A 23-year-old female with a history of eczema presents with multiple, white papules around her eyes of several years duration.

**What is your diagnosis?**

a. Sebaceous cysts  
b. Blackheads  
c. Milia cysts  
d. Xanthelasma  
e. Syringomas

**Answer**

Milia are small cysts (answer c) containing keratin. They are benign, pearly-white papules that are found in all ages and in both sexes with similar frequency. They are most common on the face, especially on the eyelids and cheeks.

Milia is a clinical diagnosis and consists of small, epidermoid cysts. The cysts are treated for cosmetic reasons, although they sometimes disappear on their own. They can be extracted with a comedone extractor or carefully deroofed with a needle and appropriate pressure applied to squeeze them out. Topical retinoids and chemical peels are of modest benefit.
A 28-year-old woman presents with pain in the left index finger. She had a manicure last week.

**What is your diagnosis?**

a. Psoriasis  
b. Onychomycosis  
c. Herpetic whitlow  
d. Paronychia  
e. Reiter's syndrome

**Answer**

Paronychia (answer d), also known as perionychia, is an inflammation of the folds of tissue surrounding the fingernail or toenail. In most cases, the infection is bacterial, with *Staphylococcus aureus* being the most common causative organism, followed by *Streptococcus pyogenes*, *Pseudomonas aeruginosa*, *Pseudomonas pyocyanea*, and *Proteus vulgaris*. Trauma facilitates entry of the organism into the paronychial tissue. Trauma may be in the form of injury from a splinter or thorn, overzealous manicuring, finger sucking, nail biting, ingrown nail, or biting or picking at a hangnail.

Other predisposing factors include diabetes mellitus, immunodeficiency, and occupations in which the hands or feet are frequently immersed in water. Clinically, the condition is characterized by acute onset of erythema, edema, and tenderness in the proximal and lateral portions of the nail bed, usually within a few days after the trauma. Usually, only one nail is involved and the fingernails are affected more often than the toenails. The digital pressure test, performed by asking the patient to oppose the thumb and the affected finger, thereby applying light pressure to the distal, volar aspect of the affected finger, is useful in the early stages of infection to determine the presence and extent of an abscess. An increase in pressure within the paronychia causes blanching of the overlying skin and clear demarcation of the abscess.

Acute paronychia can be treated with topical antibiotics (fusidic acid, mupirocin) with or without topical corticosteroids. Acetaminophen or a nonsteroidal anti-inflammatory agent may be used for symptomatic relief of pain. Severe cases may require the use of oral antibiotic therapy (clindamycin, amoxicillin/clavulanate, doxycycline). Once an abscess has developed, incision and drainage is necessary.

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An 18-month-old presents with a congenital, yellow plaque on the scalp with associated alopecia.

**What is your diagnosis?**

a. Juvenile xanthogranuloma  
b. Mastocytoma  
c. Nevus sebaceous  
d. Aplasia cutis congenita

**Answer**

Nevus sebaceous *(answer c)* is a common, congenital lesion that occurs mainly on the face and scalp. This lesion usually presents as a solitary, well-circumscribed, hairless plaque. It presents at birth and occurs secondary to a developmental defect. However, it may first be noted during early childhood. Its yellow colour is related to sebaceous gland secretion, and this colour often becomes less prominent after infancy. The lesion tends to enlarge in proportion to the growth of the child until puberty when it may become significantly thicker, more verrucous, and greasier in appearance as a result of hormonal stimulation of the sebaceous glands within them. There is a small 1% risk of malignant transformation. Deep surgical excision may be warranted for cosmetic purposes.

Mastocytoma is a common type of childhood mastocytosis that comprises a group of disorders associated with proliferation of mast cells within the skin. It may present as a solitary lesion or as multiple lesions. This is an unlikely diagnosis in this case, as it tends to present with more of a reddish-brown, hyperpigmentation; it may also develop urticarial wheals/plaques when stroked gently (Darier’s sign). The surface of the lesion may also have a peau d’orange appearance. In addition, mastocytomas tend to present more on the arms, neck, and trunk, rather than the scalp.

This is unlikely to be juvenile xanthogranuloma (JXG), which is a common form of non-Langerhans cell histiocytosis. JXG is generally smaller occurring as a firm, round papule or nodule. It is benign and self-limited in nature. Early JXG is erythematous to orange or tan but becomes more yellow with time. The head, neck, and trunk are the most common areas to be involved.

This lesion is inconsistent with a diagnosis of aplasia cutis congenita (ACC), which is a congenital defect of the skin that is characterized by localized absence of the epidermis, dermis, and, at times, subcutaneous tissues. ACC generally occurs on the scalp and classically presents as solitary or multiple, sharply demarcated, weeping or granulating, oval to circular, stellate defects, which are not present in this case.

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A seven-and-a-half year old boy presents with numerous scaly papules after a recent sore throat.

What is your diagnosis?

- Guttate psoriasis
- Impetigo
- Scabies
- Nummular dermatitis

Answer

Guttate psoriasis (answer a) generally occurs in children and young adults, often representing a first manifestation of psoriasis. It is characterized by drop-like, round or oval, erythematous, scaly plaques that are 2 to 10 mm in diameter. It is generally distributed over the trunk and proximal extremities in a symmetric fashion, but it may also involve the face, scalp, and distal extremities. Group A streptococcal infection of the throat or perianal area is the most common attributable trigger, and two-thirds of patients have a history of upper respiratory tract infection one to three weeks prior to onset. Although a variety of different treatments exist, topical corticosteroid treatment remains the first-line therapy for flares of guttate psoriasis.

Impetigo is a common, superficial skin infection most often caused by streptococci, staphylococci, or both. Two classic forms exist; they are nonbullous (70%) and bullous (30%). Although it may occur at any age, it most often affects infant’s and children’s exposed body parts. Treatment with an oral antibiotic that covers both Staphylococcus aureus and Group A strep is usually sufficient.

Scabies is a common skin infestation caused by the mite, Sarcoptes scabiei. Transmission occurs by direct contact or fomites, and it predominantly infects women and children. The mite may live for days without a host. The initial symptom is usually pruritus, which will occur well prior to dermatologic findings. Skin findings include papules, nodules, burrows, and vesicopustules. Commonly effected sites include the interdigital spaces, wrists, ankles, axillae, waist, groin, palms, and soles. The treatment of choice is 5% permethrin cream, although many other topical treatments exist.

Nummular dermatitis is characterized by discoid or coin-shaped plaques composed of minute papules and vesicles, which enlarge by peripheral extension to form discrete, erythematous, and hyperpigmented plaques that measure 1 cm or more in diameter. It most often affects extensor surfaces of the hands, arms, or legs. Lesions may be single or multiple. Secondary staphylococcal infection is common. The cause is unknown. Topical corticosteroids in classes II through IV are typically effective for treatment.

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A five-year-old boy presents to the clinic with complaints of finding blood on toilet paper following bowel movements. He has not been able to properly clean his perianal region due to a painful burning sensation with the application of water. On physical examination, an excoriated perianal region with an erythematous base is observed.

What is your diagnosis?

a. Atopic dermatitis  
b. Perianal streptococcal dermatitis  
c. Psoriasis  
d. Herpes virus infection

Answer

Perianal streptococcal dermatitis (answer b) is caused by group A β-hemolytic streptococcus (GABHS). The condition typically presents as a well-demarcated, sharply circumscribed, perianal erythema that may be associated with perirectal fissures, blood-streaked stools, rectal itching, and painful defecation. Fever and systemic symptoms are unusual.

Streptococcal pharyngitis may be concomitantly present. Perianal streptococcal dermatitis is most frequently seen in children between six-months and 10-years-of-age with a male predominance. In children, the most likely mode of transmission is through digital contamination from the oropharynx or other skin sites with GABHS infections. Potential complications of perianal streptococcal dermatitis include post-streptococcal glomerulonephritis and guttate psoriasis.

The treatment of perianal streptococcal dermatitis consists of a 10-day course of penicillin V or amoxicillin 40 mg/kg t.i.d. The use of a topical antibiotic, such as mupirocin, may reduce the rate of recurrence. Early treatment with antibiotics is important for a rapid reduction in symptoms.

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