Over a period of six months, this 40-year-old man has developed a shiny, pink lesion on his nose.

**What is your diagnosis?**

a. Basal cell carcinoma  
b. Acne papule  
c. Intradermal nevus  
d. Epidermoid cyst  
e. Xanthogranuloma  

**Answer**

While any of the first four answers would be likely diagnoses, xanthogranuloma (answer e) was proven on biopsy. This is especially unusual, as single lesions generally only present in infants. However, xanthogranuloma can occur in young adults, usually in the head and neck areas.

The cause is unknown. In infants, xanthogranuloma will generally involute spontaneously. The course in adults is less familiar, because xanthogranuloma in adults is generally removed as opposed to employing watchful waiting. Shave excision results in a good outcome in these cases.

Stanley J. Wine, MD, FRCPC, is a Dermatologist in Toronto, Ontario.
This two-year-old girl presents with a V-shaped, erythematous patch on her forehead. The lesion has been present since birth.

What is your diagnosis?

a. Port-wine stain  
b. Nevus simplex  
c. Lichen striatus  
d. Morphea

Answer

Nevus simplex (answer b), otherwise known as the “salmon patch” is by far the most common vascular lesion of infancy. It appears as a flat, dull, pink macular lesion in the midline or as a symmetrical, pink, macular lesion on the eyelids, glabella, forehead, and nape of the neck and scalp. Nevus simplex is usually an isolated lesion without other associated findings. Facial lesions are commonly accentuated during episodes of crying, breath holding, straining with defecation, or physical exertion. No treatment is necessary, since 95% of facial lesions fade within the first year or two of life.

A port-wine stain (PWS) is distinguished from nevus simplex, since lesions have distinct natural histories and differing significance in terms of potential syndrome associations. PWS is a unilateral, vascular malformation made up of capillary ectasias that may be present throughout the dermis and gradually increase with age. The colour changes from pink to purple as the patient grows, and the lesions may become nodular during adult life. They show no tendency to involute.

Lichen striatus is a benign, self-limited, childhood dermatosis that consists of pink, flesh-coloured or slightly hypopigmented, flat-topped papules that evolve in a linear array following Blaschko’s lines. Onset is usually between the ages of 3- and 10-years. Lesions are usually asymptomatic but may last from months to years.

Morphea is a form of localized scleroderma that can be a relatively localized process (plaque-type morphea) or a generalized disorder of skin and subcutaneous tissues (generalized morphea). Typically, the lesions are hardened and atrophic areas of skin that appear whitish, slightly depressed, and surrounded by a different colour that is lilac or purple. Spontaneous recovery in children is common.

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Joseph M. Lam, MD, FRCPC(C), is a Clinical Assistant Professor of Pediatrics and an Associate Member of the Department of Dermatology and Skin Sciences at the University of British Columbia in Vancouver, British Columbia.
A 36-year-old, HIV-positive man presents with an ulcerated nodule on his left thigh. He also has a low-grade fever, night sweats, and weight loss of 5 lbs over the past two months. He has a cat at home.

What is your diagnosis?

a. Kaposi’s sarcoma  
b. Angiosarcoma  
c. Pyogenic granuloma  
d. Cat scratch disease  
e. Bacillary angiomatosis

Answer

Bacillary angiomatosis (answer e) is an infectious disease caused by Bartonella henselae and Bartonella quintana. The condition is characterized by vascular proliferation that can involve many organs, notably the skin and visceral organs. Presumably, B. henselae and B. quintana stimulate the production of angiogenic growth factors, such as vascular endothelial growth factor and basic fibroblast growth factor with resultant proliferation of endothelial cells. The majority of cases occur in HIV patients, in particular, those with CD+ lymphocyte counts < 100. Other risk factors include contact with cats, poor living conditions, and poor socio-economic status. Bacillary angiomatosis is more prevalent in males with a male-to-female ratio of 9:1.

Cutaneous lesions may present as erythematous or violaceous papules/nodules and hyperkeratotic plaques. The lesions are often tender, friable, and bleed easily when traumatized; and they may also become ulcerated or crusted. Fever, night sweats, chills, anorexia, weight loss, and lymphadenopathy may be present.

Osseous bacillary angiomatosis typically involves long bones; bone pain may result from lytic bone lesions. Hepatic and spleen involvement (bacillary peliosis) may result in abdominal pain, hepatosplenomegaly, and elevation of liver enzymes. Gastrointestinal bacillary angiomatosis may cause symptoms of nausea, vomiting, abdominal pain, tenesmus, and bloody diarrhea. CNS involvement may result in headache, personality changes, and seizures.

The treatment of choice is oral erythromycin. For those patients who can not tolerate erythromycin, oral doxycycline is a reasonable alternative.
This 47-year-old gentleman was seen in the pain clinic for severe, continuous neck pain, which he rated at 12 on a scale of 1 to 10. He was referred by his family physician, as he was not getting any relief with the acetaminophen/codeine he was prescribed.

He has had this lump for a year and a half, and it has been increasing in size. His local oncologist suggested radiotherapy treatment, but the patient declined because of his concern about side effects.

What is your diagnosis?

a. Invasive squamous cell carcinoma
b. Lymphoma
c. Basal cell carcinoma
d. Lipoma

Answer

Invasive squamous cell carcinoma (SCC) (answer a) is a malignant tumour of keratinocytes that arises in the epidermis, skin appendages, and other stratified squamous mucosa.

It affects males more than females; however, SCC has a predilection for female legs as opposed to male legs.

Sunlight exposure, phototherapy, and psoralen plus UVA can lead to the development of SCC. Excessive photochemotherapy can encourage SCC development, particularly in patients with skin photo types 1 and 2 or in patients with a history of previous exposure to ionizing radiation or methotrexate treatment for psoriasis.

Oncogenic human papillomavirus is associated with dysplasia and invasive SCC. Organ transplant recipients have a markedly increased incidence of SCC that is 40 to 50 times higher than in the general population. Patients with AIDS have only a slight increase in SCC development.

Surgical excision is the usual treatment for localized disease. Radiotherapy should be performed only if surgery is not feasible.
A 70-year-old, otherwise healthy woman presents with an asymptomatic, erythematous, slow-growing lesion on the left side of her neck that has been there for approximately three years.

What is your diagnosis?

a. Basal cell carcinoma
b. Psoriasis
c. Seborrheic keratosis
d. Bowen's disease
e. Actinic keratosis

Answer

Bowen's disease (answer d), also known as squamous cell carcinoma in situ, is characterized histologically by proliferation of atypical, pleomorphic keratinocytes that involve the whole epidermis. Clinically, it presents as a solitary, asymptomatic, sharply-demarcated plaque with an overlying scale, usually in sun-exposed areas, such as the head and neck. The condition is most common in Caucasians over 60-years-of-age. Other risk factors include solar radiation, ionizing radiation, arsenic exposure, immunosuppression, and human papillomavirus infection.

Dermoscopy typically shows glomerular vessels and a scaly surface. Histological examination is the gold standard for diagnosis. As such, a punch biopsy or excisional biopsy is advised if there is doubt about the diagnosis. Untreated, the condition may develop into invasive squamous cell carcinoma in 3 to 5% of cases, and approximately 30% of those diagnosed may experience metastatic disease.

A variety of treatment options are available. They include local excision, radiotherapy, cryotherapy, 5-fluorouracil, topical imiquimod, CO₂ laser therapy, and photodynamic therapy. However, no single treatment has been shown to be convincingly superior for all cases. The choice of treatment method should depend on the size of the lesion, the clinical situation, the availability of therapy, the physician’s comfort level with the various treatment options, and the patient’s preference.

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