This month – 6 cases:

Case 1

Arm Discolouration

A 52-year-old female from Peru presents with dark macules coalescing into patches on her forearms that have been progressively increasing in the past few years. The lesions are asymptomatic.

What is your diagnosis?

a. Post-inflammatory hyperpigmentation
b. Melasma
c. Tinea versicolor
d. Lichen planus
e. Solar lentigines

Answer

Melasma **(answer b)** is an acquired hyperpigmentation that develops on sun-exposed areas of skin such as the cheeks, upper lip, forehead and forearms. Along with sun exposure, there appears to be a relationship to female hormonal activity since the condition often worsens when patients become pregnant or take OC pills. Women in young adulthood are much more likely to be affected than men and those of darker skin types are more prone than Caucasians.

Melasma is a difficult and often chronic condition to manage. It develops slowly and similarly resolution can take months and in some cases will not resolve completely, especially if the melasma has a deep (dermal) component. Sun avoidance and protection year-round is critical to the management. Various topical bleaching creams are employed which contain one or more of hydroquinone, retinoid, vitamin C, or steroid. Dermatologists often prescribe a "modified Kligman's formula" which contains several of these ingredients mixed together for optimal results. Chemical peels and sometimes laser can be useful adjuncts.

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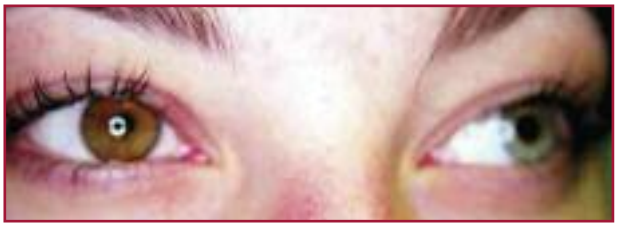
Case 2

Two Different Coloured Eyes

A 23-year-old female presents with concerns regarding her different colour of eyes. She was born with this problem. Her vision is normal bilaterally. She is otherwise healthy and is not taking any medicine.



What is your diagnosis?

a. Left Horner's syndrome
b. Left Fuchs (heterochromic iridocylitis)
c. Heterochromia iridium (inherited trait)
d. Right eye hyperpigmentation (drug related)

Answer

Heterochromia iridium **(answer c)** is the term used when the eyes are different colours, such as having one blue and one brown. There are several different causes of heterochromia:

- an inherited trait,
- a disease/disorder or
- a physical accident.

Melanocytes contain melanin, which determines the eye's colour. Melanocytes need innervation (impulses) to survive. If there is an interruption to the impulses (such as damage to the nerves supplying the eye) then the eye colour can change. If this happens to only one eye then only this one will be affected. However, iris colour may change in response to disease. For example, there is a gradual unilateral (one-sided) loss of pigmentation in Horner's syndrome and in Fuchs' heterochromic iridocyclitis. There is also evidence for pigment loss in the iris as a result of aging and changes in iris colour may also occur spontaneously in normal people after adolescence. In addition, some commonly used drugs such as latanoprost (which lowers intraocular pressure) have caused hyperpigmentation in some irises. Brown vs. blue eye colour is believed to be controlled by two genes on chromosome 15, called BEY1 and BEY2. Green vs. blue eye colour is believed to be controlled by a gene on chromosome 15, called GEY. In this system, blue is believed to be recessive to both brown and green. The protein products of these genes are unknown, however, as is the number of alleles possible for each. Furthermore, these three do not fully explain inheritance of all eye colours and more genes are likely involved.

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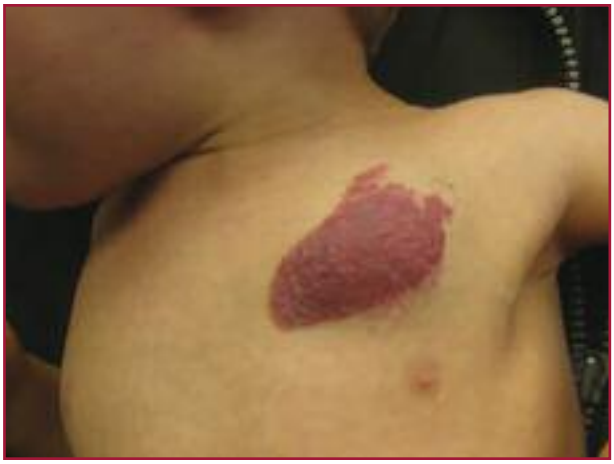
Case 3

Red Chest Patch

A 12-month-old toddler presents with a vascular plaque over the chest that has been present since shortly after birth. It initially grew rapidly for the first four months of life and has been stable since then.



What is your diagnosis?

a. Pyogenic granuloma
b Port-wine stain
c. Telangiectasia
d. Hemangioma of infancy
e. Nevus anemicus

Answer

Hemangiomas of infancy (HI) **(answer d)** are benign, soft tissue, vascular growths which are common in childhood and may involve any part of the body. The case image depicts a superficial HI. Most of these lesions resolve spontaneously with > 90% of patients having no residual HI by nine- to 10-years-of-age. Treatment decisions should be based on several factors including:

- size,
- location,
- age of patient,
- growth phase and
- psychosocial distress.

The lesion is unlikely to be a pyogenic granuloma (PG) because it lacks the pedunculated, papulonodular morphology usually found in such lesions. PGs are also associated with a collarette of scales at the base of the lesion, may sometimes occur on top of an existing port-wine stain and are prone to ulceration and bleeding with minimal trauma.

A port-wine stain (or nevus flammeus) is a vascular malformation that appears as a pink to dark red stain and most commonly involves the face. Unlike hemangiomas, port-wine stains are macular (flat) and static in their growth during the first year of life. They may be associated with a variety of syndromes.

The term telangiectasia describes a condition where the capillaries, venules or arterioles in the skin are permanently dilated. They may be a result of sun exposure, aging, radiation, or a systemic disorder. They classically disappear with gentle pressure (best demonstrated with a glass slide).

Nevus anemicus is characterized by hypovascular "blanching" of the blood vessels in the skin and thus appears as a white patch. It is a vascular birthmark.

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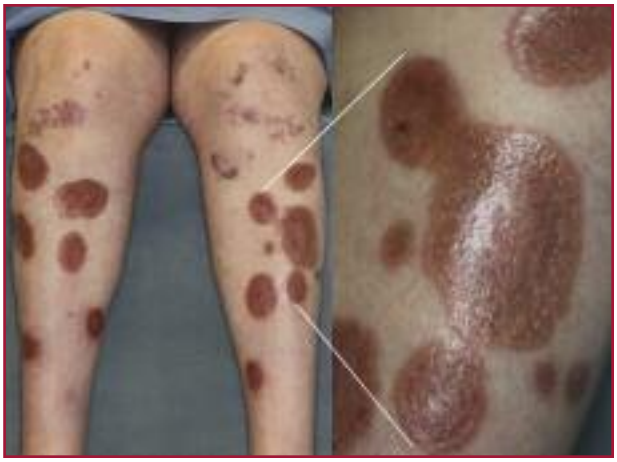
Case 4

Annular Leg Plaques

A 52-year-old female presents with infiltrated annular plaques on her neck, forearms, face, thighs and lower legs. The lesions are reddish-brown and have been gradually progressing for 20 years. She has not had any treatment.



What is your diagnosis?

a. Sarcoidosis
b. Granuloma annulare
c. Necrobiosis lipoidica diabeticorum
d. Psoriasis

Answer

Sarcoidosis **(answer a)** is a multisystemic chronic granulomatous, inflammatory disease. It mainly affects adults and can be more severe in blacks. Sarcoidosis most commonly presents as skin and eye lesions, bilateral hilar lymphadenopathy and pulmonary infiltration. Cutaneous lesions occur in approximately one-fourth of patients with the disease and present mainly on extremities, buttocks and trunk, having annular, polycyclic, or serpiginous morphology. Yellowish-brown or purple papules or plaques tend to occur on the face and firm purple or brown nodules may appear on the face, trunk, or extremities. Occasionally, red-brown or purple plaques with central clearing may develop. Systemic involvement may include:

- enlarged parotids,
- pulmonary infiltrates,
- cardiac dyspnea,
- neuropathy,
- uveitis and
- kidney stones.

Diagnosis of sarcoidosis is made on skin or lymph node biopsies. Sarcoidosis of the skin can be difficult to treat, however, moderate potency steroids can be used for less severe lesions, or high potency topical steroids, such as Clobetasol propionate ointment, can be used to manage severe skin lesions. Systemic agents such as hydroxychloroquine sulfate may be needed when there is extensive systemic involvement, with referral to dermatology and other appropriate specialists depending on the organ systems involved.

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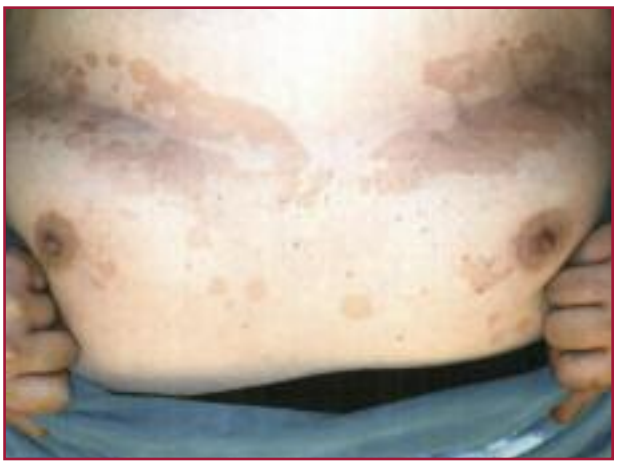
Case 5

Chest Lesions

A 32-year-old man presents with erythematous lesions on the upper chest. The lesions are asymptomatic.



What is your diagnosis?

a. Pityriasis rosea
b. Seborrheic dermatitis
c. Tinea versicolor
d. Melasma

Answer

Tinea versicolor **(answer c)** is a superficial infection of the skin caused by the dimorphic lipid-dependent yeast, *Malassezia furfur* and pityrosporum orbiculare. *Malassezia furfur* is a normal commensal on the skin surface. Skin colonization increases with age, 25% of children and almost 100% of adolescents and adults are affected. Tinea versicolor occurs when the yeast form of the organism converts to the hyphal form. Predisposing factors for the conversion include:

- a warm and humid environment,
- excessive sweating,
- skin occlusion,
- an excess of lipid-containing sebaceous secretions,
- malnutrition,
- poor general health,
- immunosuppression and
- a genetic predisposition to the disorder.

Lesions arise as multiple, small, circular macules that enlarge radially. The eruption varies in colour from patient to patient, but each person's lesions are of a single hue. Hyperpigmented, red to brown lesions erupt in fair-skinned patients whereas those with dark skin tend to have hypopigmented lesions. The diagnosis is usually based on clinical evidence. If necessary, a potassium hydroxide evaluation can be performed. Examination of scrapings from lesions reveals numerous short, stubby, hyphae intermixed with clusters of spores (the so-called spaghetti and meatballs appearance). Wood lamp examination may show yellowish gold fluorescence. Some lesions do not fluoresce.

Most patients respond to topical treatment with selenium sulfide (2.5%) lotion, sodium thiosulfate (25%) lotion, or miconazole, clotrimazole, ketoconazole or terbinafine cream. Oral ketoconazole, fluconazole, itraconazole or terbinafine may be appropriate for patients with extensive disease, frequent recurrences or disease that is refractory to topical therapy.

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Case 6

Spotted Palms

This 60-year-old black man has developed spots in the folds of his palms over five years. They are asymptomatic.

What is your diagnosis?

a. Syphilis
b. Psoriasis
c. Verruca
d. Friction points
e. Punctate keratodermas

Answer

Punctate keratodermas **(answer e)** are characterized by multiple keratoses of the palms and/or soles. In blacks, however, they are mainly seen in the creases of the palms and fingers. It is felt to be an autosomal -dominant disorder but with late expression in adulthood.

The primary findings are small depressions filled with a keratinous plug. Individual lesions may be thicker and more painful to pressure. Other than trimming tender lesions or using keratolytics to soften the skin, there is no permanent treatment.

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