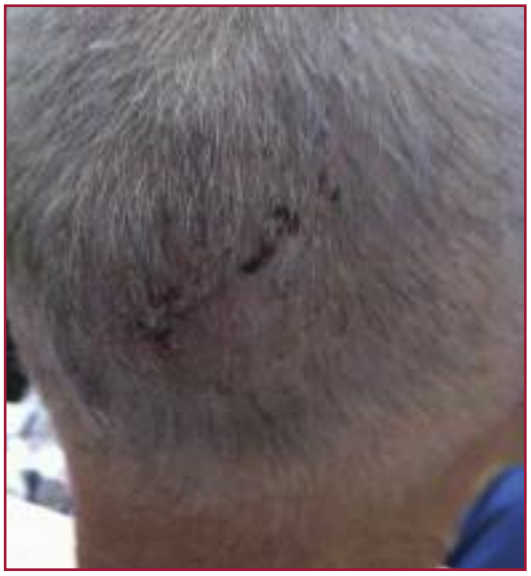
This month — 10 cases:

Editor's Picks "Best of 2012"

Case 1

Soft Tissue Mass on the Occiput

An 80-year-old male has developed a progressively growing soft tissue mass on his occiput over a six-month period of time. It has become painful, making lying supine difficult.



What is your diagnosis?

a. Sebaceous cyst
b. Lipoma
c. HCC metastasis to the skull
d. Exostosis

Answer

Hepatocellular carcinoma (HCC) metastasis to the skull **(answer c)** — biopsy proven — is the diagnosis. HCC is an aggressive tumour. It is the fifth most frequently diagnosed cancer but the second leading cause of cancer-related death in men. The majority of HCCs occur in patients with chronic liver disease.

The most common sites of HCC metastasis are the lung, intra-abdominal lymph nodes, bone, and the adrenal gland. Brain involvement is rare.

It is always prudent to consider metastasis as a differential diagnosis when a patient with malignancy presents with a mass or lesion somewhere else.

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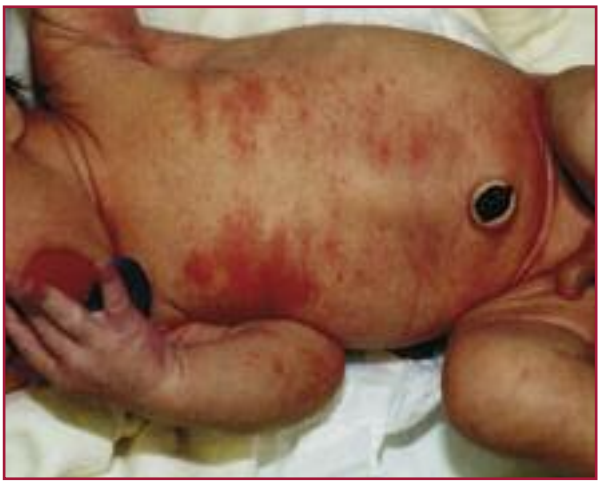
Case 2

Large, Blotchy Areas of Erythema

A two-day-old infant presents with large, blotchy areas of erythema, studded with erythematous papules on the trunk. The infant is otherwise healthy.



What is your diagnosis?

a. Neonatal pustular melanosis
b. Erythema toxicum neonatorum
c. Miliaria rubra
d. Infantile acropustulosis

Answer

Erythema toxicum neonatorum **(answer b)** is characterized by blotchy areas of erythema, studded with erythematous or yellowish papules and sometimes pustules. This leads to what is classically described as a "flea-bitten" appearance. The papules and pustules usually measure 1 to 3 mm in diameter, while the surrounding erythema measures 1 to 3 cm in diameter. In the majority of cases, the lesions develop within 24 or 48 hours of birth, but they may appear as late as three weeks later. Rarely, the eruption is present at birth. The trunk is the site of predilection. The face and extremities may also be involved, but the palms, soles, and genitalia are almost always spared. This pattern of involvement might be related to the distribution of hair follicles.

The exact etiology is unknown, but it appears to be an immune system reaction. The papules and pustules are usually discrete and scattered. The number may vary from a few to dozens. The eruption is asymptomatic. Although individual lesions may last for a few hours, the eruption usually persists for several days or, rarely, several weeks. In general, the pustular eruption tends to last longer. There is no residual pigmentary change or scarring. Relapses are rare.

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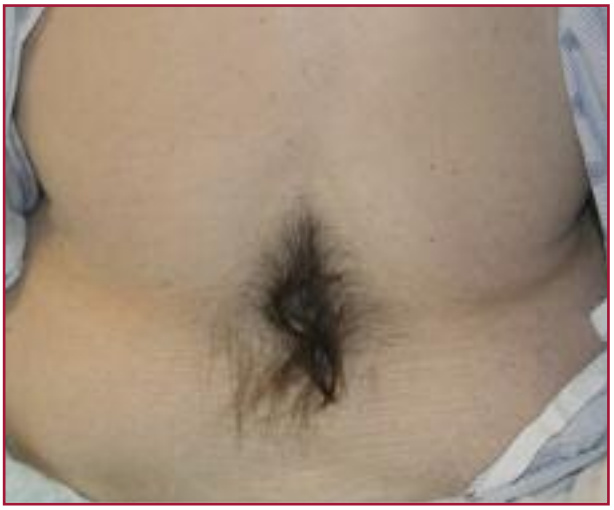
Case 3

A Woman with Back Hair

A 68-year-old Caucasian woman is noted on physical examination to have a large tuft of dark hair over the midline of the lumbar spine. The patient states that this has been present for as long as she can remember and describes only tenderness to palpation over the affected area.



What is your diagnosis?

a. Dermal sinus
b. Spina bifida occulta
c. Diastomatomyelia
d. Hirsutism
e. Exencephaly

Answer

Spina bifida occulta **(answer b)**, a spinal dysraphism, is a disorder of primary neurulation wherein there is a failure of fusion of the vertebral bodies dorsal to the spinal cord. In the occult form, the defect is typically localized in the lumbosacral region with the overlying skin remaining intact. This patient exhibits lumbar hypertrichosis (commonly referred to as a faun tail), which is a common feature of spina bifida occulta. Spina bifida occulta is frequently diagnosed incidentally on physical exam or by radiographs of the lumbosacral spine. The reported incidence for all forms of neural tube defects combined is one in one thousand pregnancies. The most important modifiable risk factor is maternal folate deficiency in pregnancy as well as exposure to certain medications, most notably anticonvulsants. The occult form is usually asymptomatic and typically requires no medical or surgical intervention.

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Case 4

A Stain on the Forehead

This 30-year-old woman is uncomfortable with the appearance of a stain on the right side of her forehead. It first appeared during puberty.

What is your diagnosis?

a. Lentigo
b. Mongolian spot
c. Nevus of Ota
d. Melasma
e. Postinflammatory hyperpigmentation

Answer

Nevus of Ota **(answer c)** is most commonly seen in individuals of Asian descent. It may involve either the V1 or V2 branch of the ophthalmic nerve distribution. It is thought to be a hamartoma of dermal melanocytes, and, in this regard, it is similar to a Mongolian spot, which is mostly noted in East Asians. Nevus of Ota generally presents in the lumbar area.

Onset usually occurs in early infancy or adolescence and is much more common in females. The reason for this is unknown.

It is generally unproblematic, save for emotional issues regarding its appearance. In extremely rare circumstances, there have been reports of glaucoma or melanoma associated with it.

Recently, laser surgery has been succesful in decreasing the colour by reducing the dermal melanocytes. Several treatments are required.

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

Case 5

Stubborn Pruritus

A four-year-old male presents with a flare-up due to a pre-existing skin condition. He has significant pruritus, despite the use of hydrocortisone 1% cream, which has worked in the past. Physical exam reveals lesions on bilateral arms, legs, hands, and feet.

What is your diagnosis?

a. Psoriasis
b. Scabies
c. Contact dermatitis
d. Atopic dermatitis
e. Seborrheic dermatitis

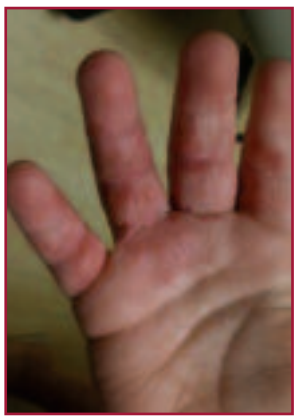


Figure 1: Atopic Dermatitis on the Hand

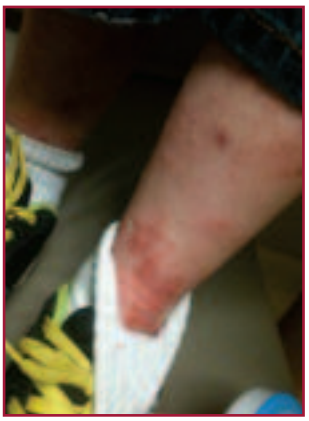


Figure 2: Atopic Dermatitis on the Ankle

Answer

Atopic dermatitis **(answer d)** is a common, chronic, inflammatory skin disorder affecting approximately 10 to 20% of children and 1 to 3% of adults in developed countries. It is often followed by the development of asthma and/or allergic rhinitis — the "atopic march" — in about half of children who develop the condition before age two. Up to 70% of affected children outgrow the disorder before adolescence.

The diagnosis is made clinically, based on the patient's history of significant pruritus as well as characteristic findings on physical examination. Infants typically experience the rash on the extensor surfaces of extremities, as well as on the face, scalp, and trunk. Older children and adults are commonly affected on the flexor surfaces of extremities as well as the hands and feet. A family history of atopy can further support the diagnosis.

Management of atopic dermatitis begins with patient and caregiver education on the chronicity of the disease and the importance of appropriate skin care practice. Bathing with warm water hydrates the skin. A "soak-and-seal" approach is very effective for a daily regimen. It involves bathing in warm water and patting the skin lightly so that it is still slightly wet. This is followed by liberal application of an emollient, such as petroleum jelly. During acute flare-ups, topical corticosteroids are considered first line treatment and are available in various potencies, concentrations, and preparations. It is best to apply them to affected areas following a bath, prior to the use of emollients. Topical calcineurin inhibitors (pimecrolimus and tacrolimus) are effective second-line agents for patients experiencing frequent exacerbations who want to avoid the side effects of topical steroids. Antihistamines may also be helpful to alleviate pruritus. UV therapy and systemic corticosteroids may be used in advanced cases.

Ankush Goyal MD, is currently awaiting Residency Training. He has just graduated from Windsor University in St. Kitts, West Indies.

Kimmy Goyal, MD, CCFP, ABFM, is a Family Doctor in Brampton, Ontario.

Case 6

Hanging Skin Growths

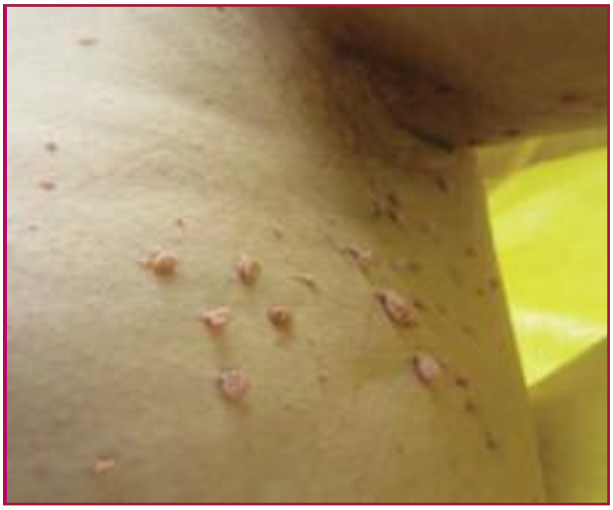
A 51-year-old male presents with multiple papules on the neck, axillae, and groin, which have been multiplying over the years.

What is your diagnosis?

a. Molluscum contagiosum
b. Common warts
c. Seborrheic keratoses
d. Acrochordons
e. Pedunculated nevi

Answer

Acrochordons or skin tags **(answer d)** are common, benign, hanging growths, commonly found on the neck, armpits, groin, and eyelids. Both genders are affected, and they become increasingly common with age and weight gain. They are particulary common in pregnancy and obesity and in those with type 2 diabetes mellitus. Chaffing/rubbing and HPV may also play a role. They are typically flesh-coloured, though they can also be darker, and they range in size from 1 to 10 mm.



Treatment for cosmesis includes, electrosurgery, laser ablation, snip excision, and cryotherapy.

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

Case 7

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 only 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

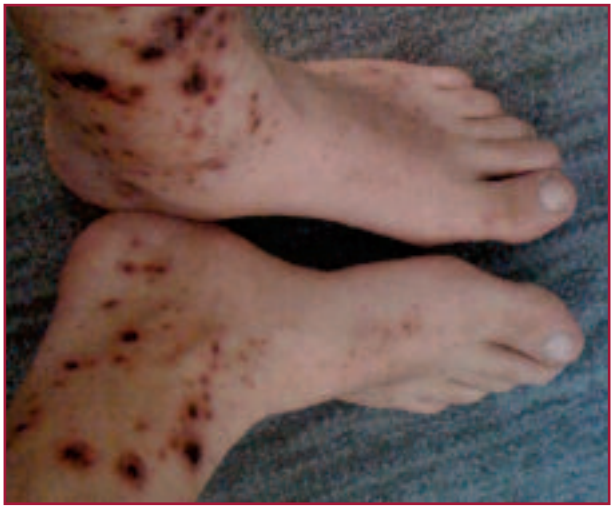
Answer

Leukocytoclastic vasculitis **(answer a)** — also called hypersensitivity angiitis and 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, sjögren's 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:

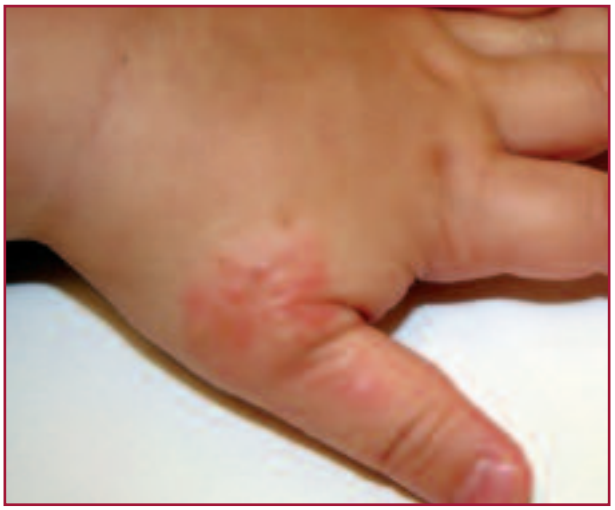
- If acute onset, treat the trigger
- Often no therapy is needed; bed rest and compression stockings help
- Prednisone 60 mg q.d. for three to five days
- If recurrent, dapsone 0.5 to 2.0 mg/Kg q.d. or colchicine 0.5 to 1 mg q.d.

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 8

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. However, 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 9

Maculopapular Arm Rash

This 55-year-old female patient presents with a one-week history of a pruritic, macular, papular rash that worsens with sun exposure. She has seropositive rheumatoid arthritis and has been taking methotrexate 25 mg subcutaneous injections weekly for the past two months. Previous to this, she was using intramuscular gold injections for ten months. She is also taking 5 mg of folic acid weekly.

What is your diagnosis?

a. Cutaneous manifestation of rheumatoid arthritis
b. Methotrexate rash
c. Gold rash
d. Sun rash

Answer

Gold rash **(answer c)** is the most common adverse effect seen with chrysotherapy.

Gold has been used to treat rheumatoid arthritis since 1929. Its indications also include psoriatic arthritis, ankylosing spondylitis with polyarthritis, and juvenile idiopathic arthritis. However, its use has been declining in the past few decades due to a number of potential side effects and the increasing use of other disease-modifying antirheumatic drugs, especially methotrexate and biologics.

After gold is injected, it is deposited in every cell of the body, with the skin being one of the organs that receives the greatest concentrations. It may seem surprising that this patient developed a gold rash two months after the discontinuation of therapy; however, the drug has a fairly long half-life. Approximately 75% of the drug is retained in the body after an initial dose, and it can still be found in the urine months after discontinuation.

Gold rashes can be quite variable; however, they are typically macular or maculopapular, photosensitive rashes affecting the limbs and/or trunk. Generalized pruritus often precedes and accompanies the rash.

Figure 1: Maculopapular Pruritic Rash

Figure 2: Close-up of Rash

Treatment should be stopped if a gold rash develops, as it may lead to chronic exfoliative dermatitis. Nonetheless, if pruritus occurs in the absence of a rash, treatment may be continued. Even after therapy is discontinued, the rash usually lasts one to two months. Patients should be instructed to stay out of the sun and to avoid using harsh soaps. Antihistamines or topical corticosteroids may also improve patient symptoms. Chrysotherapy may be resumed at a smaller dose after the rash clears.

Resources

1. Gordon DA: Major Side Effects of Gold (2012). In: UpToDate, Basow, DS (Ed), UpToDate, Waltham MA. http://www.uptodate.com.normedproxy.lakeheadu.ca/contents/major-side-effects-of gold?source=search_result&search=gold+rash&selectedTitle=1%7E150. Accessed: May 25, 2012.
2. Gordon DA: Use of Gold Compounds in Rheumatic Diseases (2012). UpToDate, Basow, DS (Ed), UpToDate, Waltham MA http://www.uptodate.com.normedproxy.lakeheadu.ca/contents/use-of-gold-compounds-in-rheumatic diseases?source=search_result&search=use+of+gold+compounds+in+rheumatic+diseases&selectedTitle=1%7E150. Accessed: May 25, 2012.
3. Almeyda J, Baker H: Quarterly Review, Drug Reactions XII, Cutaneous Reactions to Anti-rheumatic Drugs. British Journal of Dermatology 1970; 83(6):707–711.
4. Lexi-Comp: Gold Sodium Thiomalate: Drug Information. http://www.uptodate.com.normedproxy.lakeheadu.ca/contents/gold-sodium-thiomalate-druginformation?source=search_result&search=gold+sodium+thiomalate&selectedTitle=1%7E12. Accessed: May 25, 2012.

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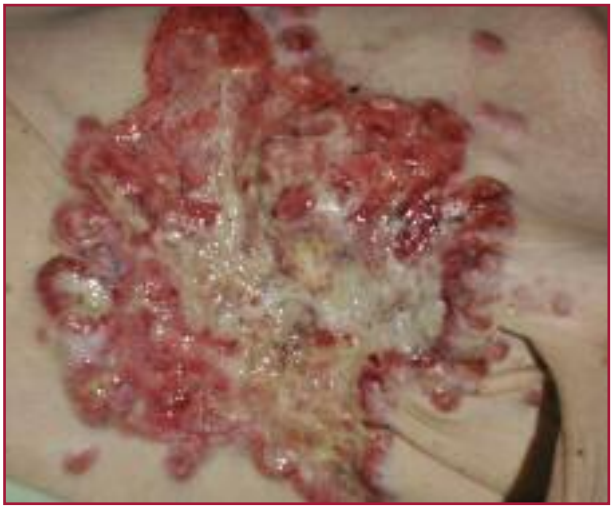
J. Carter Thorne, MD, FRCP(C), FACP, is a Rheumatologist practicing in Newmarket, Ontario.

Case 10

Ulcerating Chest Wall

A 73-year-old female, with increasing shortness of breath, was noted to have a large ulcerating chest wall mass and satellite lesions in the axilla upon physical examination. She is afebrile and her whole blood cell count is normal.



What is your diagnosis?

a. Leishmaniasis
b. Cutaneous T-cell Lymphoma
c. Sarcoidosis
d. Fungating breast carcinoma
e. Hansen's Disease

Answer

Fungating breast carcinoma **(answer d)** is an advanced stage breast cancer that is characterized by an ulcerating lesion with signs of necrosis, and it is often accompanied by a foul odour if presenting with a concurrent infection.

Initial management includes IV fluid management, pain management, biopsy of the edges of the ulcer and satellite lesions, and CT scans of the chest, abdomen, and pelvis to look for likely bone metastasis. Options for treatment at this stage include palliative radiation and chemotherapy. Evaluation for *HER2* over-expression is also recommended.

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