

## CHAPTER 3

# Dermatology

Dermatology is a broad topic, but generally pruritus, hyperpigmentation, erythema, loss of hair, trichosis, nail disorders, erythema nodosum and multifforme, purpura, vasculitis, psoriasis, urticaria, eczema, vitiligo, pemphigus and pemphigoid tend to be favourite topics.

## Questions

### Question 1

A 25-year-old man presents with a skin eruption affecting his face, scalp and chest. It has been deteriorating over the past few months. He is HIV-positive and is currently on zidovudine. On examination, he has a red, scaly eruption on his scalp, ears, nasolabial folds, and eyebrows. There are also dry, scaly areas in the presternal and interscapular areas, with extensive follicular papules. What is the most likely diagnosis?

- A atopic eczema
- B Kaposi's sarcoma
- C rosacea
- D seborrhoeic eczema
- E psoriasis

### Question 2

Which of the following is not associated with neurofibromatosis type I?

- A eight café au lait spots
- B one plexiform neurofibroma
- C three Lisch nodules
- D sphenoid dysplasia
- E acoustic neuroma

### Question 3

A 25-year-old man presents with non-pruritic white spots on his trunk. On examination, there are multiple sharply demarcated round hypopigmented macules of up to 2 cm in size, some of which appear to have coalesced. On gentle scratching, a delicate scaling is noted. There is no associated lymphadenopathy. There is no family history of depigmentation. Organisms are seen on direct microscopy, and under a Wood's lamp these lesions fluoresce with a pale greenish colour. The most likely diagnosis is:

- A psoriasis
- B pinta
- C leprosy
- D vitiligo
- E pityriasis versicolor

**Question 4**

A 36-year-old man presented with a three-week history of a rash on his abdomen and trunk. He first noticed a red, slightly pruritic lesion just to the left of his umbilicus several weeks ago. It was scaly and slightly raised. About seven days later, several similar but smaller lesions began to appear around the initial one. They continued to spread until they covered his entire abdomen and chest. On examination, there is a 3 cm × 1 cm oval lesion lateral to his umbilicus. The other lesions on his trunk appear the same except they are smaller. The most likely diagnosis is:

- A tinea versicolor
- B guttate psoriasis
- C drug eruption
- D pityriasis rosea
- E secondary syphilis

**Question 5**

A 45-year-old gardening enthusiast was referred to the Dermatology clinic with a well-circumscribed raised erythematous lesion on her finger. The lesion had enlarged steadily over the previous three weeks, was tender and bled easily when touched. The most likely diagnosis is:

- A cutaneous anthrax
- B keratoacanthoma
- C malignant melanoma
- D squamous cell carcinoma
- E pyogenic granuloma

**Question 6**

Which of the following is not commonly associated with drug-induced exacerbation of psoriasis?

- A anti-malarial agents
- B beta-blocking agents
- C non-steroidal anti-inflammatory agents
- D lithium
- E thiazide diuretics

## Answers to Chapter 3: Dermatology

These solutions aim to provide the reason(s) for the right answer, and also the reason(s) for the wrong answers being excluded.

- 1 **Answer D:** Severe seborrhoeic eczema and seborrhoeic folliculitis are common in HIV infection, possibly due to an overgrowth of, or abnormal reactivity to *Malassezia* yeasts. The scalp, face, presternal area and interscapular regions typically are affected. HIV is also associated with Kaposi's sarcoma, which presents with red, brown or purplish macules, nodules or plaques and is associated with human herpes virus 8 infection. Herpes zoster typically presents with vesiculation.
- 2 **Answer E:** All of options A–D are associated with neurofibromatosis type 1. D is an example of a distinctive osseous lesion; other examples include thinning of long bone cortex with or without pseudoarthroses. NF-1 is an autosomal dominant condition that shows complete penetrance and variable expression. It is caused by mutations in the NF1 gene in 17q11.2. Complications of this condition include learning difficulties, plexiform neurofibromas of the head and neck, scoliosis, hypertension, intracranial tumours and malignant change in cutaneous neurofibromas. Hypertension is seen in 5–6% of patients with NF-1, usually caused by renal artery stenosis or pheochromocytoma, and the screening investigations in this patient should include 24-hour urinary VMA and catecholamine profile and plasma renin assay. Acoustic neuroma is associated with neurofibromatosis type 2, and may be confirmed by CT or MRI scan usually.
- 3 **Answer E:** The condition is pityriasis versicolor associated with the yeast *Malassezia*. The most appropriate antifungal treatment for pityriasis versicolor is to use a topical imidazole or terbinafine (Selsun). Alternative treatments include selenium sulphide lotion applied daily for 10–14 days.
- 4 **Answer D:** Pityriasis rosea is a self-limited, inflammatory dermatosis of unknown cause. It characteristically presents with oval, scaly, tannish-pink patches or plaques on the trunk, the generalised eruption being preceded by a single lesion ('herald' patch) by days to weeks. Typically, the lesions follow the skin cleavage lines. The lesions usually disappear within two months without any treatment.
- 5 **Answer E:** A pyogenic granuloma is a benign vascular lesion of the skin and mucosa, usually solitary in nature, often appearing as a glistening red papule or nodule that is prone to bleeding and ulceration. Lesions often grow rapidly over weeks, frequently at sites of trauma, and commonly involve the digits, arms, head and face. Keratoacanthoma is a rapidly growing nodular lesion with a central crater full of keratinous material. Clinically and pathologically

the lesions resemble squamous cell carcinoma. Cutaneous anthrax would not be expected on the basis of the history given. Anthrax lesions begin as red-dened, indurated papules, later becoming necrotic with a characteristic black centre. Malignant melanomas may occur at any site, but most are pigmented. However, amelanotic melanoma is important in the differential diagnosis of pyogenic granuloma.

- 6 **Answer E:** The simple explanation is that all of the others can exacerbate existing psoriasis.