



Test your knowledge with multiple-choice cases

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Case 1

Red-Purple Papules

A 65-year-old Italian man comes to your office with a one-month history of asymptomatic red-purple papules and plaques on both lower legs.

What is your diagnosis?

- a. Lichen planus
- b. Kaposi sarcoma
- c. Erythema nodosum
- d. Leucocytoclastic vasculitis
- e. Schamberg's disease

Answer

Kaposi sarcoma (KS) (answer b) is a vascular neoplasm most frequently occurring in AIDS patients. It has been associated with infection of human herpes virus 8 (HHV-8) There are four types of KS:

- 1. Classical KS:
 - Frequently occurs in elderly, Jewish and Mediterranean males (as in this case)
 - Presents as violaceous macules and papules with subsequent development of plaques and red-purple nodules
- 2. Epidemic or AIDS-related KS:
 - Most frequently occurs in homosexual men
 - · Lesions are generally multifocal and widespread
 - · Lymph nodes may be palpable
- 3. Endemic KS:
 - This lymphadenopathic type is an aggressive form, affecting African children and adults



- 4. Immunosuppression-associated, or transplantation-associated KS:
 - Usually associated with chemotherapy

Observation is a reasonable option in patients with slowly progressive disease. Other options would include cryotherapy, surgical excision, radiotherapy, intralesional injection of chemotherapy and topical application of alitretinoin gel.

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Ash-Leaf Spots

A three-year-old boy presents with a generalized tonic-clonic seizure. At six- and eight-months-of-age, he had episodes of infantile spasm.

What is your diagnosis?

- a. Tuberous sclerosis complex
- b. Vitiligo
- c. Hypomelanosis of Ito
- d. Neurofibromatosis

Answer

Tuberous sclerosis complex (answer a) is an autosomal dominant neurocutaneous disorder with the potential for hamartoma formation in almost every organ, most commonly in the:

- skin,
- brain,
- kidneys,
- · heart and
- eyes.

In newborn infants and in fair-skin individuals, the lesions are often difficult to visualize without an ultraviolet light.

"Ash-leaf spots" are the most common dermatologic manifestation. Ash-leaf spots are usually present at birth or develop within the first two years of life. In newborn infants and in fair-skin individuals, the lesions are often difficult to visualize without an ultraviolet light (Wood's lamp).



Other dermatologic manifestations include:

- facial angiofibroma (adenoma sebaceum),
- shagreen or leather patch,
- periungual and ungual fibromas,
- café-au-lait spots,
- confetti lesions,
- poliosis and
- thumbprint macules.

The risk of mental retardation, cognitive impairment and behavioural disorders is greater in children with an early onset of seizures, especially those with infantile spasms.

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A Well-Circumscribed Patch

A 48-year-old man presents with a well-circumscribed tan patch that is 1 cm in diameter with small brown macules scattered within it. He has had this patch for many years.

What is your diagnosis?

- a. Café-au-lait macule
- b. Nevus spilus
- c. Becker nevus
- d. Solar lentigo
- e. Nevus comedonicus

Answer

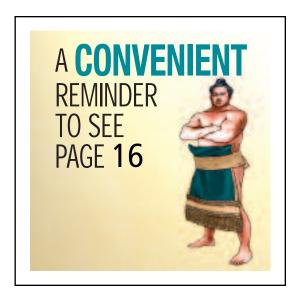
Nevus spilus (answer b) is a light-brown pigmented patch with smaller and darker coloured speckled macules, most commonly occurring on the trunk and legs. Some believe that nevus spilus is a subtype of congenital melanocytic nevus. This lesion is found in 1% to 2% of children and is a clinical diagnosis.

Any evidence of new irregular pigmentation or development of a papule or nodule warrants a biopsy.



Treatment is not necessary, as the risk of melanoma remains small. Watchful waiting and observation are preferred. Any evidence of new irregular pigmentation or development of a papule or nodule warrants a biopsy. Surgical excision is the definitive way to remove the lesion and lasers have been tried with modest benefit.

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A Painful Skin Rash

A 23-year-old female presents with a mild fever and a four-day history of a very painful skin rash on both her lower legs. She is otherwise healthy.

What is your diagnosis?

- a. Vasculitis
- b. Papular urticaria
- c. Lichen planus
- d. Erythema induratum
- e. Erythema nodosum

Answer

Erythema nodosum (answer e) is a self-limited-panniculitis (*i.e.*, inflammation of subcutaneous fat) which typically presents with a sudden onset of dusky-red, painful nodules on both shins. The rash can be idiopathic, as in this case, or may be associated with a wide variety of conditions, including:

- · infections,
- inflammatory bowel diseases,
- medications,
- sarcoidosis,
- rheumatologic diseases,
- · autoimmune disorders,
- pregnancy and
- · malignancies.

This condition typically presents with sudden onset of dusky-red painful nodules on both shins.



Classically, erythema nodosum regress spontaneously within a few weeks without scarring or ulceration and bed rest is often sufficient treatment. Acetylsalicylic acid and NSAIDs, such as indomethacin or naproxen and potassium iodide, may be helpful in enhancing analgesia and resolution. Treatment should also be directed towards the underlying cause, if identified.

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Dark Pigmentation

This 86-year-old woman has had psoriatic arthritis. For 25 years, she was treated with medication which helped her significantly. The medication was stopped 35 years ago because of the development of a dark pigmentation affecting her face and extremities, which has since persisted (especially on her face).

What is your diagnosis?

- a. Chrysiasis (gold)
- b. Bisthmuth
- c. Argyria (silver)
- d. Arsenic
- e. Haemachromatosis (iron)

Answer

Each of the above can produce a pigmentation of the skin. Chrysiasis from parenteral gold (answer a) is a rare cutaneous hyperpigmention on sun-exposed skin. It is similar to argyria (silver) but chrysiasis is more prominent around the eyes and, more specifically, on sun-exposed areas of the body.

Chrysiasis appears within months-to-years of therapy. When this patient's cataracts were removed several years ago, gold crystals were plentiful in the lenses.

There is no therapy for this condition.

Bisthmuth pigmentation is very rare nowadays as it is rarely used parenterally. It's discolouration resembles argyria. It too is generalized and may appear as a black line on the gums.

Arsenic-induced pigmintation is brown in colour but may take one to 20 years to appear.



The discolouration of haemachromatosis is generalized and accentuated by sun exposure. Colouration ranges from metallic gray to bronze. There is great diversity in certain areas of the skin which may show increased colour. The genitals, nipples, areola, scars, buccal mucosa and conjunctiva may be involved.

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An Atrophic Patch

A 46-year-old male farmer presents with a well-defined erythematous atrophic patch, with a keratotic raised border on his finger.

What is your diagnosis?

- a. Porokeratosis of Mibelli
- b. Squamous cell carcinoma
- c. Bowen's disease
- d. Psoriasis
- e. Lichen planus

Answer

Plaque-type porokeratosis of Mibelli (answer a) is a chronic progressive skin lesion characterized by slightly atrophic patches surrounded by an elevated keratotic border. These lesions can occur anywhere on the body but are most common on the:

- hands,
- · fingers,
- · feet and
- ankles.

This condition is more common in men and persists indefinitely with a tendency for slow, irregular growth. Biopsy shows classic changes of a cornoid lamella.

Treatment options include topical 5-fluorouracil or imiquimod cream and oral retinoids. Cryotherapy or curettage can be tried, or for more definitive therapeutic options, excision or laser ablation can used.



These lesions can occur anywhere on the body but are most common on the hands, fingers, feet and ankles.

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A Cystic Mass

A two-year-old boy presents with a cystic mass on the inner aspect of his lower lip. The mass is asymptomatic.

What is your diagnosis?

- a. Ranula
- b. Mucocele
- c. Parulis
- d. Hemangioma

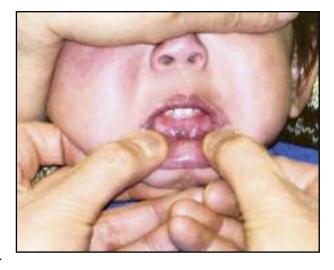
Answer

A mucocele (answer b) is caused by a blockage or traumatic severance of the duct of a minor salivary gland, which results in the submucous retention of secretions. A mucocele usually presents as an asymptomatic cystic swelling in the buccal mucosa of the lower lip. Lesions occasionally develop on the:

- upper lip,
- · palate, or
- floor of the mouth.

A mucocele on the floor of the mouth should be differentiated from a ranula. Fluctuations in size are common. The mucocele can persist for weeks or months before the cyst spontaneously drains. Surgical removal of the mucocele and the associated minor salivary gland prevents recurrence.

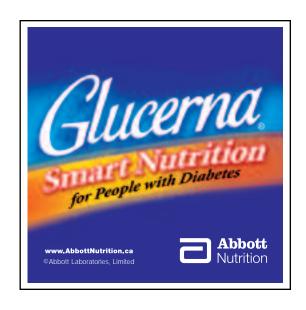
This condition is caused by blockage or traumatic severance of the duct of a minor salivary gland, which results in the submucous retention of secretions.



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A Slowly-Growing Papule

A 58-year-old male presents with a hyperkeratotic papule on his dorsal hand that has been slowly growing over the past two years.

What is your diagnosis?

- a. Squamous cell carcinoma
- b. Wart
- c. Keratosis pilaris
- d. Keratoacanthoma
- e. Basal cell carcinoma

Answer

Squamous cell carcinoma (SCC) (answer a) is a malignant tumour of the keratinocytes and is the second most common form of skin cancer after basal cell carcinoma. It typically arises on the sun-exposed skin of older adults. Most SCCs arise from or near precancerous lesions known as actinic keratoses.

SCCs can extend locally, but also spread to regional nodes and result in distant metastases (2% to 6% of cases). SCC on the lower lip or arising in a scar has a high metastatic potential. Fair complexioned individuals and immunosuppressed patients are at highest risk for a SCC.

This condition typically arises on the sun-exposed skin of older adults.



Surgical excision is the treatment of choice and Mohs micrographic surgery is beneficial in recurrent SCC and for tissue sparing on the face. Radiation therapy is effective in select cases.

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