Dermatological history and examination

Shalini Narayan

Abstract

Skin disease is very prevalent and, according to the British Skin Foundation, currently affects 8 million people in the UK and is increasing. According to Cancer Research UK, melanoma skin cancer is the fifth most common cancer in the UK. In 2014, 15,419 new cases of melanoma skin cancer and 131,772 new cases of non-melanoma skin cancer were registered. The skin has a major protective and important social function, and relatively minor skin complaints can cause much anguish. Most skin diseases are not life-threatening, but many are associated with high morbidity, in the form of discomfort, disfigurement, embarrassment, social stigmatism and loss of work and earnings. The impact of skin disease must not be underestimated, and the Dermatology Life Quality Index (DLQI) assessment tool has been developed to assess this formally. This article focuses on how to take a comprehensive dermatological history and examination for both skin rashes and skin malignancies. It also discusses the diagnostic methods and tools commonly used by dermatologists, as well as the DLQI system.

Keywords Dermatology; examination; hair; history; investigation; morphology; nails; skin; skin disease

Key points

- Ask patients when the rash/lesion first appeared, whether it is fixed or comes and goes, and whether there are any exacerbating or relieving factors
- Ask about skin symptoms, itching, pain, tenderness, burning and soreness
- Ask about family history, allergies (known, suspected), medications (topical, oral) and underlying medical conditions
- When examining the skin, look for patterns of distribution, symmetry/asymmetry, clustering or linear patterns and extensor or flexor predilection
- Examine individual lesions/rashes: is there crusting or hyperkeratosis, scaling, erythema, blisters, pustules, plaques, ulceration or pigmentation changes?
- Examine the hair and scalp, nails, mouth and genital area as appropriate
- Most diagnoses will be made clinically, but think about taking swabs (bacterial, fungal, viral), taking skin scrapings for mycology, dermatoscopy, allergy testing such as radioallergosorbent/prick testing and skin biopsy for culture, histology or immunofluorescence testing

Introduction

Up to one-quarter of primary care visits involve skin disorders, and most patients can be treated in primary care. Therefore it is important that primary care physicians have a working knowledge of how to manage common skin conditions and recognize patients who need to be referred to specialist services because of diagnostic difficulties or disease severity.

History

History-taking from a patient with skin disease should follow a systematic and logical framework. Important points to remember include the following.

How long have skin lesions been present?: ask the patient when the very first rash arose, as well as how long the current rash may have been present. Some eruptions (e.g. drug eruptions, allergic contact dermatitis) begin acutely, whereas others (e.g. eczema, psoriasis, pityriasis versicolor) are more insidious. The time course of individual lesions is important: urticarial lesions typically come and go within 24 hours, leaving no marks, whereas psoriatic plaques typically change over weeks to months.

Where did the first skin lesions arise?: some rashes have a typical distribution, which can give clues to the diagnosis. For example, the extensor surfaces and hairline are typical for psoriasis, the flexor surfaces for atopic eczema and the toe webs for tinea pedis.

Are there any symptoms?: for example, does it itch or cause pain? Some skin conditions (e.g. scabies, eczema) can be extremely itchy, while others (e.g. herpes zoster) are painful. Some skin conditions (e.g. erythropoietic protoporphyria) cause burning.

Oral and topical medications: the history of topical treatments used and the response to them is important and can help to confirm clinical suspicions. Inflammatory skin rashes, for example eczema, should respond to topical anti-inflammatory agents such as topical corticosteroids. Mild cutaneous infection should respond to topical antimicrobial agents. Topical treatments can, however, also be the cause of rashes such as allergic contact dermatitis and photoallergic reactions.

Ask which medication was being taken at the time of onset of the rash. Possible drug-related rashes are a common reason for requesting a dermatological opinion for medical in-patients.

Shalini Narayan *MB ChB FRCP Cert Med Ed is a Consultant Dermatologist at Bristol Royal Infirmary, Bristol, UK. Her clinical practice includes all aspects of dermatology. She has a particular interest in both undergraduate and postgraduate medical education.*
Competing interests: none declared.

Please cite this article in press as: Narayan S, Dermatological history and examination, Medicine (2017), http://dx.doi.org/10.1016/j.mpmed.2017.03.007

Make a comprehensive list of medications the patient is currently taking and any recent changes, particularly in the 2–3 weeks before the rash began (although medications taken up to 2 months beforehand can be implicated in drug rash eosinophilia systemic symptoms).

Many individuals use alternative therapies such as homoeopathic and herbal remedies, but may not offer this information in a 'conventional' medical setting. Specific questions can be asked about such therapies and also about over-the-counter medications.

General medical history: it is important to be aware of a wide range of systemic conditions that can manifest as skin conditions (Table 1, Figure 1).

Occupational and recreational history: occupational dermatoses are common and are a frequent cause of time lost from work. Allergic contact dermatitis is more common in certain occupations (Table 2). Evidence suggesting occupational dermatosis includes:

- similar dermatoses in other employees at the patient's workplace
- a time relationship between exposure and dermatitis
- improvement of the rash when the patient is away from the workplace.

It is also important to ask about hobbies, recreation and sporting activities. These can lead to contact allergies, but the patient may not associate them with their condition.

Family history: some skin conditions have a genetic basis; examples include atopic eczema, psoriasis, ichthyosis and keratoderma.

Contact history: certain skin conditions (e.g. impetigo, scabies) are acquired from others. A history of family and social contacts, including affected children at school, is important to avoid continuing cross-infection.

Current residence: this is important with infectious outbreaks (e.g. scabies).

Cutaneous manifestations of some systemic conditions

Diabetes mellitus
- Granuloma annulare
- Necrobiosis lipoidica (Figure 1)
- Xanthoma
- Bullous disease
- Diabetic dermopathy
- Diabetic stiff skin
- Neuropathic leg ulceration
- Increased risk of cutaneous infection (e.g. candidiasis)

Sarcoidosis
- Lupus pernio of the nose
- Erythema nodosum
- Granulomatous invasion of old scars
- A wide variety of presentations in cutaneous sarcoid

Internal malignancy
- Paraneoplastic pemphigus (solid organ cancer)
- Dermatomyositis (lung cancer, breast cancer, upper gastrointestinal tract cancer, any solid organ tumour)
- Erythema gyratum repens (lung, uterus and breast cancer)
- Acanthosis nigricans

Genodermatoses: genetically determined syndromes with a cutaneous component that predisposes at-risk individuals to developing cancer. Skin diseases in this group include:
- Cowden's disease
- Gorlin's syndrome (basal cell naevus syndrome)
- Neurofibromatosis
- Torre–Muir syndrome

Porphyria cutanea tarda
- Vesicles, blisters, erosions in light-exposed areas
- Skin fragility
- Hypertrichosis
- Scarring

Hyperthyroidism/Graves' disease
- Pretibial myxoedema
- Thyroid acropachy (from periosteal new bone)
- Diffuse alopecia
- Palmar erythema

Addison's disease
- Hyperpigmentation of skin and mucous membranes caused by pituitary melanocyte-stimulating hormone and adrenocorticotropin

Cushing's syndrome
- Thinning of the skin, spontaneous bruising, striae, diffuse alopecia, acne, hirsutism

Acromegaly
- Acne
- Skin thickening

Table 1

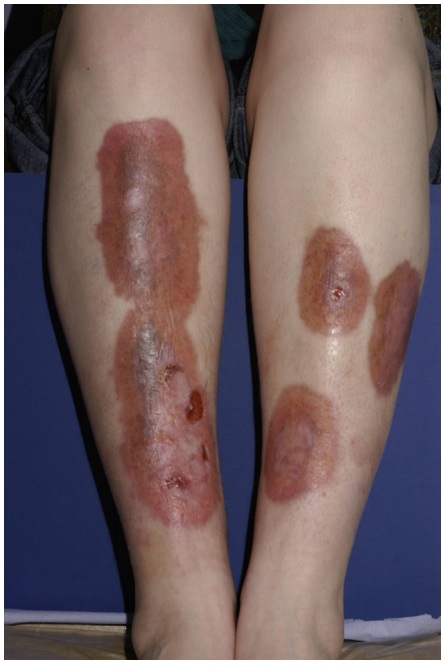

Figure 1 Necrobiosis lipoidica of the shins associated with diabetes mellitus.

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