet radiation response. This is one of the main limitations of FSP as a method of classifying individuals with pigmented skin. Furthermore, studies have shown a lack of a direct correlation between constitutive skin color and response to ultraviolet radiation. For instance, individuals originating from various Asian countries encompass a diverse group and skin color does not always predict their skin phototypes [16,17]. Another limitation of FSP is that it is based on self-reported erythema sensitivity and tanning ability, and hence it is not quantitative or reliable. Furthermore, it cannot be applied for *in vitro* conditions. For this reason, new classification systems have been developed, such as the colorimetric classification of constitutive pigmentation by individual typology angle [18,19] and the Roberts skin classification system [20] (Box 1.2). The former is of relevance in the research setting, while the latter is of practical relevance in predicting response to trauma, prior to procedural dermatology. There are four elements to the Roberts skin classification system, which should be evaluated based on a thorough history, examination, and evaluation of test site reaction.

Box 1.2 Roberts skin type classification system

Fitzpatrick (FZ) scale: measures skin phototype

- FZ_1 White skin. Always burns, never tans
- FZ_2 White skin. Always burns, minimal tan
- FZ_3 White skin. Burns minimally, tans moderately and gradually
- FZ_4 Light brown skin. Burns minimally, tans well
- FZ_5 Brown skin. Rarely burns, tans deeply
- FZ_6 Dark brown/black skin. Never burns, tans deeply

Roberts hyperpigmentation (H) scale: propensity for pigmentation

- H_0 Hypopigmentation
- H_1 Minimal and transient (<1 year) hyperpigmentation
- H_2 Minimal and permanent (>1 year) hyperpigmentation
- H_3 Moderate and transient (<1 year) hyperpigmentation
- H_4 Moderate and permanent (>1 year) hyperpigmentation
- H_5 Severe and transient (<1 year) hyperpigmentation
- H_6 Severe and permanent (>1 year) hyperpigmentation

Glogau (G) scale: describes photoaging

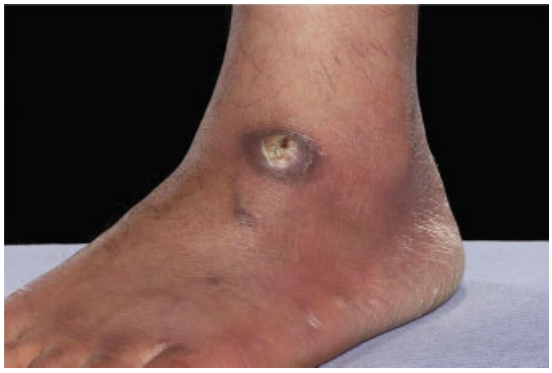
- G_1 No wrinkles, early photoaging
- G_2 Wrinkles in motion, early to moderate photoaging
- G_3 Wrinkles at rest, advanced photoaging
- G_4 Only wrinkles, severe photoaging

Roberts scarring (S) scale: describes scar morphology

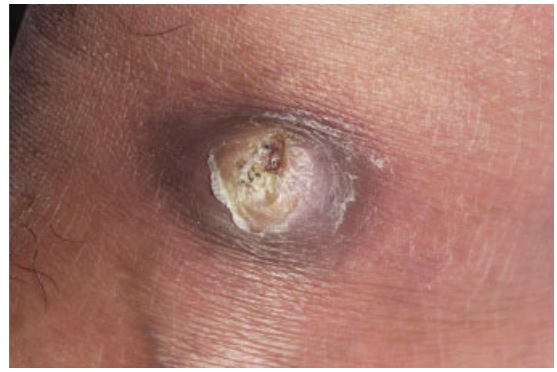
- S_0 Atrophy
- S_1 None
- S_2 Macule
- S_3 Plaque within scar boundaries
- S_4 Keloid
- S_5 Keloidal nodule

most practicing dermatologists need to be competent in the diagnosis and management of cutaneous disorders in people of diverse racial and ethnic backgrounds. For example, in 1990 the United States census revealed that 76% of the population was white; 12% black; 9% Hispanic; 2.8% Asian/Pacific Islander; and 0.7% American Indian, Eskimo, and Aleut [6]. Projections for the US population in 2050 forecast a substantial decline in the white population to approximately 53%, with an increase in other racial groups (black 14%; Hispanic 25%; Asian 8%; American Indian, Eskimo, and Aleut approaching 1%) [6]. In the United Kingdom, the 2001 census demonstrated that ethnic minorities made up 7.9% of the population, an increase of 53% compared to the previous 1991 census [13].

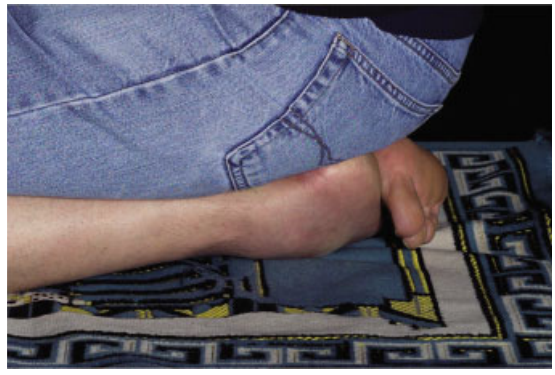
Based on the above and despite the valid limitations and difficulties in defining ethnic dermatology, the use of this term is helpful, given that it enables interested parties (dermatologists, other physicians, nurses, scientists, and patients) to come together to help advance this aspect of dermatology [2]. In time it is likely that advances in genomics will increase our understanding of the role of genetic variation among human populations, thereby influencing our use of terminologies such as ethnic dermatology and skin of color [14].



(A)



(B)



(C)

Figure 1.1 (A,B) A prayer nodule (talar callosity) located on the dorsal aspects of the left foot associated with the specific prayer stance undertaken by this devout Muslim (C).

References

1 Dadzie OE. Skin of colour: an emerging subspecialty of Dermatology. Br J Dermatol 2009; 160: 368–75.

2 Taylor SC, Cook-Bolden F. Defining skin of color. Cutis 2002; 69: 435–7.

3 Silver SE. Defining skin of color. Cutis 2003; 71: 141–2; author reply 142–3; discussion 143.

4 Elgart ML. Defining skin of color. Cutis 2003; 71: 142; author reply 142–3; discussion 143.

5 Dawkins R. *The Ancestor's Tale: A Pilgrimage to the Dawn of Life*, new edn. Phoenix, 2005.

6 Taylor SC. Skin of color: biology, structure, function, and implications for dermatologic disease. J Am Acad Dermatol 2002; 46: S41–62.

7 Lee C. "Race" and "ethnicity" in biomedical research: how do scientists construct and explain differences in health? Soc Sci Med 2009; 68: 1183–90.

8 Marshall J. *Skin Diseases in Africa*. Cape Town, South Africa: Maskew Miller Ltd, 1964.

9 Taylor SC. Epidemiology of skin diseases in people of color. Cutis 2003; 71: 271–275.

10 Alexis AF, Sergay AB, Taylor SC. Common dermatologic disorders in skin of color: a comparative practice survey. Cutis 2007; 80: 387–94.

11 Bede T, Papier A. Disparities in dermatology educational resources. J Am Acad Dermatol 2006; 55: 687–90.

12 Nijhawan RI, Jacob SE, Woolery-Lloyd H. Skin of color education in dermatology residency programs: does residency training reflect the changing demographics of the United States? J Am Acad Dermatol 2008; 59: 615–18.

13 http://www.ons.gov.uk/ons/rel/ethnicity/focus-on-ethnicity-and-identity/focus-on-ethnicity-and-identity-summary-report/focus-on---ethnicity-and-identity-summary-report.pdf (accessed 14 August 2012).