

# Dermatology

A handbook for medical students & junior doctors



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## **Preface**

This Handbook of Dermatology is intended for senior medical students and newly qualified doctors.

For many reasons, including modern medical curriculum structure and a lack of suitable patients to provide adequate clinical material, most UK medical schools provide inadequate exposure to the specialty for the undergraduate. A basic readable and understandable text with illustrations has become a necessity.

This text is available online and in print and should become essential reading. Dr Chiang is to be congratulated for her exceptional industry and enthusiasm in converting an idea into a reality.

Julian Verbov

Professor of Dermatology

Liverpool 2009

## **Preface to the 2nd edition**

Nicole and I are gratified by the response to this Handbook which clearly fulfils its purpose. The positive feedback we have received has encouraged us to slightly expand the text and allowed us to update where necessary. I should like to thank the BAD for its continued support.

Julian Verbov

Professor of Dermatology

Liverpool 2014

## Foreword to First edition

There is a real need for appropriate information to meet the educational needs of doctors at all levels. The hard work of those who produce the curricula on which teaching is based can be undermined if the available teaching and learning materials are not of a standard that matches the developed content. I am delighted to associate the BAD with this excellent handbook, designed and developed by the very people at whom it is aimed, and matching the medical student and junior doctor curriculum directly. Any handbook must meet the challenges of being comprehensive, but brief, well illustrated, and focused to clinical presentations as well as disease groups. This book does just that, and is accessible and easily used. It may be read straight through, or dipped into for specific clinical problems. It has valuable sections on clinical method, and useful tips on practical procedures. It should find a home in the pocket of students and doctors in training, and will be rapidly worn out. I wish it had been available when I was in need, I am sure that you will all use it well in the pursuit of excellent clinical dermatology!

Dr Mark Goodfield

President of the British Association of Dermatologists

## What is dermatology?

- Dermatology is the study of both normal and abnormal skin and associated structures such as hair, nails, and oral and genital mucous membranes.

## Why is dermatology important?

- Skin diseases are very common, affecting up to a third of the population at any one time.
- Skin diseases have serious impacts on life. They can cause physical damage, embarrassment, and social and occupational restrictions. Chronic skin diseases may cause financial constraints with repeated sick leave. Some skin conditions can be life-threatening.
- In 2006-07, the total NHS health expenditure for skin diseases was estimated to be around £97 million (approximately 2% of the total NHS health expenditure).

## What is this handbook about?

- The British Association of Dermatologists outlined the essential and important learning outcomes that should be achieved by **all** medical undergraduates for the competent assessment of patients presenting with skin disorders (*available on:* [http://www.bad.org.uk/library-media/documents/\(Link2\)%20Core%20curriculum\(2\).pdf](http://www.bad.org.uk/library-media/documents/(Link2)%20Core%20curriculum(2).pdf)).
- This handbook addresses these learning outcomes and aims to equip you with the knowledge and skills to practise competently and safely as a junior doctor.



## Essential Clinical Skills

- Detailed history taking and examination provide important diagnostic clues in the assessment of skin problems.

### Learning outcomes:

1. Ability to take a dermatological history
2. Ability to explore a patient's concerns and expectations
3. Ability to interact sensitively with people with skin disease
4. Ability to examine skin, hair, nails and mucous membranes systematically showing respect for the patient
5. Ability to describe physical signs in skin, hair, nails and mucosa
6. Ability to record findings accurately in patient's records

### Taking a dermatological history

- Using the standard structure of history taking, below are the important points to consider when taking a history from a patient with a skin problem (Table 1).
- For dark lesions or moles, pay attention to questions marked with an asterisk (\*).

**Table 1. Taking a dermatological history**

Main headings	Key questions
<b>Presenting complaint</b>	Nature, site and duration of problem
<b>History of presenting complaint</b>	Initial appearance and evolution of lesion* Symptoms (particularly itch and pain)* Aggravating and relieving factors Previous and current treatments (effective or not) Recent contact, stressful events, illness and travel History of sunburn and use of tanning machines* Skin type ( <i>see page 70</i> )*
<b>Past medical history</b>	History of atopy i.e. asthma, allergic rhinitis, eczema History of skin cancer and suspicious skin lesions
<b>Family history</b>	Family history of skin disease*
<b>Social history</b>	Occupation (including skin contacts at work) Improvement of lesions when away from work
<b>Medication and allergies</b>	Regular, recent and over-the-counter medications
<b>Impact on quality of life</b>	Impact of skin condition and concerns

**Examining the skin**

- There are four important principles in performing a good examination of the skin:  
**INSPECT, DESCRIBE, PALPATE and SYSTEMATIC CHECK** (Table 2).

**Table 2. Examining the skin**

Main principles	Key features
<b>INSPECT</b> <i>in general</i>	General observation Site and number of lesion(s) <i>If multiple</i> , pattern of distribution and configuration
<b>DESCRIBE</b> <i>the individual lesion</i>	<b><u>SCAM</u></b> <u>S</u> ize (the widest diameter), <u>S</u> hape <u>C</u> olour <u>A</u> ssociated secondary change <u>M</u> orphology, <u>M</u> argin (border)
<p><i>*If the lesion is pigmented, remember <b><u>ABCD</u></b></i></p> <p><i>(the presence of any of these features increase the likelihood of melanoma):</i></p> <p><u>A</u>symmetry (lack of mirror image in any of the four quadrants) Irregular <u>B</u>order Two or more <u>C</u>olours within the lesion <u>D</u>iameter &gt; 6mm</p>	
<b>PALPATE</b> <i>the individual lesion</i>	Surface Consistency Mobility Tenderness Temperature
<b>SYSTEMATIC CHECK</b>	Examine the nails, scalp, hair & mucous membranes General examination of all systems

**Communicating examination findings**

- In order to describe, record and communicate examination findings accurately, it is important to learn the appropriate terminology (Tables 3-10).

**Table 3. General terms**

Terms	Meaning
<b>Pruritus</b>	Itching
<b>Lesion</b>	An area of altered skin
<b>Rash</b>	An eruption
<b>Naevus</b>	A localised malformation of tissue structures

Example: (Picture Source: D@nderm)



Pigmented melanocytic naevus (mole)

**Comedone** A plug in a sebaceous follicle containing altered sebum, bacteria and cellular debris; can present as either open (blackheads) or closed (whiteheads)

Example:



Open comedones (left) and closed comedones (right) in acne

**Table 4. Distribution** (the pattern of spread of lesions)

Terms	Meaning
<b>Generalised</b>	All over the body
<b>Widespread</b>	Extensive
<b>Localised</b>	Restricted to one area of skin only
<b>Flexural</b>	Body folds i.e. groin, neck, behind ears, popliteal and antecubital fossa
<b>Extensor</b>	Knees, elbows, shins
<b>Pressure areas</b>	Sacrum, buttocks, ankles, heels
<b>Dermatome</b>	An area of skin supplied by a single spinal nerve
<b>Photosensitive</b>	Affects sun-exposed areas such as face, neck and back of hands

Example:



Sunburn

**Köebner phenomenon** A linear eruption arising at site of trauma  
Example:



Psoriasis

**Table 5. Configuration** (the pattern or shape of grouped lesions)

Terms	Meaning
<b>Discrete</b>	Individual lesions separated from each other
<b>Confluent</b>	Lesions merging together
<b>Linear</b>	In a line
<b>Target</b>	Concentric rings (like a dartboard)

Example:



Erythema multiforme

**Annular** Like a circle or ring

Example:

Tinea corporis  
(‘ringworm’)**Discoid /** A coin-shaped/round lesion**Nummular** Example:

Discoid eczema

**Table 6. Colour**

Terms	Meaning
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**Erythema** Redness (due to inflammation and vasodilatation) which blanches on pressure

Example:



Palmar erythema

**Purpura** Red or purple colour (due to bleeding into the skin or mucous membrane) which does not blanch on pressure – petechiae (small pinpoint macules) and ecchymoses (larger bruise-like patches)

Example:



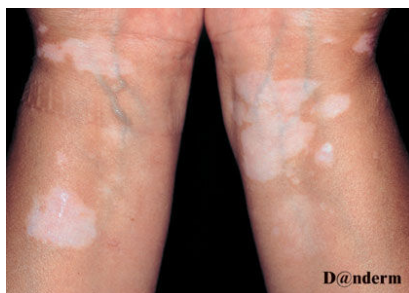
Henoch-Schönlein purpura  
(palpable small vessel vasculitis)

**Hypo-pigmentation** Area(s) of paler skin  
Example:



Pityriasis versicolor  
(a superficial fungus infection)

**De-pigmentation** White skin due to absence of melanin  
Example:



Vitiligo  
(loss of skin melanocytes)


**Hyper-pigmentation** Darker skin which may be due to various causes (e.g. post-inflammatory)  
Example:



Melasma  
(increased melanin pigmentation)



**Table 7. Morphology** (the structure of a lesion) – **Primary lesions**

Terms	Meaning
<b>Macule</b>	<p>A flat area of altered colour</p> <p>Example:</p>  <p>Freckles</p>
<b>Patch</b>	<p>Larger flat area of altered colour or texture</p> <p>Example:</p>  <p>Vascular malformation (naevus flammeus / 'port wine stain')</p>
<b>Papule</b>	<p>Solid raised lesion &lt; 0.5cm in diameter</p> <p>Example:</p>  <p>Xanthomata</p>



**Nodule** Solid raised lesion  $>0.5\text{cm}$  in diameter with a deeper component

Example: (Picture source: D@nderm)



Pyogenic granuloma  
(granuloma telangiectaticum)

**Plaque** Palpable scaling raised lesion  $>0.5\text{cm}$  in diameter

Example:



Psoriasis

**Vesicle** Raised, clear fluid-filled lesion  $<0.5\text{cm}$  in diameter

(small blister) Example:



Acute hand eczema  
(pompholyx)

**Bulla** Raised, clear fluid-filled lesion  $>0.5\text{cm}$  in diameter

(large blister) Example:



Reaction to insect bites

**Pustule** Pus-containing lesion <0.5cm in diameter

Example:



Acne

**Abscess** Localised accumulation of pus in the dermis or subcutaneous tissues

Example:



Periungual abscess  
(acute paronychia)

**W(h)eal** Transient raised lesion due to dermal oedema

Example:



Urticaria

**Boil/Furuncle** Staphylococcal infection around or within a hair follicle

**Carbuncle** Staphylococcal infection of adjacent hair follicles (multiple boils/furuncles)

**Table 8. Morphology - Secondary lesions** (lesions that evolve from primary lesions)

Terms	Meaning
<b>Excoriation</b>	Loss of epidermis following trauma

Example:



Excoriations in eczema

**Lichenification** Well-defined roughening of skin with accentuation of skin markings

Example:



Lichenification due to chronic rubbing in eczema

**Scales** Flakes of stratum corneum

Example:



Psoriasis (showing silvery scales)

## Crust

Rough surface consisting of dried serum, blood, bacteria and cellular debris that has exuded through an eroded epidermis (e.g. from a burst blister)

Example:



Impetigo

## Scar

New fibrous tissue which occurs post-wound healing, and may be atrophic (thinning), hypertrophic (hyperproliferation within wound boundary), or keloidal (hyperproliferation beyond wound boundary)

Example:



Keloid scars

## Ulcer

Loss of epidermis and dermis (heals with scarring)

Example:



Leg ulcers

**Fissure** An epidermal crack often due to excess dryness

Example:



Eczema

**Striae** Linear areas which progress from purple to pink to white, with the histopathological appearance of a scar (associated with excessive steroid usage and glucocorticoid production, growth spurts and pregnancy)



Example:



Striae



**Table 9. Hair**

Terms	Meaning
<b>Alopecia</b>	<p>Loss of hair</p> <p>Example:</p>  <p>Alopecia areata (well-defined patch of complete hair loss)</p>
<b>Hirsutism</b>	<p>Androgen-dependent hair growth in a female</p> <p>Example:</p>  <p>Hirsutism</p>
<b>Hypertrichosis</b>	<p>Non-androgen dependent pattern of excessive hair growth (e.g. in pigmented naevi)</p> <p>Example:</p>  <p>Hypertrichosis</p>

**Table 10. Nails**

Terms	Meaning
<b>Clubbing</b>	<p>Loss of angle between the posterior nail fold and nail plate (associations include suppurative lung disease, cyanotic heart disease, inflammatory bowel disease and idiopathic)</p> <p>Example: (Picture source: D@nderm)</p> <div data-bbox="432 510 601 763" data-label="Image"> </div> <p>Clubbing</p>
<b>Koilonychia</b>	<p>Spoon-shaped depression of the nail plate (associations include iron-deficiency anaemia, congenital and idiopathic)</p> <p>Example: (Picture source: D@nderm)</p> <div data-bbox="432 936 611 1171" data-label="Image"> </div> <p>Koilonychia</p>
<b>Onycholysis</b>	<p>Separation of the distal end of the nail plate from nail bed (associations include trauma, psoriasis, fungal nail infection and hyperthyroidism)</p> <p>Example: (Picture source: D@nderm)</p> <div data-bbox="432 1402 601 1617" data-label="Image"> </div> <p>Onycholysis</p>
<b>Pitting</b>	<p>Punctate depressions of the nail plate (associations include psoriasis, eczema and alopecia areata)</p> <p>Example: (Picture source: D@nderm)</p> <div data-bbox="432 1794 593 2007" data-label="Image"> </div> <p>Pitting</p>