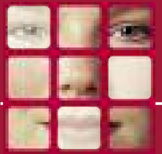

This month – 8 cases:

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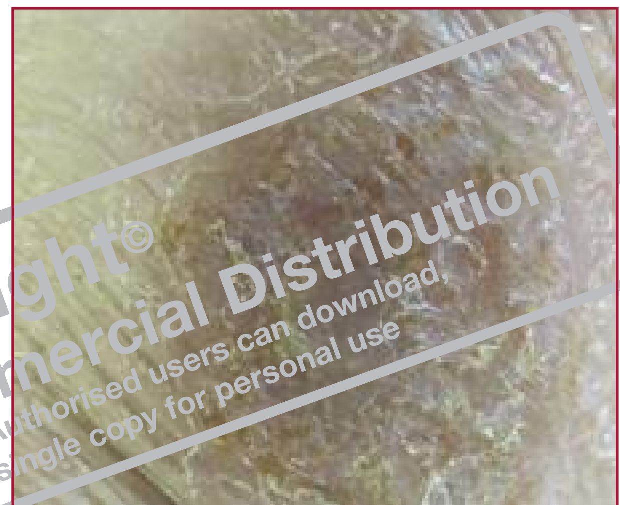
Case 5

Pruritic Arm, and Leg Eruptions

A 68-year-old male presents for assessment of a three month history of a pruritic eruption on his arms and legs. It has progressively worsened and has failed to respond to betamethasone valerate 0.1% cream. Upon examination, there are nummular crusted plaques, particularly on the lower legs, with varicosities evident.



What is your diagnosis?

a. Psoriasis
b. Nummular dermatitis
c. Lichen planus
d. Tinea corporis

Answer

Nummular dermatitis **(answer b)** is a pruritic, acute, chronic, and potentially relapsing condition characterized by crusted nummular plaques typically on the lower extremities. It is important to recognize in such cases that microbial infection may be driving the process and that, when topical therapy alone fails, as in this case, a course of oral antibiotics may be indicated. Therapy should be directed against *Staphylococcus*, given that this is the microbial agent most commonly implicated in this condition. Topical steroids are also standard treatments for this condition.

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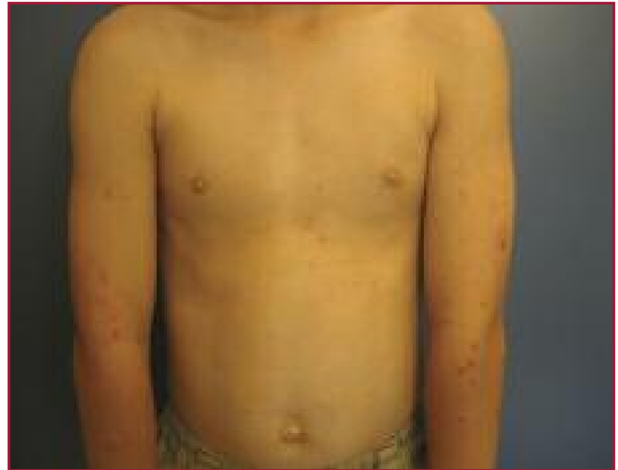
Case 2

Arm, Leg, Buttocks, and Ear Papules

A 7-year-old boy presents with pruritic papules that have been present for the past two weeks and preferentially affect the arms, legs, buttocks, and ears with relative sparing of the back and chest. What is the cause?



What is your diagnosis?

a. Varicella
b. Id eruption
c. Pityriasis lichenoides et varioliformis acuta
d. Scabies
e. Papular acrodermatitis of childhood

Answer

Papular acrodermatitis of childhood **(answer e)** is a distinct viral exanthem, typically occurring after an upper respiratory tract infection. The eruption is characterized by monomorphous edematous erythematous papules, symmetrically distributed on the face, extremities, and buttocks. The trunk is usually spared, and the eruption is asymptomatic in most patients, although mild pruritis may occur. Papular acrodermatitis of childhood is benign, self-limited and usually resolves completely in 8 to 12 weeks; thus, treatment is supportive, and reassurance should be provided.

Unlike the monomorphous lesions seen in papular acrodermatitis of childhood, varicella lesions initially present as a red macule or papule, then rapidly progress to become vesicles. This eruption is initially found on the scalp, face, or trunk, later spreading to the extremities. The pathognomonic finding of varicella is the presence of both new papules and vesicles and older, crusted lesions at the same time. An id eruption is a hypersensitivity disorder characterized by small edematous papules or papulovesicles usually found symmetrically on the trunk and extremities. These lesions are usually associated with moderate to severe pruritis, and they are almost always preceded by an exacerbation of pre-existing eczematous dermatitis.

Pityriasis lichenoides et varioliformis acuta is a polymorphous eruption with pruritic brown macules and papules evolving into vesicular, necrotic, and occasionally purpuric lesions. These lesions usually involve the entire body, sparing the face, scalp, palms, and soles. Patients with this condition may have associated fever and constitutional symptoms.

Scabies is a common skin infestation caused by *Sarcoptes scabiei*, an obligate human parasite. The most prominent symptom of scabies is pruritus, which is usually present before clinical signs develop. Skin findings including papules, nodules, vesicopapules, and burrows are typically found in the interdigital spaces, wrists, ankles, axillae, palms and soles. In infants, lesions may also be present on the head.

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Case 3

Scaly Eruption on Scalp

This four-year-old boy has had a scaly eruption on his scalp for several months, which has gradually gotten worse, and it has now formed a boggy crust. No one else in the household is involved.

What is your diagnosis?

a. Psoriasis
b. Cradle cap
c. Tinea capitis
d. Crusted impetigo
e. Kerion

Answer

This youngster demonstrates an exaggerated response to a *Trichophyton Tonsurans* infection resulting in kerion formation **(answers c and e)**. Tinea capitis is most commonly seen in children. Scaling in the scalp, with broken hairs and alopecia is most often noted. However, in some individuals there is a marked host immune response to the organism, resulting in thick plaques with pustules and/or abscesses, which can result in permanent hair root destruction. As the condition can lead to permanent baldness. It is, therefore, important to initiate treatment as soon as possible.

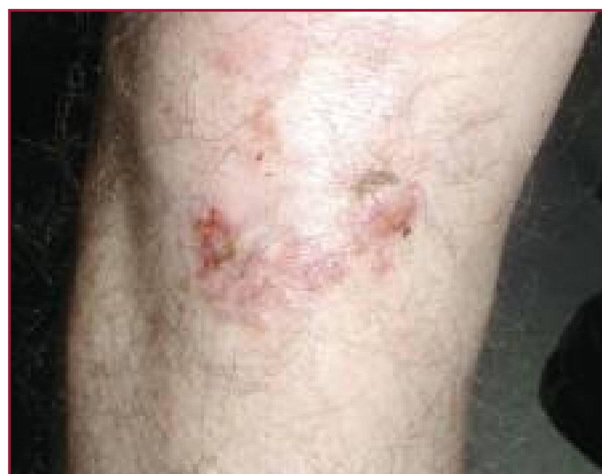
While topicals may be tried, some cases of tinea capitis, invariably, require oral Terbinafine, as is needed for the child. Selenium sulphide or ketoconazole shampoos to reduce infectivity and should also be used.

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

Case 4

Clustered Papules and Vesicles

A 79 year-old male presents with a history of burning erythematous urticarial plaques with clustered papules and vesicles. The lesions are found on extensor surfaces of both elbows and knees. At the time of presentation, the lesions were excoriated and crusted. The patient has no known history of celiac disease.



What is your diagnosis?

a. Neurotic excoriations
b. Bullous pemphigoid
c. Dermatitis herpetiformis
d. Linear IgA bullous dermatosis

Answer

Dermatitis herpetiformis **(answer c)** is a chronic autoimmune bullous disorder characterized by burning and pruritic urticarial papules and vesicles in clusters. The lesions are symmetrically found on elbows, knees, back, and buttocks. The disease may be seen in children, but it often begins in the second to fifth decade of life.

It is most commonly associated with gluten-sensitive enteropathy that is similar to, but less severe than celiac disease, with only mild jejunal wall inflammation and patchy regions of villous atrophy. The destruction is often not severe enough to cause malabsorption. Thus, the gluten sensitive enteropathy is often asymptomatic. IgA antiendomysial antibodies (IgA-EmA) are produced due to chronic exposure of the sensitive gut to dietary gluten. The antibodies are then abnormally deposited in the upper dermis leading to an immune response presenting in dermatitis herpetiformis. In patients with celiac disease, 15 to 25% will develop dermatitis herpetiformis.

The appearance of Linear IgA bullous dermatosis is quite similar. However, the histologic and immunoflourescence characteristics differ, and there is no association with gluten-sensitive enteropathy.

Diagnosis of dermatitis herpetiformis is made using direct immunoflourescence of skin biopsy demonstrating IgA deposition in the upper dermis. Antibody tests to confirm celiac disease and dermatitis herpetiformis include IgA-EmA and antibodies against tissue transglutaminase (IgA anti-tTG). The main treatment options include Dapsone and a gluten free diet in which the patient should avoid wheat, rye, and barley.

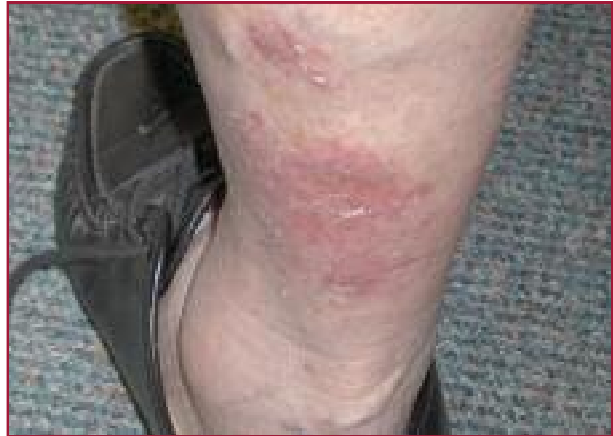
Andrea B. Herschorn, MD, is a Community Medicine resident, Queen's University, Kingston, Ontario.

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

Case 5

Weeping Leg Lesion

This lady presented with this weeping lesion, which started two weeks ago, and it has been getting worse since then. She said that she has always had dry skin and that it tends to get worse during the winter.



What is your diagnosis?

a. Discoid eczema
b. Eczema herpeticum
c. Asteatotic eczema
d. Infectious eczematoid reaction

Answer

Infectious eczematoid reaction **(answer d)** is a variant of eczema, a progressive, moist, eczematous process, which seems to result from a combination of eczema and superficial bacterial infection with *Staphylococcus aureus*.

The skin is erythematous, wet, and oozing. At the edge, a small circular lesion appears and coalesces as the condition spreads.

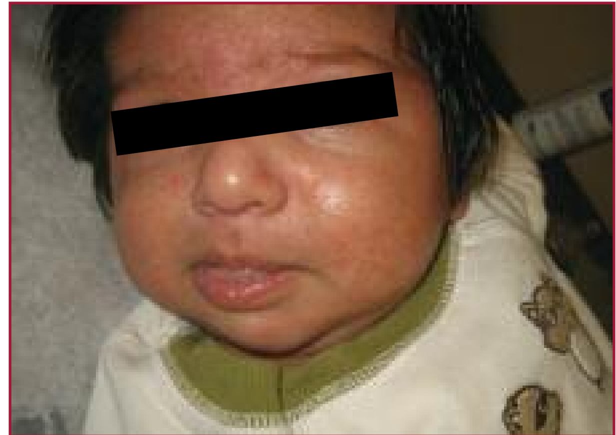
Treatment should involve both a potent topical steroid and an oral antibiotic.

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 6

Infantile Face Bumps

A one-month-old infant male presents with erythematous papulopustules over the face and upper chest. What is the cause of his bumps?



What is your diagnosis?

a. Erythema toxicum
b. Seborrheic dermatitis
c. Miliaria
d. Benign neonatal cephalic pustulosis (neonatal acne)
e. Milia

Answer

Benign neonatal cephalic pustulosis (neonatal acne) **(answer d)** is a neonatal pustular eruption that presents with multiple facial papules and pustules. Pustular smears reveal yeasts of Malassezia furfur or Malassezia sympodialis. Malassezia colonization begins at birth and increases over the first few weeks of life. Benign neonatal cephalic pustulosis responds to 2% ketoconazole cream.

Miliaria is part of the differential diagnosis for benign neonatal cephalic pustulosis; however, both papules and pustules are present often on the head and the neck, and sometimes on other parts of the body. It is associated with the presence of blocked eccrine sweat glands and exposure to increased humidity and heat, resulting in the leakage of eccrine sweat into the epidermal and dermal layer.

Seborrheic dermatitis, though linked to Malassezia overgrowth, is a papulosquamous disorder patterned on the sebum-rich areas of the scalp, face, and trunk. Severity varies widely from mild dandruff to exfoliative erythroderma. This condition is aggravated by emotional stress, humidity changes, seasonal changes, and trauma, such as itching.

Milia, though commonly seen in infants, presents as keratin-filled cysts derived possibly from the pilosebaceous follicle. Primary milia stem from parts of the facial skin with vellus hair follicles. Secondary milia can stem from damaged pilosebaceous units.

Erythema toxicum neonatorum presents only within the neonatal period and is characterized by small erythematous papules, vesicles, and occasionally pustules. A major difference from benign neonatal cephalic pustulosis, however, is the presence of a distinct and diffuse erythematous halo surrounding the lesions. Lesions are transitory, disappearing in a few hours, only to reappear elsewhere on the body. Erythema toxicum neonatorum itself is an asymptomatic skin condition that is benign and self-limiting.

Jennifer Quan is a Final Year Medical Student at the University of British Columbia.

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Case 7

Scaly Bump on the Scalp

A 70-year-old Hispanic female presents with a scaly bump on her scalp. It started innocuously as a bruise and "slowly evolved into this bump" over the last year. The lesion is moderately pruritic and occasionally bleeds.

What is your diagnosis?

a. Seborrheic keratosis
b. Cutaneous angiosarcoma
c. Cystic acne
d. Prurigo nodularis

Answer

Cutaneous angiosarcomas **(answer b)** are rare malignant vascular neoplasms, and they represent less than 1% of the sarcomas. They are more frequent in males, and in the Caucasian population. Cutaneous angiosarcomas occur mainly in the elderly population, particularly in the head and neck area. The tumour can also involve areas of previous radiation therapy, chronic lymphedema (otherwise known as Stewart-Treves syndrome), and pre-existing vascular lesions.

Cutaneous angiosarcomas may present as singular or multifocal, slow spreading dusky red patches that are similar to bruises. In later stages, lesions may develop into elevated nodules or plaques that may bleed and ulcerate. Facial edema can accompany the lesions. Cutaneous angiosarcomas are aggressive tumours that can metastasize. The prognosis is poor, with a 5-year survival rate of less than 15%.

Early diagnosis and treatment are essential for local control of this aggressive tumour. A combined modality treatment approach consisting of early surgical excision with wide margins followed by wide-field local radiation therapy, with or without chemotherapy (*e.g.*, paclitaxel, docetaxel), is often advocated.

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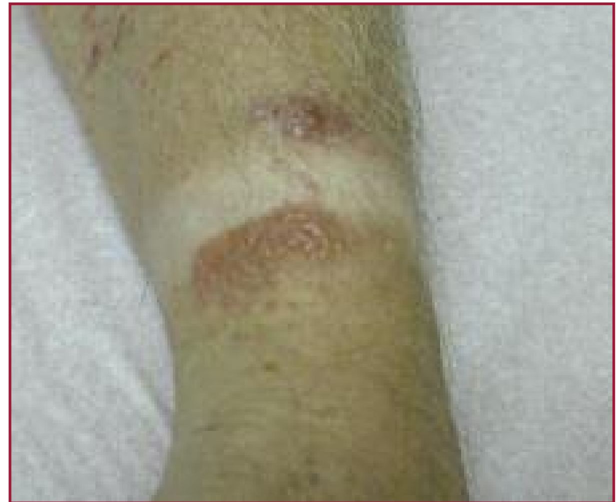
Alexander K.C. Leung, MBBS, FRCPC, FRCP(UK&Irel), FRCPCH, is a Clinical Professor of Pediatrics, the University of Calgary, Calgary, Alberta.

Case 8

Itchy Rash on Wrist

This man presented with this extremely itchy rash, which he developed after camping.



What is your diagnosis?

a. Urticaria
b. Erythema chronicum migrans
c. Poison ivy
d. Erythema multiforme

Answer

Poison ivy **(answer c)**, western poison oak, and poison sumac have poisonous sap (urushiol) in their roots, stems, leaves, and fruit. The sap is released when the plant is bruised, making it easier to contract Rhus dermatitis in the spring and early summer when leaves are tender.

The most common sites on the body for poison ivy are exposed areas on the arms, legs, and face. The intensity of the rash varies depending on the sensitivity of the person and the amount and extent of exposure.

Washing the skin with soap and water inactivates and removes the resin. Washing is most effective if it is done within 15 minutes of exposure

Cold, wet compresses are effective in the blistering stage. They should be used for 15 to 30 minutes several times a day for the first three days

Steroid creams or ointments are helpful to reduce redness and itching. Hydrocortisone can be used on the face, but it is usually not strong enough for more than mild cases on the arms or legs. Typically, a prescription strength steroid is needed for these areas

Oral steroids are used for severe cases of poison ivy but must be used for at least a week

Short, cool tub baths with colloidal oatmeal can be soothing and help control inflammation

Calamine lotion helps control itching, but if it is used too long, it can cause excessive drying of the skin and more inflammation

Antihistamines help reduce itching and the older types such as diphenhydramine help encourage sleep

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.