Clinical Quiz

Dermatology: What’s Your Diagnosis?

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CASE 1:
A 24-year-old female presents with a 6 month history of depigmented patches developing on the face and neck.

What’s your diagnosis?

a. Pityriasis alba
b. Vitiligo
c. Postinflammatory hypopigmentation
d. Nevus depigmentosus

Answer: b. Vitiligo

Vitiligo (answer b) is an autoimmune skin condition occurring in 0.5% to 1% of the European and American population1. It is characterized by well-demarcated depigmented macules and patches affecting the skin. There are three main types of vitiligo: localized, generalized and universal. Localized vitiligo is further subtyped into focal, segmental, and mucosal vitiligo2. Generalized vitiligo, the most common type, is subtyped into acrofacial, vulgaris, or a mixed subtype. The term “universal vitiligo” is used when more than 80% of the skin is involved3. Onset of vitiligo may be at any age, with a mean age of onset of 22 to 25 years depending on the geographic region4. On histology, a complete absence of melanocytes is seen. Treatment consists of photoprotection along with topical glucocorticoids or calcineurin inhibitors for localized cases and NB-UVB for more generalized involvement.

Pityriasis alba presents as ill-defined hypopigmented patches in atopic individuals.

Postinflammatory hypopigmentation presents as hypopigmented macules with a preceding history of inflammation, for example from psoriasis or eczema, in the same area.

Nevus depigmentosus presents as a congenital nevus at birth or in early childhood and is a misnomer, in that it is hypopigmented rather than depigmented.

CASE 2:
A 50 year old otherwise healthy male presents with a 6 week history of progressive asymptomatic lesions on his left hand.

What’s your diagnosis?

a. Granuloma annulare
b. Tinea corporis
c. Lichen planus
d. Papular sarcoid

Answer: a. Granuloma annulare

Granuloma annulare (GA) (answer a) is characterized by firm, smooth, shiny dermal papules and plaques most often in an annular (circular) arrangement. The lesions occur most commonly on the dorsa of the hands. However, they may also be seen on the feet, elbows and knees. Localized GA usually occurs in children and young adults, however a more generalized form can be found in older patients. Skin biopsy is not usually required, however biopsy can be performed for definitive diagnosis to rule out other, more serious skin conditions. GA is a self-limited skin disorder and in most cases the lesions will disappear within 2 years5. Associations between GA and diabetes...
mellitus, as well as thyroid disease, have been reported. More recently, there have been studies showing an increased risk of dyslipidemia in patients with GA. As a result, it is important to perform the adequate screening tests in patients affected with GA. Treatment is not required. However, when desired, therapies for localized disease include topical glucocorticoids or intralesional steroid injections.

Tinea corporis, commonly known as “ringworm”, is a dermatophyte infection that generally presents with enlarging annular scaly plaques. GA is most often misdiagnosed as tinea corporis and the key features of tinea corporis that are not seen in GA are pruritus and scaling. Lesions of GA are smooth and generally asymptomatic. When tinea corporis is suspected, potassium hydroxide (KOH) scrapings and culture should be performed for confirmation of fungal infection.

Lichen planus is an inflammatory dermatosis involving the skin and/or mucous membranes. Skin lesions consist of pruritic, purple, polygonal, planar papules and plaques. Often seen are overlying fine, white lines on the lesions as well as on the buccal mucosa, called Wickham striae.

Sarcoidosis is a multisystem granulomatous disease of unknown cause, primarily affecting the lungs. Skin lesions may mimic GA and if sarcoidosis is suspected, biopsy should be performed to determine the diagnosis. Clues to sarcoidosis may include dyspnea, cough, or constitutional symptoms such as fever, fatigue, and weight loss.

**CASE 3:**

A 21-year-old man presents with thin brown plaques on the upper torso, which appear every summer.

**What’s your diagnosis?**

a. Guttate psoriasis  

b. Tinea corporis  

c. Post-inflammatory hyperpigmentation  

d. Pityriasis versicolor

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**Answer:** d. Pityriasis versicolor

Pityriasis versicolor (answer d), is a noncontagious skin condition caused by the overgrowth of Malassezia species. The term “tinea versicolor” is commonly used, although this condition is not caused by a dermatophyte. Skin findings are characterized by well-demarcated patches with variable pigmentation (hypopigmented, hyperpigmented or erythematous), hence the name “versicolor”. When scraped, a fine characteristic scale appears, known as “grattinage”. The lesions are most commonly found on the trunk. Clinical findings can be confirmed by KOH preparation, showing a classic “spaghetti and meatballs” appearance of clusters of yeast cells and long hyphae. Predisposing factors include sweating, oily skin, and warm weather. Given the high risk of recurrence, management involves treatment with topical or systemic antifungals based on the degree of skin involvement, generally followed by secondary prophylaxis with a topical agent such as selenium sulfide lotion.

Guttate psoriasis presents as diffuse erythematous papules and plaques with overlying silvery scale. It is often preceded by a streptococcal infection.

Post-inflammatory hyperpigmentation presents as ill-defined hyperpigmented macules and patches following a resolved cutaneous eruption, such as eczema or psoriasis. Scales will be absent.

Tinea corporis, commonly known as “ringworm”, is a dermatophyte infection that normally presents with slowly extending annular plaques with scales and central clearing. KOH preparation and fungal culture are used to confirm the presence of dermatophyte infection.
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References