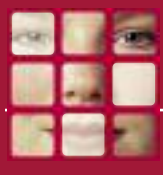


**This month – 7 cases:**



Case 1

# Red, Burning Glans/Prepuce

This 48-year-old uncircumcised male has had a relatively asymptomatic eruption on his glans penis, and coronal area for seven years.

## What is your diagnosis?

a. Chronic candidiasis
b. Zoon's balanitis (plasma cell balanitis)
c. Psoriasis
d. Bowen's disease
e. Pemphigus vulgaris

## Answer

Zoon's balanitis, (plasma cell balanitis) **(answer b)** is a rare, benign condition seen in uncircumcised middle-aged males. The appearance is of a glistening, shiny redness of the glans and/or prepuce. There may be some erosion. Surprisingly symptoms are minimal, but there may be some itching or burning.

All of the above should be considered in the differential diagnosis. Inevitably a biopsy, showing atrophy of the epidermis, plasma cell proliferation of the dermis and some red blood cell (RBC) proliferation, is needed to prove the diagnosis.

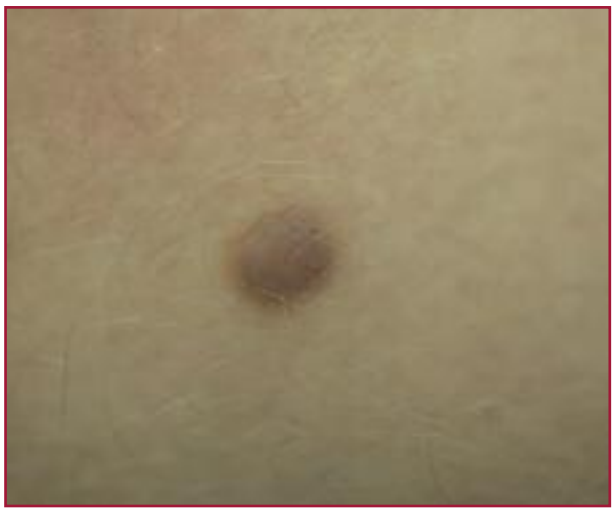
While the cause is unknown, it should be noted that all individuals with this condition are uncircumcised. Friction, trauma, heat and poor hygiene have all been implicated. The treatment of choice remains circumcision, although recently, use of a carbon dioxide laser has been successful. Potent topical steroids and calcinurin inhibitors have helped, but relapse occurs when they are stopped.

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

Case 2

# Reddish-brown Knee Papule

This 32-year-old male presents with a firm, reddish-brown papule on the right knee.



## What is your diagnosis?

a. Nevus
b. Kaposi sarcoma
c. Malignant melanoma
d. Dermatofibroma

## Answer

This patient has a dermatofibroma **(answer d)**. Dermatofibromas are common, benign, cutaneous lesions, usually found on the trunk and lower extremities. A patient with a dermatofibroma will typically present with a solitary, well-defined, papular or nodular lesion that is firm upon palpation and reddish-brown in colour. Though they are generally acknowledged to be benign, dermatofibromas can cause significant discomfort, pain and itching.

Although the etiology of dermatofibromas is not known, lesions are thought to arise as a result of fibrosis occurring in response to trauma or insect bites. When the surrounding skin is compressed, dermatofibromas retract beneath the surface. This "retraction sign" can be used to help diagnose dermatofibromas.

Dermatofibromas often do not require any treatment. Removal is not necessary; however, some patients elect to have lesions surgically excised for cosmetic reasons or to alleviate discomfort.

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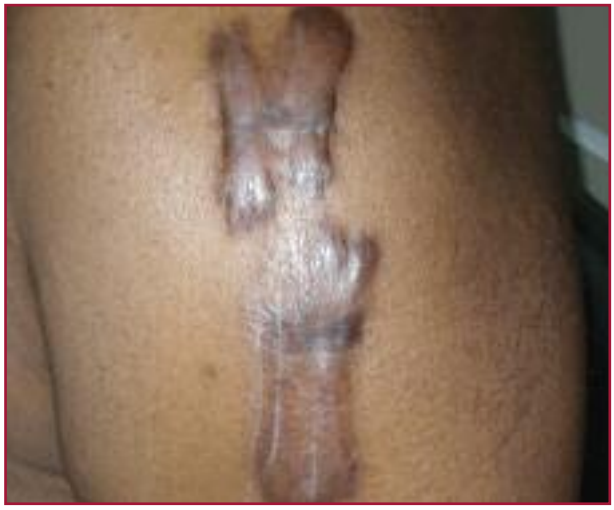
Richard G. B. Langley, MD, FRCPC, is a Dermatologist, Associate Professor and Director of Research, Division of Dermatology, Department of Medicine, at Dalhousie University, Halifax, Nova Scotia.

Case 3

# Hyperpigmented Linear Lesions

A 41-year-old male presents with three linear, raised, hyperpigmented lesions on his left shoulder. He has a remote history of trauma to this area.



## What is your diagnosis?

a. Hypertrophic scar
b. Keloid scar
c. Lobomycosis
d. Dermatofibroma

## Answer

The diagnosis is a keloid scar **(answer b)**. A scar resulting from surgery, trauma, or even cystic acne may become unusually large in a susceptible patient. If the margins stay within the original trauma site, it is called a hypertrophic scar; this usually develops within four weeks of the injury. If the borders grow beyond the original lesion margins, it is known as a keloid scar, often appearing months to years after the incident. Unlike a hypertrophic scar, a keloid is histologically different, demonstrating large collagen bundle deposition. Keloids are often painful or sensitive in the early stages of development. They are most commonly seen on the shoulders and chest but can appear anywhere on the body. Individuals with dark pigmented skin are more susceptible to developing these lesions.

Although a hypertrophic scar may regress on its own, a keloid scar very rarely does so. The first line of treatment for a keloid scar is intralesional steroid injection with 40 mg/ml triamcinolone acetonide every two to four weeks. When the lesion flattens, the concentration and frequency of injections should be reduced to prevent involution of skin and telangiectasia. Other treatments include cryotherapy, surgical excision followed by intralesional steroid, silicone gel sheeting and intralesional 5-Fluorouracil injection.

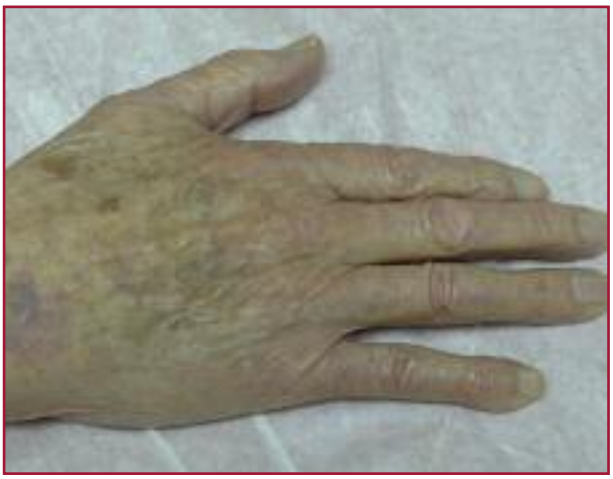
Andrea B. Herschorn, MD, is a Community Medicine resident, Queen's University, Kingston, Ontario.

Charles Lynde MD, FRCPC, is a Dermatologist, Diplomate American Boards Dermatology, Assistant Professor, Department of Medicine, University of Toronto, Toronto, Ontario

Case 4

# Brownish Hand Spots

This gentleman was noticed to have these brownish spots on his hands during his yearly physical. He is not bothered about them, as they are causing no symptoms.



## What is your diagnosis?

a. Solar lentigo
b. Seborrheic keratosis
c. Actinic keratosis
d. Lentigo maligna

## Answer

Solar lentigo (liver spots) **(answer a)** are common, benign, brown macules occurring on sun-exposed skin of Caucasian people. Roughly 75% of white people over the age of 60 have one or more lesions, and they increase in number and size with age.

Differential diagnosis: Flat seborrheic keratosis tends to have some surface hyperkeratosis.

Spreading pigmented actinic keratosis also has epidermal hyperkeratosis, as well as a defined border.

Lentigo maligna is best diagnosed by skin biopsy and careful histological review. A biopsy should be taken from any lentigo that develops a highly irregular border, or where there is a localized increase in pigmentation, or thickening, to rule out lentigo maligna melanoma.

Treatment: Solar lentigines are best prevented with sun-protective measures, including sun avoidance, hats, clothing, and sunscreens.

Existing lesions should be monitored for interval change. Stable lesions do not require treatment, though it may be requested for cosmetic reasons.

Hydroquinone solutions, tretinoin, azelaic acid cream, glycolic acid peels and creams are all of value in reducing hyperpigementation over weeks or months.

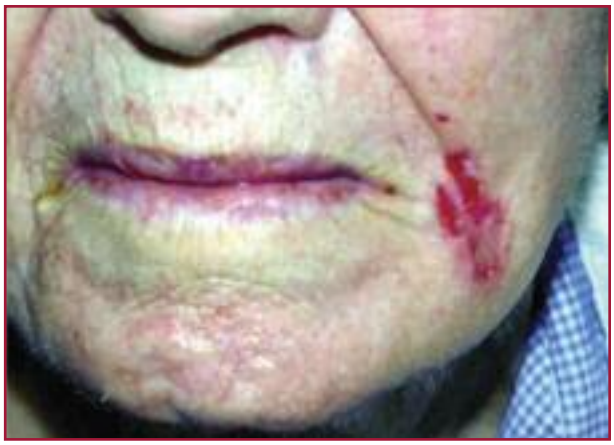
Light cryosurgery is also effective but requires some experience.

Hayder Kubba, MBChB, LMCC, CCFP, FRCS(UK), DFFP, DPD, graduated from the University of Baghdad, where he initially trained as a Trauma Surgeon. He moved to Britain, where he received his FRCS and worked as an ER Physician before specializing in Family Medicine. He is currently a Family Practitioner in Mississauga, Ontario.

Case 5

# Ulcerations on the Face

A 91-year-old female presents with superficially spreading and not healing ulcerations, which have not healed over the last six months.



Jerzy K. Pawlak, MD, MSc, PhD, is a General Practitioner, Winnipeg, Manitoba.

## What is your diagnosis?

a. Squamous cell carcinoma
b. Basal cell carcinoma
c. Actinic keratosis
d. Chronic impetigo

## Answer

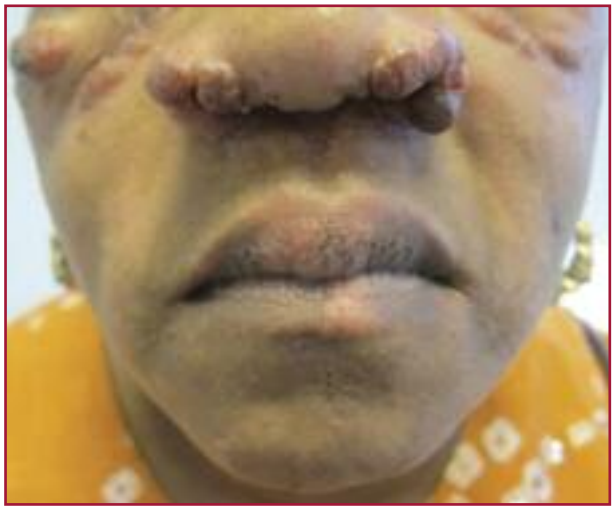
Basal cell carcinoma (BCC), superficial variant **(answer b)** is the least aggressive variant of BCC. The diagnosis of superficial basal cell carcinoma is often missed. This tumour occurs most frequently on the trunk and extremities, but may very rarely occur on the face. The tumour spreads peripherally, with a round-to-oval, red, scaling plaque that often resembles a plaque of eczema, psoriasis or Bowen's disease. Careful inspection of the border reveals its thin, raised, pearly white nature.

Electrosurgery and cryosurgery are most beneficial for small to medium-size nodular and superficial BCC's. Excisional surgery is preferred for large tumours, or those with poorly defined margins on the cheeks, forehead, trunk and legs. Radiation is useful for elderly patients who cannot tolerate minor surgical procedures, and very often produces the best cosmetic result.

Case 6

# Red-to-Purple Face Nodules

A 35-year-old African female presents with red-to-purple nodules on her ears, cheeks and nose. These nodules have been increasing in size over the past year. Although she is extremely bothered by the unsightly lesions on her face, the patient states that the lesions are asymptomatic. She also complains of redness and pain in her eyes, accompanied by sensitivity to light. Furthermore, she has been experiencing constitutional symptoms of fevers, chills and weight loss.



## What is your diagnosis?

a. Lichen planus
b. Lupus pernio
c. Granuloma annulare
d. Discoid lupus erythematosus

## Answer

Lupus pernio **(answer b)**, the most characteristic cutaneous lesion in sarcoidosis, is characterized by dusky red-to-purple, indurated, smooth papules/nodules and plaque-like lesions on the nose, cheeks, and ears. There is a high association of lupus pernio with the pulmonary component of sarcoidosis.

Sarcoidosis is a chronic inflammatory disease of unknown etiology that is characterized by non-caseating epithelioid granulomas. It can affect multiple organs, particularly the lungs. Sarcoidosis can commonly presents with skin, eye, and/or joint lesions. Lupus pernio typically present as reddish brown or violaceous papules and plaques that occur symmetrically on the face, torso, and extremities. Uveitis can occur in the eyes, while arthralgias and bony cystic lesions can affect the musculoskeletal system. Constitutional symptoms such as weight loss, loss of appetite, fatigue, fevers, chills and night sweats may be present.

The best way to confirm diagnosis of cutaneous sarcoidosis is skin biopsy. Presence of circumscribed granulomas of epithelioid cells with or without necrosis may be observed. Staining and culture of the specimen should be performed to rule out an infectious disease. Other tests such as a full pulmonary work-up (*e.g.,* chest X-ray, pulmonary function tests and chest CT scans), eye examination, and radiographic investigations of bones and joints should be performed.

Lesions of cutaneous sarcoidosis are usually asymptomatic and resolve spontaneously over months or years. Topical or intralesional corticosteroids are the treatment of choice for limited, non-disfiguring involvement, while prednisone, methotrexate, hydrochloroquine, infliximab, and carbon dioxide or pulsed-dye laser can be effective options to treat disfiguring involvement of the skin.

Surgical excision of the lesions may cause hypertrophic or keloidal scars.

Kellen K.N. Liu, MBBS, Dip Dermatology, is an International Fellow of Dermatology, Harvard Medical School, Boston, Massachusetts

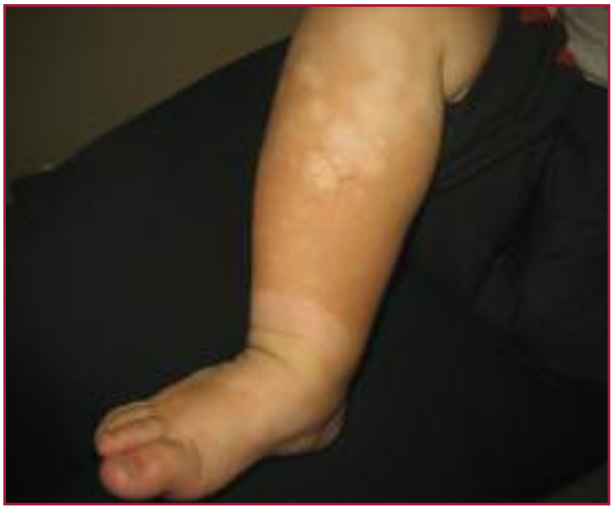
Alex H.C. Wong, MD, CCFP, BSc (Pharm), is a Clinical Lecturer of Family Medicine, University of Calgary, Calgary, Alberta

Alexander K. C. Leung, MBBS, FRCPC, FRCP (UK and Irel), is a Clinical Professor of Pediatrics at the University of Calgary, Calgary, Alberta.

Case 7

# White Patches Over Legs

A 19-month-old male toddler with atopic dermatitis presents with hypopigmented patches over the lower extremities.



## What is your diagnosis?

a. Vitiligo
b. Nevus anemicus
c. Congenital smooth muscle hamartoma
d. Post-inflammatory hypopigmentation
e. Tuberous sclerosis

## Answer

Post-inflammatory hypopigmentation **(answer d)** is a relative pigmentary deficiency which follows a variety of inflammatory skin disorders, such as burns (trauma), infections, medications, and eczematous or psoriatic processes. In our patient, the post-inflammatory hypopigmentation was a sequelae of his atopic dermatitis. In patients of darker skin colour, the hypopigmentation is more cosmetically obvious. This phenomenon is also most noticeable during the summer months, when the skin around the lesions tans, accentuating the hypopigmentation. There is usually no correlation between the degree of inflammation and the degree of post-inflammatory hypopigmentation. It is generally self-limiting and the skin will regain its pigment after months to years. The pathophysiology of this manifestation has not been fully elucidated; it is thought to be caused by injury to the keratinocytes, which are then unable to accept melanosomes from the melanocyte dendrites.

Vitiligo also results in a patterned loss of pigmentation, but it is caused by an autoimmune destruction of melanocytes. It presents as ivory-white patches surrounded by sharp borders. In contrast to post-inflammatory hypopigmentation, these lesions are completely devoid of pigment.

Nevus anemicus is a birthmark caused by constricted cutaneous blood vessels, resulting in a white patch of skin overlying the vessels. This can be distinguished from post-inflammatory hypopigmentation by "diascopy," in which the white patch disappears when the surrounding area is blanched with pressure.

A congenital smooth muscle hamartoma presents as a flesh-coloured or slightly hyperpigmented lesion. It is a benign proliferation of smooth muscle within the reticular dermis. One of its classic features is mild overlying hypertrichosis, which is not present in post-inflammatory hypopigmentation.

Tuberous sclerosis (TS) is one of the more common neurocutaneous conditions that can present with hypopigmented macules. In TS, lesions usually present at birth, or shortly after and they are persistent. TS patients often have other systemic features of the disease.

Post-inflammatory hypopigmentation is a common skin condition primary care practitioners are likely to encounter in their office. It is important to recognize that the condition is benign and to reassure parents and patients that skin pigmentation will return to normal.

Kelly Luu, is a Pediatric Resident at the BC Children's Hospital, Vancouver, British Columbia.

Joseph M. Lam, MD, is a Clinical Assistant Professor of Pediatrics and Dermatology at the University of British Columbia, Vancouver, British Columbia.