

# **Hypopigmentary Disorders**

## Ranthilaka R. Ranawaka

The following six children came with hypopigmented patches on the face:



- 1. A 9-year-old boy came with this asymptomatic patch on the face.
  - (a) What is your diagnosis?
  - (b) How do you manage this condition?



- 2. An 11-year-old girl came with this patch on the face. She had similar lesions on her forearm.
  - (a) What is the possible diagnosis?
  - (b) What is the important clinical sign you would elicit?
  - (c) What bed side test you do to confirm your diagnosis?

R. R. Ranawaka (⊠) General Hospital Kalutara, Kalutara, Sri Lanka

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- 3. A 12-year-old boy has had these patches on the face and the trunk for more than 1year.
  - (a) What is your diagnosis?
  - (b) What important clinical signs would help you to come to the correct diagnosis?



- 4. A 10-year-old boy had this itchy patch for 3 months. This started after taking part in his school sportsmeet.
  - (a) What is your diagnosis?
  - (b) How do you manage this condition?



- 5. A 10-year-old boy had developed this skin patch 2 months ago.
  - (a) What is your diagnosis?
  - (b) How do you manage this condition?



- 6. A 7-year-old girl had this depigmented patch for last 2 months. The mother said that the child had a black naevus on that site for many years.
  - (a) What is your diagnosis?
  - (b) How do you manage this condition?

#### Answers

 Pityriasis alba. A rounded, oval, or irregular hypopigmented patch that is usually not well marginated.

Management: topical emollient twice daily

2. Leprosy

Test sensation. Lesions on the face do not elicit sensory impairment due to overlapping sensory nerve supply on the face.

Slit-skin smear for bacillary index and morphological index

- Pityriasis versicolor Note the satellite lesions and mild scaling. Scaling accentuates after a wash and dried up.
- Polymorphic light eruption. History of itching and/or redness after sun exposure. Mild topical steroid twice daily. Broadspectrum sunscreen if appear repeatedly or if the child is engaged in outdoor sports.
- 5. Vitiligo: Asymptomatic. Look for other sites 0.1% tacrolimus ointment twice daily
- Halo naevus Reassurance. 0.1% tacrolimus ointment twice daily if depigmentation is marked.

#### 42.1 Introduction

Pigmentary disorders, both hypopigmentary and hyperpigmentary, are common in pigmented skin. More common hypopigmentary disorders, such as leprosy, vitiligo, and photodermatoses, are discussed in separate chapters. Pityriasis alba, progressive macular hypomelanosis, and idiopathic guttate hypomelanosis are easily visible, common cosmetic problems in pigmented skin, and by no means a concern in White skin (Damevska et al 2019).

#### 42.2 Pityriasis Alba

Pityriasis alba occurs predominantly in children between the ages of 3 and 16 years. This often coexists with atopic dermatitis and is considered one of its milder forms. Although it is common worldwide, its incidence is markedly higher in darker skin phototypes. Even though its aetiology is unknown, possible reported triggering factors include sunlight, beauty treatments, and microorganisms, among others (Miazek et al. 2015; van Geel and Speeckaert 2016).

**Clinical Features** The individual lesion is a rounded, oval, or irregular hypopigmented patch that is usually not well marginated. Most cases persist for some months, and some may still show hypopigmentation for a year or more after all scaling subsides (Jadotte and Janniger 2011).

**Differential Diagnosis** Vitiligo, naevus depigmentosus, pityriasis versicolor, tuberculoid leprosy.

**Treatment** Emollient, mild topical corticosteroids, topical tacrolimus, or pimecrolimus in resistant cases (Rigopoulos et al. 2006) (Fig. 42.1a, b).

#### 42.3 Progressive Macular Hypomelanosis (PMH)

Asymptomatic ill-defined nummular hypopigmented non-scaly macules affecting the trunk. The condition typically affects areas rich in sebaceous glands (Petersen et al. 2017). The lesions often converge in and around the midline. It is mostly common in adolescents and young adults. This is clearly visible and easily diagnosed clinically in pigmented skin (Kumarasinghe et al. 2006).

**Differential Diagnosis** Pityriasis versicolor (pale yellow fluorescence in Wood's lamp).

**Investigations** In White skin, Wood's light examination shows orange-red fluorescence.

**Management** Good response to 5% benzoyl peroxide hydrogel and 1% clindamycin lotion/ gel in combination (Santos et al. 2011) (Figs. 42.2, 42.3, and 42.4).



Fig. 42.1 (a, b) Pityriasis alba in 19-year-old and 10-year-old girls. The 10-year-old was a known atopic and had eczema on feet



**Fig. 42.2** Progressive macular hypomelanosis in a 28-year-old man. This clinically resembles pityriasis versicolor, but not scaly

Fig. 42.3 PMH in a 24-year-old woman



Fig. 42.4 PMH in a 25-year-old woman showing the anterior chest, the upper abdomen, and the back of the trunk

#### 42.4 Idiopathic Guttate Hypomelanosis (IGH)

Acquired leukoderma with discrete round to oval porcelain-white macules approximately 2–5 mm diameter increasing in number with age. It is seen in up to 80% of patients over the age of 70 years and mostly seen in shin while occasionally on extensor aspect of arms and forearms. Some suggest that IGH may reflect the normal aging or photoaging process. No spontaneous re-pigmentation occurs (Juntongjin and Laosakul 2016; Wambier et al. 2018; Laosakul and Juntongjin 2017).

**Management** Treatment is not usually required (Fig. 42.5a–d).

# **42.5 Depigmented Halo** (Figs. 42.6, 42.7, 42.8, and 42.9)

#### 42.6 Hypopigmented Naevi

Hypopigmented naevi and pigmentary mosaicism are markedly visible in pigmented skin (Kromann et al. 2018) (Fig. 42.10a, b).

#### 42.7 Pigmentary Mosaicism

Pigmentary mosaicism is a term that describes varied patterns of pigmentation in the skin caused by genetic heterogeneity of the skin cells. In a



**Fig. 42.5** (**a**–**d**) Idiopathic guttate hypomelanosis is common in middle-aged women in our setting. They are worried that they are getting vitiligo. Reassurance is adequate in most



Fig. 42.6 Halo naevus. Recent onset of depigmented halo around a congenital epidermal naevi



Fig. 42.8 Hypopigmented halo around the BCG scar in a 7-month-old infant



Fig. 42.7 Halo naevus. Depigmented halo around an intradermal naevus



Fig. 42.9 Cutaneous leishmaniasis with hypopigmented halo. This association is common in our pigmented skin



Fig. 42.10 (a, b) A solitary congenital depigmented naevi in infants

substantial number of cases, pigmentary mosaicism is observed alongside extracutaneous abnormalities typically involving the central nervous system and the musculoskeletal system (Kromann et al. 2018; Nehal et al. 1996; Kishimoto et al. 2016) (Figs. 42.11a, b and 42.12).

### 42.8 Unclassified Hypopigmented Disorders

The following are few patients who came to the skin clinic with hypopigmented or depigmented skin patches which have appeared within few months. Histopathology was inconclusive in all (Figs. 42.13, 42.14, 42.15 and 42.16).





Fig. 42.11 (a, b) Pigmentary mosaicism in infants



**Fig. 42.12** Pigmentary mosaicism in a 5-year-old girl showing streaks and whorls of hypopigmentation or hyperpigmentation following Blaschko's lines



**Fig. 42.13** Asymptomatic hypopigmented patches on the buttock of an 11-year-old girl which had appeared gradually over 3 months. Other areas of the skin were unaffected. Differential diagnosis: hypopigmented mycosis fungoides, early vitiligo. Histopathology was inconclusive. The skin patches disappeared spontaneously over 6 months after topical emollients



**Fig. 42.14** A 12-year-old boy had developed these asymptomatic skin patches over 1 month. Differential diagnosis: vitiligo, hypopigmented mycosis fungoides, post-inflammatory depigmentation. History was not suggestive of post-inflammatory depigmentation. Histopathology was inconclusive and non-specific changes only



Above child showing back of the trunk and left flank (Figs. 42.15 and 42.16).



21.06.2016

15.10.2018

**Fig 42.15** (a) A 34-year-old man had developed these asymptomatic skin patches over 2 months. He gave a history of working outdoor throughout a sunny day during his house repair. Within 24 h, he had developed erythematous patches which were depigmented over 2 months as shown above. These depigmented patches were confined to the back of the trunk and a few lesions on upper arms. Other areas of the body were unaffected. Differential

diagnoses were post-inflammatory depigmentation following acute sunburn, vitiligo, and hypopigmented mycosis fungoides. Skin biopsies performed from two vitiliginous patches showed only non-specific changes. Basal layer showed increased pigmentation. (b) Two years later, he came to us. His skin patches showed mottled re-pigmentation after topical Ayurvedic treatments



**Fig. 42.16** An 8-year-old Buddhist priest came with these hypopigmented patches on the front and back of the trunk and limbs for more than 3 years. These lesions were bound down and firm to touch, and some lesions showed atrophy. Differential diagnoses were vitiligo, hypopigmented mycosis fungoides, and morphoea. Repeatedly histopathology showed only non-specific changes

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