

This month – 7 cases:

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Case 1

Significant Leg Hair Loss

This 45-year-old male has had significant hair loss on both of his outer lower legs for several years. It is asymptomatic and he is in good health.

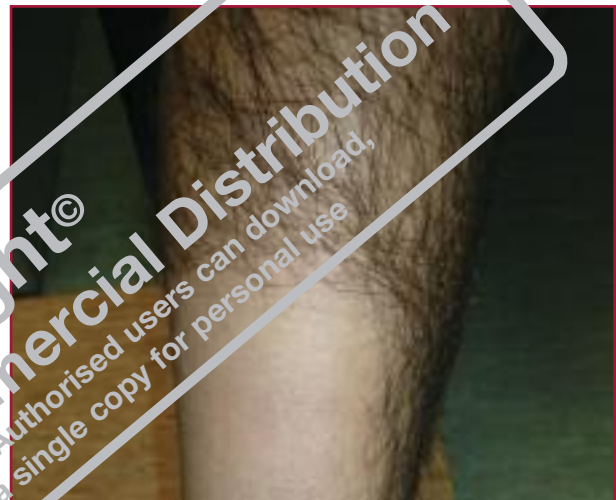
What is your diagnosis?

- Factitious shaving of the area
- Chronic rubbing
- Chronic fungal infection
- Alopecia areata
- Peroneal alopecia

Answer

Peroneal alopecia (**answer e**) is a physiologic alopecia that occurs in one third of males. It may also occur in females.

The loss occurs in the distribution of the superficial branch of the peroneal nerve, which influences the anterolateral lower legs, above the ankle.



It is particularly dramatic in this individual, because of the density of the black hair on his legs. The cause is unknown.

Stanley Wine, MD, FRCPC, is a Dermatologist in North York, Ontario.



Case 2

Hair Loss on the Head

A 7-year-old boy presents with localized hair loss over the occiput. On closer examination, he has several “exclamation-like” hairs.

What is your diagnosis?

- a. Trichotillomania
- b. Tinea capitis
- c. Alopecia areata
- d. Telogen effluvium
- e. Loose anagen syndrome

Answer

Alopecia areata (**answer c**) is a relatively common non-scarring disorder that occurs at any age. It is characterized by the sudden appearance of sharply defined round patches of hair loss, single or multiple that may coalesce. Skin within the involved areas is smooth, soft and devoid of hair, although scattered long hairs may occasionally be seen. “Exclamation-like” hairs are characteristic of this disorder, and can be found around the margins of alopecia. They appear as broken-off hairs with attenuated bulbs, and short stumps (distal ends broader than proximal ends). The bulb represents the dot of the exclamation mark. Alopecia areata most commonly involves the scalp; however, any hair bearing area may be affected.

Ophiasis is a rare form of this disorder that begins with hair loss at the occiput and extends anteriorly and bilaterally in the shape of a wave. Nail defects may be associated with this condition and most commonly present as geometric fine pitting, trachonychia and a hammered brass appearance of the dorsal nail plate. There may also be erythema and mottling of the lunulae. The etiology of this disorder is thought to be autoimmune, mediated by T cells attacking hair follicles and nails. The course of the disease is variable. Generally, the more patches of alopecia, the less likely permanent recovery will occur. There is no cure for this disease; however, there are therapies to control the condition. Triamcinolone acetonide intralesional injections are used in the adult population with good effect on hair regrowth. However, these are too uncomfortable for most children. Treatment in children involves class I or II topical corticosteroids.



In contrast, trichotillomania begins more insidiously with irregular linear or rectangular patches of partial hair loss. These angular lesions contain areas of broken hairs of different lengths. Trichotillomania is a compulsive habit or desire to pluck hair.

Tinea capitis involves erythematous scaly patches of alopecia caused by a dermatophytic trichomycosis of the scalp. Clinical presentations vary.

Telogen effluvium is the most common type of alopecia in children and is characterized by varying degrees of diffuse scalp hair thinning. Short new hairs may be seen emerging throughout the scalp. No scalp abnormalities are present. The nails may display transverse lines or grooves (Beau lines). This self-limited condition is caused by a variety of stressors that result in the majority of hair shifting from anagen to telogen phase.

Loose anagen syndrome describes an autosomal dominant disorder of loosely anchored anagen hairs. Typically, a blonde child between two to five-years old presents with diffuse or patchy thinning with short scalp hair of uneven length. Matting of the hair is commonly noted in the occipital area. The anagen hairs display ruffled cuticles and pigmented, misshapen bulbs. Fortunately, this condition tends to improve with time.

Kristy Bailey is a final year medical student at the University of Ottawa, Ontario.

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Case 3

Itchy Upper Chest Macules

A 50-year-old male presents with several round, slightly itchy brown macules on his chest and upper back of a few months duration.

What is your diagnosis?

- a. Tinea versicolor
- b. Granuloma annulare
- c. Pityriasis rosea
- d. Tinea corporis
- e. Post-inflammatory hyperpigmentation

Answer

Tinea versicolor (or pityriasis versicolor) (**answer a**) is a common, benign superficial fungal infection caused by the *Malassezia* species rather than a true dermatophyte infection. It presents as hyper- or hypopigmented patches with fine scales on the trunk, and less commonly on the proximal arms and legs. Some individuals appear to be predisposed and develop recurrences in hot, humid weather.

The pigmentary abnormalities resolve slowly after effective therapy, typically four to six weeks later, so patience is recommended. Selenium sulfide can be applied once daily for seven days and left on for 10 minutes. Antifungal creams applied once or twice daily for two to three weeks is also effective. Various dosing schedules for oral antifungals such



as ketoconazole and itraconazole can be used for extensive cases and as a preventative measure. Exercising after each oral dose allows more medication to reach the skin and is more efficacious.

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Case 4

Blotchy Patches and Back Pain

This lady presented with a non-itchy skin mottling, which she has had on the right side of her back for the last year. She has had severe back pain for approximately 14 months. Her back pain was investigated, as there was concern that it could be secondary to her previous breast cancer, but her tests revealed only lumbosacral osteoarthritis, for which she was advised to have a combination of acetaminophen and diclofenac. She found that applying heat pads to her back helped.

What is your diagnosis?

- a. Erythema gyratum repens
- b. Erythema ab igne
- c. Erythema induratum
- d. Erythema nodosum

Answer

Erythema ab igne (**answer b**) refers to skin that is reddened due to long-term exposure to infrared radiation.

Erythema ab igne (EAI) is a skin reaction caused by exposure to heat. It was once commonly seen in the elderly who stood or sat close to open fires or electric heaters. Since central heating has become widely used, this cause has become less common, however, erythema ab igne is still sometimes found in people exposed to heat from other sources such as, heat packs, laptops, and hot water bottles. It may also be seen in people with hypothyroidism or lymphedema.

Overexposure to heat causes a mild red rash that might be described as 'blotchy.' Prolonged and repeated exposure causes a marked redness and colouring of the skin. The skin and underlying tissue may start to thin, and sometimes sores or lesions can develop. Some people may complain of mild itchiness and a burning sensation, but it often goes unnoticed unless a change in pigmentation is visible.



Different types of heat sources can cause this condition such as:

- Repeated application of hot water bottles or heat pads to treat chronic pain (e.g., chronic backache)
- Repeated exposure to car heaters or furniture with built-in heaters
- Occupational hazard for silversmiths and jewelers (face exposed to heat), bakers and chefs (arms)

The source of heat must be removed. If the area is only mildly affected with slight redness, the condition may resolve by itself in a few months. If the condition is severe and the skin pigmented and atrophic, resolution is unlikely. In this case, there is a possibility that squamous cell carcinomas may form. If there is a persistent sore that doesn't heal or a growing lump within the rash, a skin biopsy should be performed to rule out the possibility of skin cancer. Abnormally pigmented skin may persist for years. Treatment with topical tretinoin or laser may improve the appearance. Untreated, it can lead to skin cancer.

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Case 5

Discoloured Forearm

An 81-year-old female presents with discolouration on her forearm. She has no other significant medical problems, other than hypertension and hypothyroidism. Examination reveals a non-blanching and non-palpable violaceous patch on the left forearm.

What is your diagnosis?

- a. Actinic (solar) purpura
- b. Eczema
- c. Urticaria
- d. Vasculitis

Answer

Actinic (solar) purpura (**answer a**), also known historically as Bateman's purpura, is simply defined as hemorrhage within the skin or mucous membranes. Actinic purpura can be divided into several morphological subsets (palpable purpura; macular purpura; noninflammatory retiform purpura and inflammatory retiform purpura). While the differential diagnosis is broad, certain patterns are common and readily recognized, such as the actinic purpura as shown. Actinic or Bateman's purpura refers to the flat, irregular, violaceous or purple lesions that typically appear on the back of the hands and forearms in patients over the age of 50. This condition occurs when slight trauma leads to blood leaking into the surrounding skin. Actinic (solar) purpura results from actinic or sun induced damage to the supporting connective tissue in the dermis. The lesions last several weeks to months, and are of no clinical significance. Patients generally report the appearance



of these discoloured purple areas on forearms, hands and occasionally face or neck after minor trauma, or they may be noted without any history of trauma. Patients on systemic corticosteroids, topical corticosteroids or anticoagulants may experience these lesions with increased frequency.

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Case 6

Cystic Mouth Lesion

A 20-year-old female presented with a cystic lesion in the inner aspect of his lower lip.

What is your diagnosis?

- a. Oral hemangiomas
- b. Oral lymphangiomas
- c. Mucoceles
- d. Oral pyogenic granulomas

Answer

Mucoceles (**answer c**) usually occur on the lower lip and inner part of the cheek, as these are frequent areas of mouth trauma, but they can occur anywhere inside the mouth. A mucocele is usually a single lump with a slight bluish or normal mucosa colour, varying in size from 0.5 to 2 cm. Mucoceles are generally soft and painless, asymptomatic swellings that have a relatively rapid onset and fluctuate in size, while a mucus-retention cyst may slowly enlarge. An oral mucocele is a harmless, fluid-containing swelling of the lip or mouth lining (mucosa) due to mucus from the small salivary glands of the mouth leaking into the soft tissue, usually from injury or blockage of the gland, but similar mucus retaining cysts occur from blockage and backup of



saliva in the gland. The duration of the lesion is usually three to eight weeks; however, it may vary from a few days to several years in some instances.

Surgical excision of the mucocele along with the adjacent associated minor salivary glands is recommended. The risk for recurrence is minimal when appropriate surgical excision has been performed.

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**Case 7**

Hypopigmented Lesions

A 15-year-old girl had slowly progressive hypopigmented lesions on the body for the past six years. Apart from atopic dermatitis, her past health is unremarkable. There is no family history of a similar skin disorder.

What is your diagnosis?

- a. Pityriasis alba
- b. Tinea versicolor
- c. Tuberous sclerosis
- d. Vitiligo

Answer

Vitiligo (**answer d**) is a common acquired pigmentation disorder characterized by depigmented macules/patches, as a result of loss of functional cutaneous melanocytes. The condition affects 0.5 to 1% of population worldwide. Approximately 25% of affected patients have the onset of vitiligo before 10-years of age. Genetic, immunological, and neurogenic factors may play a role in the pathogenesis. Typically, vitiligo presents as acquired amelanotic macules/patches that appear chalk or milk-white in colour. Lesions often show homogenous depigmentation, and are well demarcated. Lesions are often symmetrical and enlarge centrifugally in size over time. The most common location is the face, followed by the neck, lower limbs, trunk, and upper limbs. The diagnosis is mainly clinical, based on the findings of acquired, well-demarcated white macules/patches that tend to enlarge. Wood's lamp



accentuates the lesion and may be of benefit if the diagnosis is in doubt, especially in skin type I and type II individuals. The clinical course is generally unpredictable. Most patients, except those with segmental vitiligo, experience slow progression of the disease through the appearance of new lesions or enlargement of existing lesions. There may be periods of relative inactivity, which may last for months to years. In segmental vitiligo, lesions tend to progress rapidly at onset and show a more stable course thereafter.

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