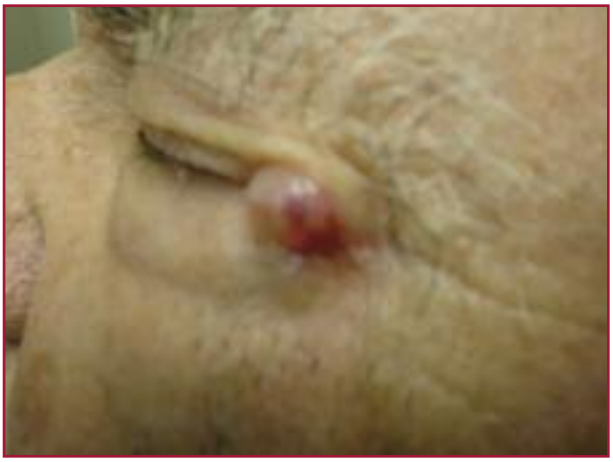
This month – 15 cases:

Case 1

Large, Red Eyelid Growth

This 79-year-old man has had this developing growth at the corner of his eyefold over a 10-year period. It has been interfering increasingly with his lateral vision, but it is otherwise asymptomatic.



What is your diagnosis?

a. Solitary neurofibroma
b. Basal cell carcinoma
c. Epidermoid cyst
d. Amelanotic dermal nevus
e. Giant angioma

Answer

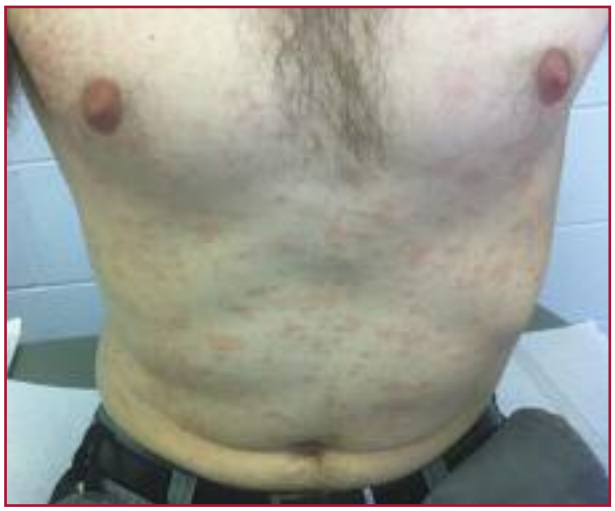
Solitary neurofibroma **(answer a)** is a benign lesion not associated with internal abnormalities. It occurs in the superficial dermis, is unencapsulated, and is composed of myxomatous stroma and Schwann cells. It grows slowly and is asymptomatic, forming soft pinkish-white papulonodules from 2 to 20 mm in size. It can easily be invaginated. When desired, it can be easily excised.

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

Case 2

Torso Rash Preceded by Patches

A 30-year-old male presents with a skin rash of five-days duration, which was preceded by two patches that were initially mildly pruritic. He has no prior history of skin conditions or any other health concerns.



What is your diagnosis?

a. Tinea versicolor
b. Numular eczema
c. Guttate psoriasis
d. Pityriasis rosea

Answer

Pityriasis rosea **(answer d)** is an acutely presenting skin rash that involves the trunk in older children and young adults. The rash is mostly preceded by a herald patch, which is a round, sharply delineated lesion. It is believed to be caused by human herpes virus type 7 (HHV-7). Diagnosis is clinical; presence of the herald patch prior to the rash is the hallmark of pityriasis rosea. Pityriasis rosea is self limited, resolving without intervention. Symptomatic treatment for pruritus might be needed.

Cherinet Seid, MD, LMCC, CCFP, DTM (RCPS Glas), is the Lead Physician of the North Renfrew Family Health Team, Deep River, Ontario, Emergency Physician at Deep River and District Hospital, and Assistant Professor at Northern Ontario School of Medicine, Sudbury, Ontario.

Case 3

Alarming Body Rash

This gentleman presents for an emergency appointment with his doctor, because he is terrified as a result of these rashes, which began to appear a day before.

He had a severely sore throat two days prior to the rash. He was prescribed penicillin at a walk-in clinic after taking a throat swab.

He is a very healthy gentleman, and sees his doctor very occasionally; he is on no regular medication and is not known to suffer from any allergies.

What is your diagnosis?

a. Leukocytoclastic vasculitis
b. Dermatitis herpetiformis
c. Erysipelas
d. Impetigo

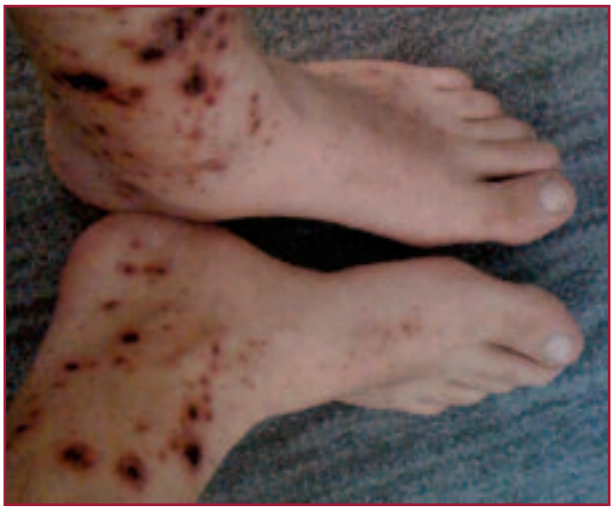
Answer

Leukocytoclastic vasculitis **(answer a)** — also called hypersensitivity angiitis, allergic vasculitis — is an inflammation of dermal venules with immune complex deposition and fibrinoid necrosis.

It favours children and young adults. In older patients, leukocytoclastic vasculitis often results from a drug reaction or reflection of systemic vasculitis.

There are many possible triggers for leukocytoclastic vasculitis, such as infections (streptococci, tuberculosis, hepatitis B and C), collagen diseases (lupus erythematosis, sjogren syndrome, and rheumatoid arthritis), complement defects, and serum sickness.

Usually, immune complexes are formed then deposited in the venules, where they activate complements and establish inflammatory reactions that damage the vessel wall.



The hallmark of leukocytoclastic vasculitis is purpura. More advanced lesions are often palpable. Other lesions may be urticarial, pustular, or necrotic. The lower legs are 100% involved by the rash, arms 15%, mucosa 15%, external ears 10%, and conjunctivae 5%.

Therapy for Leukocytoclastic Vasculitis

Therapy Includes the following:

- If acute onset, treat the trigger
- Often no therapy is needed; bed rest and compression stockings help
- Prednisone 60 mg q.d. for three to five days
- If recurrent, dapsone 0.5 to 2.0 mg/Kg q.d. or colchicine 0.5 to 1 mg q.d.

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 4

Papule on the Nose

A 44-year-old female presents with a stable papule on her nose of several years duration. She has no personal or family history of skin cancers.

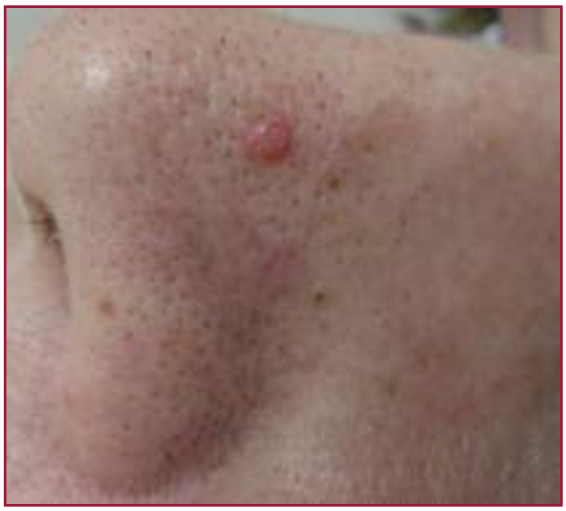
What is your diagnosis?

a. Basal cell carcinoma
b. Verruca vulgaris
c. Compound nevus
d. Spider angioma
e. Angiofibroma

Answer

An angiofibroma **(answer e)** is a common, benign papule, most commonly seen on or around the nose. Most lesions are asymptomatic, although minor trauma can induce bleeding in some cases. There is no gender or racial predilection, and most patients present between 25- and 45-years-of-age.

Most angiofibromas are small (1 to 5 mm), firm, dome-shaped papules with a shiny appearance. They are skin-coloured to reddish. They typically present as one lesion, although two to three papules are occasionally observed.



Angiofibromas may be biopsied or excised to confirm the diagnosis (a basal cell carcinoma is in the differential diagnosis). Treatment options include electrosurgery, laser, shave excision, or curettage; cosmetic outcome is usually excellent.

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in North York, Ontario.

Case 5

Weight Gain and Cutaneous Manifestations

A 59-year-old Caucasian man presents to the emergency department with a three-day history of non-tender abdominal distention and weight gain. His past medical history includes hypertension, dyslipidemia, and a prior diagnosis of hepatitis C virus infection fifteen-years previous. The patient denies consuming excessive alcohol. Physical examination reveals numerous tattoos, proximal muscle wasting, multiple spider nevi on his upper trunk, bulging flanks with shifting dullness, as well as the cutaneous manifestations shown in Figure 1.

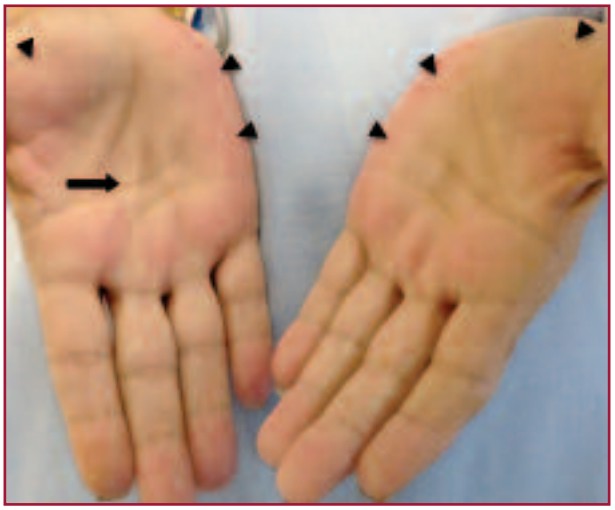


Figure 1: Classic Cutaneous Manifestations of Advanced Cirrhosis

What is your diagnosis?

a. Diabetes Mellitus
b. Thyrotoxicosis
c. Cirrhosis
d. Rheumatoid Arthritis
e. Lymphoma

Answer

Cirrhosis **(answer c)** results from progressive fibrosis of the liver. With time, these changes irreversibly alter hepatocellular architecture, ultimately leading to hepatic failure and a significantly shortened life expectancy. In North America, the most common causes of cirrhosis are alcohol and hepatitis C virus infection. This patient exhibited some of the classic cutaneous manifestations (or stigmata) of advanced cirrhosis. These included palmar erythema (arrowheads, Figure 1) and Dupuytren's contracture (arrow, Figure 1). Palmar erythema results from an exaggeration of normal palmar mottling and is thought to be caused by alterations in the metabolism of sex hormones. It is seen on the thenar and hypothenar eminences, with central palmar sparing. Dupuytren's contractures are due to shortening and thickening of the palmar fascia, which slowly flexes the affected digit. While accumulation of free radicals may play a role, the precise underlying pathophysiology is unknown. Neither of these cutaneous manifestations are specific for cirrhosis; however, their co-occurrence along with findings on history and physical examination support the diagnosis.

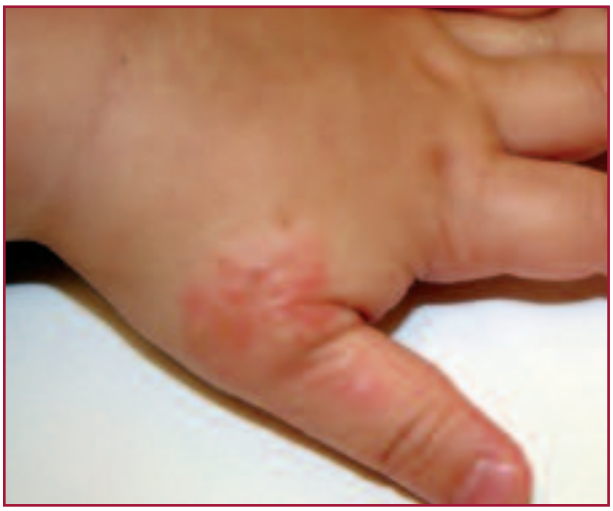
Brent M. McGrath, MD, MSc, PhD, is an Associate Chief Resident from the Department of Medicine at Dalhousie University in Halifax, Nova Scotia. He works at the Saint John Regional Hospital in Saint John, New, Brunswick.

Mallory S. Toner, BSc, and Marcella D. Cronkhite, BN, BSc, are Medical Students in the Faculty of Medicine at Dalhousie University, Halifax, Nova Scotia.

Case 6

Dry, Red, Cracked Skin on Thumb

A two-year-old boy visits the clinic with his mother, because he developed dry, red, cracked skin over his left thumb.



What is your diagnosis?

a. Scabies
b. Contact dermatitis
c. Impetigo
d. Thumb-sucking

Answer

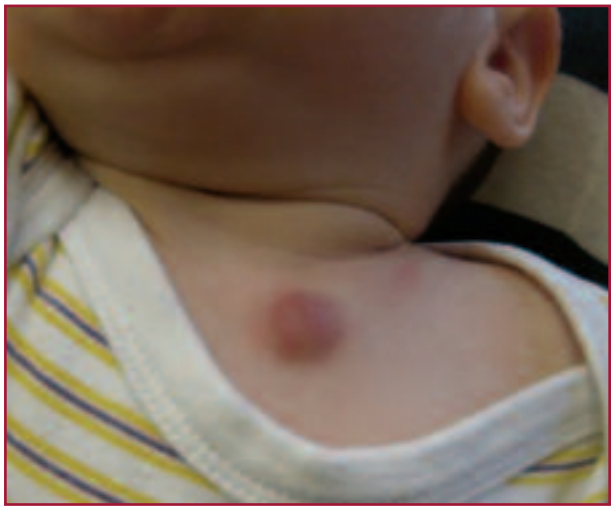
Thumb-sucking **(answer d)** for many younger children can be a way to relieve the feeling of hunger. About 70 to 90% of infants suck their thumb, but most of them gradually stop on their own between the ages of three and six. A thumb-sucking child usually places the thumb in the mouth above the tongue, pressing forward against the upper front teeth or gums, and backward against the lower front teeth or gums. Thumb-sucking in children younger than four is not usually problematic. Prolonged finger sucking can create crowded, crooked teeth, or bite problems. The child may also develop speech problems or problems with swallowing properly. Protrusion and displacement of front teeth are common results of thumb sucking. This can affect the child's appearance and cause further emotional problems. Prolonged finger sucking can also cause minor physical problems like chapped skin, calluses, and fingernail infections. Problem thumb-sucking is most often resolved with home treatments, such as offering rewards and praise when the child is not thumb-sucking. If home treatments do not work, other treatments may be necessary. These treatments include behavioural therapy, thumb devices, and oral devices, such as palate changes with the teeth pushed forward.

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

Case 7

Swollen Chest Nodule

A 13-month-old infant presents with a swollen nodule over the left upper chest. It has been there for the past two weeks. The mother recalls a dimple that has been present in the area since birth.



What is your diagnosis?

a. Branchial cleft sinus and cyst
b. Accessory nipple
c. Wattle
d. Thyroglossal duct cyst
e. Atypical mycobacterial infection

Answer

Branchial cleft sinuses and cysts **(answer a)** are epithelial cysts formed along the course of the first and second branchial clefts as a result of improper closure during embryonic development. They are generally located along the lower third of the lateral aspect of the neck. Lesions may be unilateral or bilateral, and they may open onto the cutaneous surface or may drain into the pharynx. Lesions are present at birth as cystic swellings. They are benign, but occasionally may become infected and painful, as is the case above. If they become symptomatic, they may be surgically corrected.

It is doubtful that this lesion is a thyroglossal cyst/sinus, as these tend to occur near the midline of the neck. These lesions represent persistence of the embryonic structure associated with normal thyroid descent, and move when swallowing.

This is unlikely to be a wattle, otherwise known as a congenital cartilaginous rest of the neck. This is a rare developmental abnormality that tends to frequently occur as small, fleshy appendages, rather than the cystic structure we see in this case. Wattles are generally located on the anterior neck or near the lower half of the sternocleidomastoid muscle.

It is implausible that the nodule is a supernumerary nipple (polythelia), as they tend to occur along, or slightly medial to, the embryologic milk line. They also tend to manifest more commonly as small, brown or pink, concave, umbilicated, or elevated papules. They are most common on the chest or upper abdomen and are occasionally seen in other sites including the face, neck, shoulder, back, genitals, and thighs.

Atypical mycobacterial infections tend to occur in immunocompromised individuals or in an immunocompetent host following skin trauma. These present most commonly as cervical lymphadenitis in healthy children.

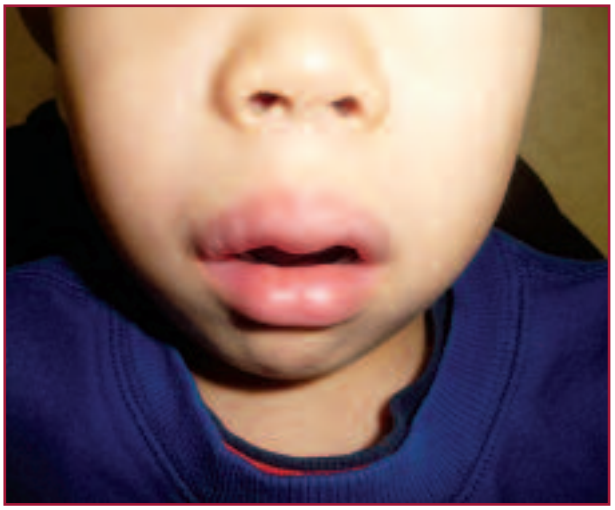
Tram Nguyen is a third year Pediatric Resident at McMaster University, Hamilton, Ontario.

Joseph M. Lam is a Clinical Assistant Professor of Pediatrics and Associate Member of the Department of Dermatology and Skin Sciences at the University of British Columbia. He practices in Vancouver, British Columbia.

Case 8

Itchy, Swollen Lips

A seven-year-old boy presents with itchy, swollen lips an hour after ingesting some chocolate. There is no associated dyspnea or dysphagia.



What is your diagnosis?

a. Dermatomyositis
b. Angioedema
c. Urticaria
d. Cellulitis

Answer

Angioedema **(answer b)** is characterized by diffuse, subcutaneous tissue swelling with normal or erythematous skin. The lesion may be intensely pruritic or itchy. There may also be a burning or stinging sensation at the affected site. Angioedema usually affects the face, but it may also involve the hands and feet, and rarely the genitalia. There may be associated dyspnea or dysphagia. The release of histamine, leukotrienes, and bradykinin from the affected cells causes vasodilatation and increased vascular permeability with resuling edema.

Angioedema is most commonly caused by a type 1 anaphylactic, an immunoglobulin E-mediated response, or immediate hypersensitivity reaction to a food, drug, insect venom, preservative, latex product, or aeroallergen. Angioedema may also develop consequent to a type II cytotoxic reaction (transfusion reaction) or a type III antigen-antibody complex reaction (serum sickness). A subset of angioedema (vibratory angioedema and exercise-induced angioedema) results from hypersensitivity to a mechanical or physical factor. Hereditary angioedema is an autosomal dominant disorder caused by the absence or dysfunction of the C1 inhibitor.

Angioedema is usually self-limited, but known triggers should be avoided. Pruritus can be relieved with antihistamines. Intramuscular epinephrine (1:1,000), 0.01ml/kg (maximum dose, 0.3 ml), usually provides rapid relief of acute, severe angioedema. A short course of systemic corticosteroid should be considered for severe episodes of angioedema.

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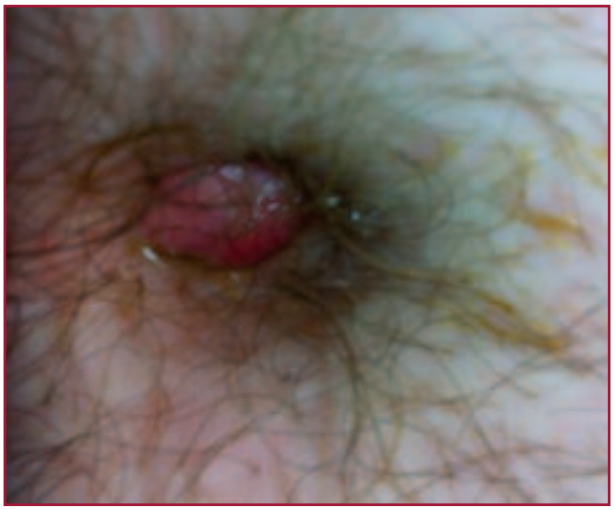
Case 9

A Swollen, Red Umbilical Stump

A 29-year-old male is seen in the ER with a painful, swollen, red umbilical stump. It developed progressively over one week. He has no fever and no history of trauma or piercing. He has not had any prior similar presentations.



What is your diagnosis?

a. Umblical hernia
b. Phlebitis
c. Umblical granuloma
d. Omphalitis with abscess

Answer

Omphalitis with abscess **(answer d)** is the diagnosis. Omphalitis, an infection of the umbilical stump, is well known in new borns, but is rather rare in adults.

Folliculitis can be an underlying cause here. If this condition recurs, the possibility of infection of the remnants of the allantois or omphalomesenteric (vitline) duct should be considered. Imaging with ultrasound or CT scan will be necessary in such cases.

Treatment involves antibiotic use to cover both gram positives and negatives, as etiologic agents of omphalitis tend to be polymicrobial. Incision and drainage is required when there is an abscess. Specific antibiotics can then be chosen depending on the culture and sensitivity result.

Early treatment is necessary to prevent further spread of the infection into the fascia and abdominal muscles. Recurrent cases due to remnants of the allantois or veteline duct would require further surgical removal of these remnants.

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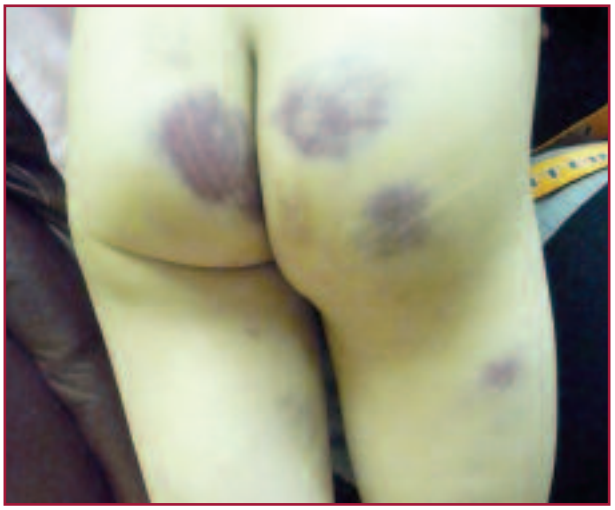
Case 10

Abdominal Pain Followed by Rash

A six-year-old girl presents with abdominal pain, bilateral knee pain, smoky urine, and a rash. She had a sore throat two-weeks-ago.



What is your diagnosis?

a. Henoch-Schönlein purpura
b. Idiopathic thrombocytopenic purpura
c. Poststreptococcal glomerulonephritis
d. Systemic lupus erythematosus

Answer

Henoch-Schönlein purpura (HSP) **(answer a)** is an IgA-mediated, systemic small-vessel vasculitis with a predilection for the skin, gastrointestinal tract, joints, and kidneys. Approximately 75% of cases occur in children between 2- and 11-years-of-age, with a peak at 4- to 7-years-old. The hallmark is a pressure or gravity-dependent purpuric or petechial rash. Abdominal pain, arthritis, and nephritis are common. Between 60 and 75% of patients with HSP have a history of upper respiratory tract infection. *Streptococcus* is the most common infecting organism.

Most cases are self-limited. The average duration of the disease is four-weeks. Recurrences are reported in up to 33% of patients. Therapy consists of general and supportive measures as well as treatment of the sequelae of the vasculitis. Prednisone should be considered for patients with severe gastrointestinal or joint involvement. Early prednisone treatment does not prevent renal disease, although it is effective in treating renal involvement and reduces the odds of developing persistent renal disease.

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Case 11

Enlarging Lesion on the Flank

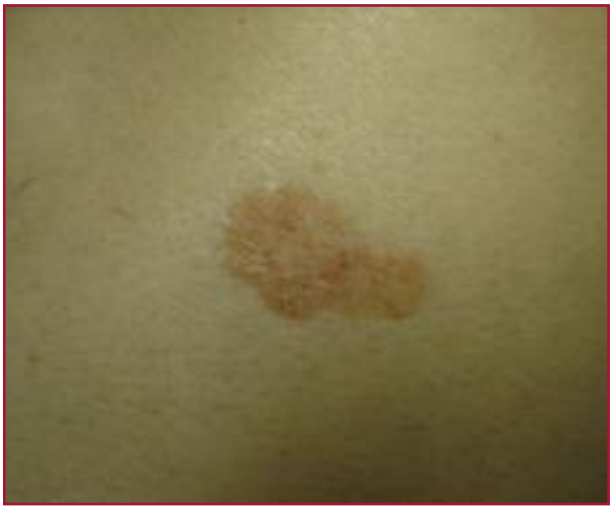
This 50-year-old man has had a slowly enlarging lesion on his flank for three years. It is asymptomatic.

What is your diagnosis?

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

Answer

Bowen's disease **(answer e)**, otherwise known as intraepithelial squamous cell carcinoma, is most often located on chronically sun exposed skin, but it can occur elsewhere. Most grow slowly over time and seldomly progress to squamous cell cancer. Lesions are usually solitary with a well defined border. Depending on the degree of colour, erythema, and scale, any of the choices above need to be considered. Indeed, a biopsy is often required to arrive at the correct diagnosis. Most commonly, such lesions are excised or curetted and cauterized.



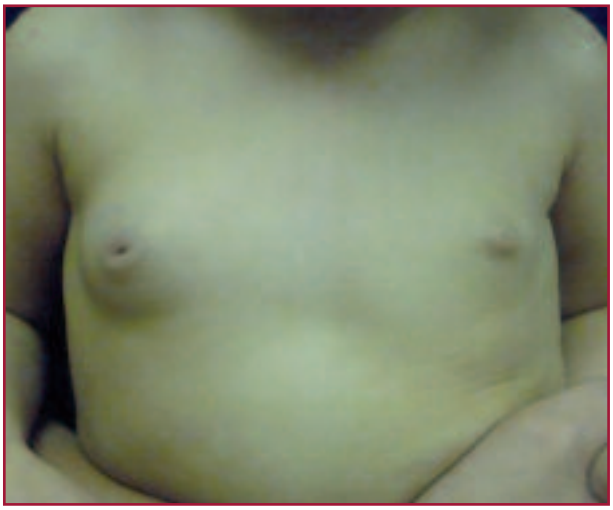
At times, due to the infirmity of the patient or location and size of the tumour, medical treatment using topical imiquimod or fluorouracil has been used.

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

Case 12

Premature Breast Enlargement

A two-year-old girl presents with enlargement of the breasts, most notable on the right. There is no discharge from the nipples. Her health is otherwise unremarkable.



What is your diagnosis?

a. Neurofibromas of the chest wall
b. Premature thelarche
c. Neonatal hyperplasia of the breasts
d. Gynecomastia

Answer

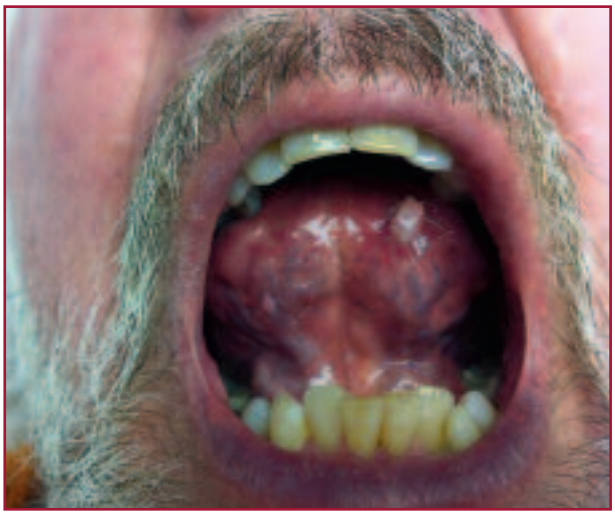
Premature thelarche **(answer b)** denotes isolated breast development before the age of eight-years in girls who do not manifest any other signs of pubertal development. The condition is especially prevalent during the first two years of life. Premature thelarche may result from an "overactivation" of the hypothalamic-pituitary axis in early childhood, secondary to altered sensitivity to steroids of the hypothalamic receptors controlling sexual maturation, increased circulating free estradiol, increased sensitivity of breast tissue to estrogens, and increased production of adrenal androgens from the zona reticularis. The increased adrenal androgens may serve as precursors to the peripheral conversion to estrogens. Premature thelarche may also result from a mutation in the *GNAS* gene. The enlargement may involve only one breast or both breasts, with one notably larger than the other. Breast size may fluctuate cyclically. Breast enlargement is not usually excessive, and no significant changes of the nipples or areolae develop. Children with premature thelarche are of normal height and weight. Growth and osseous maturation are normal. Menarche occurs at the normal time and the pattern of adolescent sexual development and function is normal. Laboratory tests are seldom indicated. The condition is benign, and no therapy is necessary.

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

Case 13

Growth Underneath The Tongue

A 63-year-old male presents with a painless growth on the dorsum of the tongue. He states that he noticed it only a few weeks ago. It has been years since he quit smoking. He has no constitutional symptoms, and he has no associated lymphadenopathy.



What is your diagnosis?

a. Squamous cell carcinoma
b. Papilloma
c. Hemangioma
d. Mucocele

Answer

Hemangioma **(answer c)**, biopsy proven, is the diagnosis. Hemangiomas are mostly diagnosed in early life as a result of congenital malformations. When they occur in adults, they tend to result from repetitive trauma to the blood vessels. Tongue hemangiomas comprise the most common hemangiomas of the head and neck. The lesion shown here was excised in office under local anaesthesia followed by suturing with no complication.

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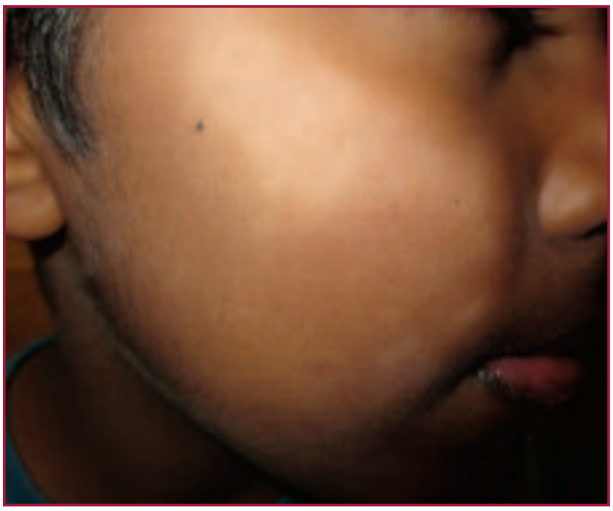
Case 14

Bilateral, Hypopigmented Macules

A 12-year-old boy presents with bilateral, hypopigmented macules over the cheeks. His symptoms have been present over the summer months.



What is your diagnosis?

a. Vitiligo
b. Tinea versicolor
c. Nevus anemicus
d. Pityriasis alba
d. Nevus depigmentosus

Answer

Pityriasis alba **(answer d)** is a disorder characterized by post-inflammatory hypopigmentation, often in atopic individuals, and it is most frequently seen in individuals with darker skin. Histologic evaluation shows normal numbers of melanocytes, but they are often degenerated or dysfunctional. Most cases of pityriasis alba become apparent after sun exposure, which enhances the contrast between areas with intact pigmentary response to ultraviolet light and areas of pityriasis alba. Treatment usually involves moisturizing and sun protection. Repigmentation can take several months to years.

Vitiligo is an acquired pigmentary disorder of the skin and mucous membranes in which some, or all, of the melanocytes in the affected skin are selectively destroyed. It is characterized by well-delineated depigmented macules and patches. On Wood's lamp examination, vitiligo lesions commonly show chalky-white accentuation.

Tinea versicolor is a common, superficial fungal disorder of the skin characterized by multiple scaling hypo- or hyperpigmented oval macules, patches, or thin plaques. They generally occur in sebum-rich areas of the upper trunk and proximal arms and less commonly over the face or neck. Most cases present in adolescents. Similar to pityriasis alba, sun exposure can lead to accentuation of affected areas.

Nevus anemicus is a congenital vascular anomaly that presents clinically as a hypopigmented macule or patch. The underlying cause is hypersensitivity to catecholamines, leading to localized vasoconstriction, and it can be distinguished from other hypomelanoses by diascopy (applying pressure with a glass slide to the lesion and adjacent unaffected skin). With diascopy, nevus anemicus lesions become indistinguishable from the surrounding skin, which is now blanched from the pressure of the slide. Loss of melanin does not occur in the lesion, and, thus, there is no enhancement on Wood's lamp examination. Rubbing of the affected area fails to cause vasodilation or erythema, unlike nevus depigmentosus.

Nevus depigmentosus is an uncommon skin condition characterized by nonprogressive hypopigmented lesions presenting at birth or soon after. It most commonly affects the trunk and can be segmental. Unlike nevus anemicus, it has an erythema response to friction.

Jack Chang is a final year Medical Student at the University of British Columbia, Vancouver, British Columbia.

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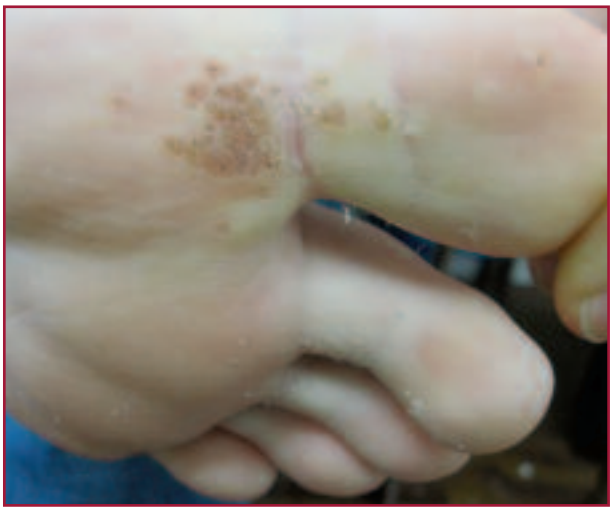
Case 15

Discoloured Areas on the Foot

A 19 year-old male has slowly enlarging, asymptomatic, discoloured areas on the bottom of his foot.



What is your diagnosis?

a. Tinea pedis
b. Foreign body granulomas
c. Corns
d. Pitted keratolysis
e. Plantar warts

Answer

Plantar warts **(answer e)** generally occur as a result of the human papillomavirus (HPV) types 1, 2, or 4. They are transferred through direct contact, often in public showers, pools, and gyms. This virus can spread to surrounding areas, but it is not thought to be capable of spreading to areas beyond those in proximity to the outbreak, such as the genitalia. Warts can occur at any age, though children and adolescents are most commonly affected.

Plantar warts are typically self-limited but sometimes can last for several years. Unfortunately, there is no simple foolproof treatment for warts, hence, various modalities, can and often need to be tried. Over the counter salicylic acid preparations or compounded acid mixtures are a great starting point; these are best applied after scraping down the wart with a pumice stone. Cryotherapy using liquid nitrogen on a regular basis is often a useful destructive method, and occasionally cantharidin is also used. For stubborn or resistant warts, excision or electrosurgery can be tried, as can CO_2 or pulsed dye laser therapy, immunotherapy with diphencyprone or candida antigen, or even intralesional bleomycin.

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in North York, Ontario.

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