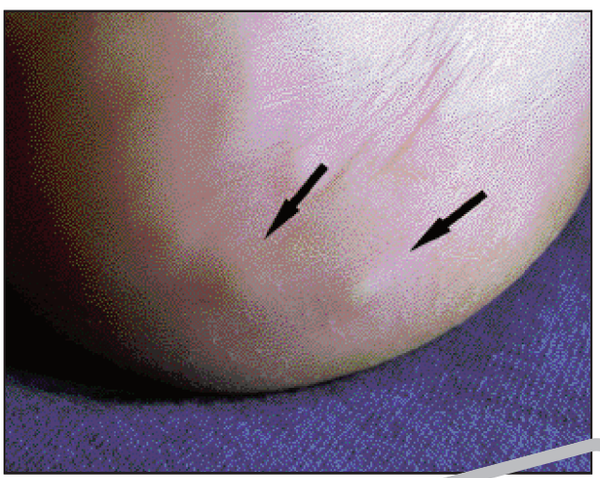
This month–13 cases:

Case 1

A Pressing Issue

This young male presents with a concern regarding lesions on the medial aspect of his heel. They are asymptomatic.



What is the diagnosis?

a. Warts
b. Piezogenic pedal papules
c. Eruptive xanthomas
d. Stucco keratoses
e. Epidermoid cysts

Answer

Piezogenic pedal papules **(answer b)** are a highly prevalent condition, but are only occasionally brought up by patients. The papules are caused by herniation of fat into the dermis through areas of fragmented dermal elastic tissue. Since pressure generated by body weight increases herniation, the papules are more apparent on weight-bearing areas. The lesions tend to disappear entirely when the weight is removed. The papules most commonly occur bilaterally on the medial, lateral and posterior aspects of the heel, as well as on the volar wrists.

Piezogenic pedal papules are nonhereditary and usually are not associated with connective tissue disease. They are found in both sexes, in all ages and in all ethnicities. They are most often asymptomatic and do not require treatment.

Painful lesions may be associated with:

- obesity,
- sporting activities,
- occupational activity and rarely,
- Ehlers-Danlos syndrome.

Symptomatic treatment should start with the use of:

- heel pads,
- rest and
- foot elevation.

Surgical therapy is best avoided.

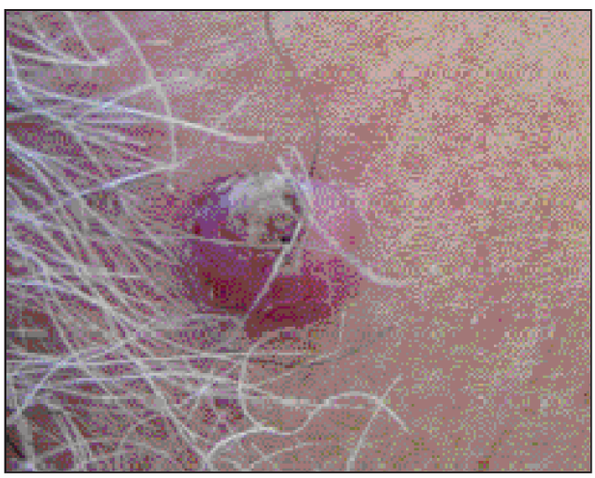
Rose Yeung, BSc, is a Medical Student, University of Alberta, Edmonton, Alberta.

Mike Kalisiak, MD, BSc, is a Dermatology Resident, University of Alberta, Edmonton, Alberta.

Case 2

A Growing Problem

A middle-aged male patient presents with an asymptomatic, erythematous papule along his mandible, which has been slowly increasing in size.



What is your diagnosis?

a. Squamous cell carcinoma
b. Bowen's disease
c. Basal cell carcinoma
d. Metastatic renal cancer
e. Amelanotic melanoma

Answer

Basal cell carcinoma (BCC) **(answer c)** comprise over 80% of all skin cancers, typically appearing after the age of 40 in fair complexions, due predominantly to chronic sun exposure. Approximately 80% of lesions are on the head and neck, with the nose being the most commonly affected area.

BCCs are painless, non-healing papules and nodules that can occasionally bleed since they are friable. Various subtypes of BCC exist, including:

- superficial,
- nodular (most common),
- micronodular,
- morpheaform,
- pigmented and
- several other uncommon variants.

The morpheaform and micronodular tumors are more difficult to treat and have higher recurrence rates.

Treatment options include:

- careful electrodesiccation and curettage,
- excision,
- Mohs micrographic surgery,
- aggressive liquid nitrogen cryotherapy,
- radiation and
- topical imiquimod (for superficial BCCs).

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Approximately 80% of lesions are on the head and neck, with the nose being the most commonly affected area.

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

Case 3

"What's wrong with my daughter?"

A healthy 10-year-old girl presents with a seven-month history of non-tender, skin-coloured, annular papules over the right external malleolus. She is otherwise asymptomatic. She lives at home with her parents in the city and she has no pets. The lesion is not scaly and is non-pruritic. She was initially referred to the pediatric surgeon for biopsy and possible excision.

What do you think?

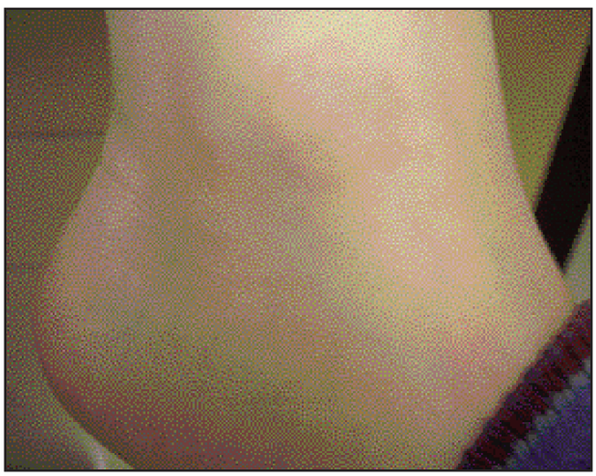
a. Tinea corporis
b. Pityriasis rosea
c. Granuloma annulare
d. Sarcoidosis
e. Urticaria

Answer

This patient has the classic features of *granuloma annulare* (GA) **(answer c)**, an idiopathic, self-limited cutaneous condition that is common in children. It can present anywhere, but it is commonly found on areas susceptible to trauma, such as the wrists, the ankles and the dorsal feet. The characteristic eruption is of annular, grouped, flesh-coloured dermal papules varying from 1 mm to 5 mm in diameter.

The differential diagnosis includes:

- tinea corporis,
- pityriasis rosea,
- sarcoidosis,
- urticaria,
- erythema migrans,
- subacute cutaneous lupus erythematosus,
- Hansen's disease and
- erythema annulare centrifugum.



Although localized GA is the most common form, there are four types of GA:

1) localized,
2) generalized,
3) perforating and
4) subcutaneous.

In children, the association with diabetes mellitus is controversial, at best.

Spontaneous resolution occurs in about 50% of individuals, but may take up to three years to four years before involution occurs. Most often, we recommend observation alone. However, case reports have demonstrated resolution with treatments that include corticosteroids (topical, intralesional and systemic), destructive therapies (ranging from cryotherapy to surgical excision), systemic agents (from methotrexate to psoralens and UVA light) to other topicals (5-fluorouracil, retinoic acid and anthralin). However, given the natural history and benign nature of the disease, the best treatment is still likely good patient education and watchful waiting.

Joseph Ming-Chee Lam, MD, FRCPC, FAAP, is a Pediatrician finishing a two-year fellowship in Pediatric Dermatology in Toronto, Ontario and San Diego, California.

Case 4

"What's on my baby's skin?"

A nine-month-old girl was noted to have a reddish mass on the right side of her abdomen.

What is your diagnosis?

a. Superficial hemangioma of infancy
b. Deep hemangioma of infancy
c. Salmon patch
d. Port-wine stain

Answer

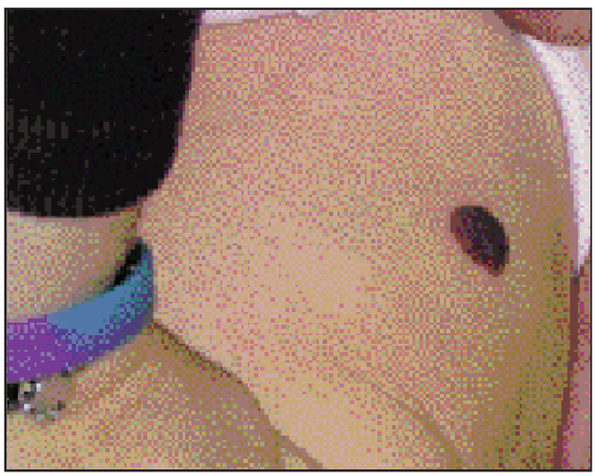
Superficial hemangioma of infancy **(answer a)**, also known as strawberry hemangioma, is the most common vascular tumour encountered during childhood. The majority of lesions develop within the first few weeks of life. A precursor lesion heralds the hemangioma in 30% to 50% of cases. The precursor lesion might take the form of:

- telangiectasia,
- a pale or erythematous patch, or
- a bruise-like mark.

The lesion then grows into a protuberant, sharply demarcated, bright red mass. The rapidly proliferative phase lasts three months to nine months and is followed by an involutional phase that usually leads to complete disappearance of the lesion. Partial involution might leave an atrophic area with a few telangiectatic vessels.

Deep hemangioma of infancy, formerly known as cavernous hemangioma, consists of collections of dilated vessels deep in the dermis and subcutaneous tissue. The lesion is present at birth and is usually:

- bluish or reddish,
- cystic,
- firm and
- compressible.



Approximately 60% to 80% of cavernous hemangiomas undergo spontaneous involution, often with central clearing and fibrosis.

A salmon patch consists of ectatic dermal capillaries that represent the persistence of fetal circulatory patterns in the skin. The lesion is flat and blanches totally with pressure. The patch tends to fade with time and is rare after the age of six.

A port-wine stain consists of mature dilated capillaries and represents a permanent developmental defect. The lesion is:

- red-to-purple,
- macular and
- sharply circumscribed.

A lesion in the trigeminal area might be associated with a vascular malformation of the ipsilateral meninges and cerebral cortex (Sturge-Weber syndrome).

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

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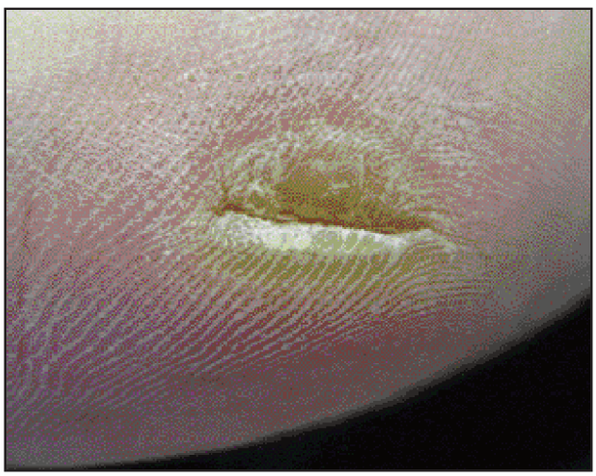
Case 5

Thickening Skin On the Foot

A 45-year-old male has discomfort from the thick skin on his lateral foot.



What is your diagnosis?

a. Corn
b. Squamous cell carcinoma
c. Clavus
d. Keratoderma

Answer

A c*lavus* or a callus **(answer c)** is a thickening of the skin due to intermittent pressure and frictional forces which results in hyperkeratosis. This can result in chronic pain and can occasionally result in the formation of an ulcer.

The most common sites for clavus formation are the feet, especially the dorsolateral aspect of the fifth toe or under the metatarsal heads. The shape of the feet are important and with age, there is increasing tendency for bony prominences to form with resulting skin friction, which will ultimately lead to the thickening of the skin. Formation of a clavus results in more friction against footwear and a perpetual cycle. The following can increase the tendency for clavus formation:

- Morton's toe (second toe longer than the first),
- contractures or mallet-shaped toes,
- obesity,
- neuropathies and
- diabetes.

Treatment should be aimed at reducing the pain and discomfort that are often associated with walking. Paring of lesions is important, as well as determining the etiology of the foot pressure irregularity and redistributing the weight. The use of orthotics and wider shoes are helpful. When all else fails, surgery is warranted.

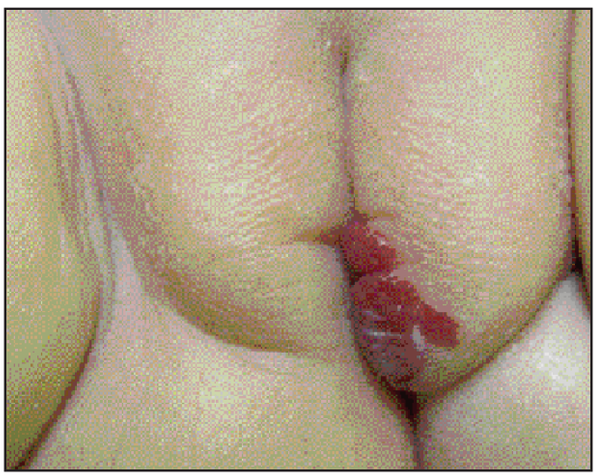
The most common sites for clavus formation are the feet, especially the dorsolateral aspect of the fifth toe or under the metatarsal heads.

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

Case 6

A Red Growth

A four-month-old infant girl presents with an enlarging red tumour over the left labial region. The mass was not present at birth, but appeared around two weeks of age and has been increasing in size since then. Recently, it has seemed to stop growing as rapidly. There are no other lesions on her body. She is otherwise perfectly healthy.



What is the cause of this lesion?

a. Unusual insect bite
b. Port-wine stain
c. Child abuse
d. Angiosarcoma
e. Hemangioma of infancy

Answer

This infant has a labial *hemangioma of infancy* (HOI) **(answer e)**. HOI are very common lesions in childhood. They are seen in up to 12% of infants at one year of age, making them the most common tumor of infancy.

The natural history for HOI has been well documented. The hemangioma is absent at birth, although precursor lesions, such as a telangiectatic or erythematous macule, can be seen in up to 50% of patients. They usually appear within the first two weeks to four weeks of life.

The growth phase of the HOI is the most pronounced in the first three months to six months, followed by slower growth. Most HOIs reach their maximal size by 12 months of age. There can be wide variability in the timing of growth and stabilization between different patients.

Complete involution of HOI occurs at a rate of approximately 10% per year, with 50% of patients having resolution by five years of age and 90% of patients having resolution at nine years of age. In some hemangiomas, fibro-fatty infiltration may occur when the lesions resolve.

Ulceration is the most frequent complication of hemangiomas, occurring in 5% to 13% of all lesions. This usually occurs in the proliferative phase and is more common in areas of mechanical trauma, such as:

- the perineum,
- the perioral area and
- in the intertriginous areas.

Fortunately, our patient did not experience any ulceration and only required periodic follow-up.

Joseph Ming-Chee Lam, MD, FRCPC, FAAP, is a Pediatrician finishing a two-year fellowship in Pediatric Dermatology in Toronto, Ontario and San Diego, California.

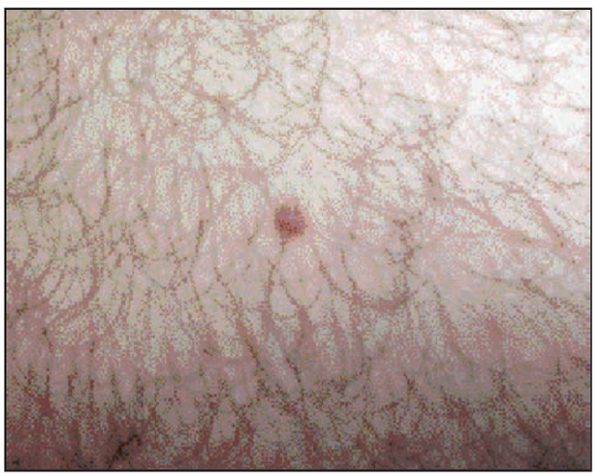
Case 7

"What's on my thigh?"

A 45-year-old man presents to the ER because his girlfriend is very concerned about the lesion on the medial side of his left thigh. He is not concerned about it, as it has been there for a few years with no change.

On examination, the papule is:

- smooth,
- firm,
- round,
- brownish,
- measures around 0.5 cm and
- has a peripheral rim of hyperpigmentation.



What do you think?

a. Keloid scar
b. Nodular melanoma
c. Melanocytic nevus
d. Kaposi's sarcoma
e. Dermatofibroma

Answer

Dermatofibromas **(answer e)** are thought to be fibrosing reactions to a local insult, such as an arthropod bite or folliculitis.

They are most common on the legs of women and most dermatofibromas are detected by examination alone. Classically, when pinched, they dimple in the centre.

A history of an unchanging lesion present for months to years supports this diagnosis. However, a punch or elliptical biopsy extending to subcutaneous fat is indicated if the diagnosis is in doubt.

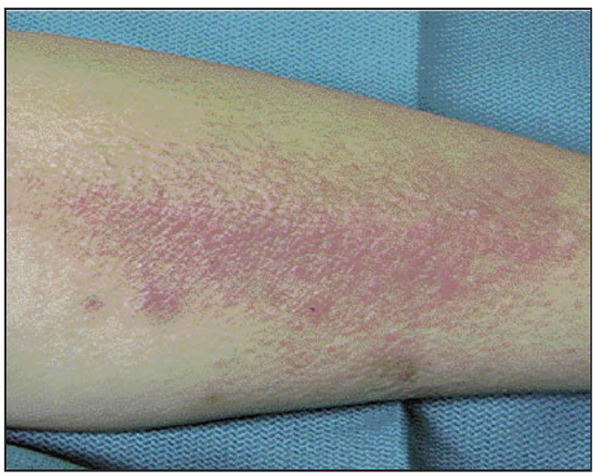
No treatment is necessary. For patients in whom the lesion causes symptoms—such as pain or bleeding with leg shaving, or for cosmetic reasons—surgical excision and primary closure is considered acceptable treatment. Dermatofibromas persist if not removed.

Hayder Kubba 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, Fort McMurray, Alberta.

Case 8

"What's this on my shins?"

This 37-year-old woman presents with symmetrical pruritic plaques on both shins. They have been present for eight years.



What is the diagnosis?

a. Hypertrophic lichen planus
b. Pretibial myxedema
c. Lichen amyloidosis
d. Lichen simplex chronicus
e. Erythema nodosum

Answer

This patient has *lichen amyloidosis* **(answer c)**. Lichen amyloidosis is the most common form of primary localized cutaneous amyloidosis (PLCA). PLCA is associated with the deposition of amyloid in the skin, without associated deposits in internal organs.

Lichen amyloidosis evolves from scaly, skin-coloured or hyperpigmented papules that coalesce into plaques. Lichen amyloidosis is most often seen on the extensor surfaces of extremities.

Treatment is aimed at symptomatic relief, but it is not curative.

Treatment is aimed at symptomatic relief, but it is not curative; the amyloid deposits will persist. It can be aggravated by rubbing or scratching. Potent topical steroids can be used under occlusion in combination with salicylic acid. Phototherapy with psoralens and UVA light may be helpful. Other treatments include:

- systemic retinoids,
- surgical excision,
- dermabrasion and
- cryotherapy.

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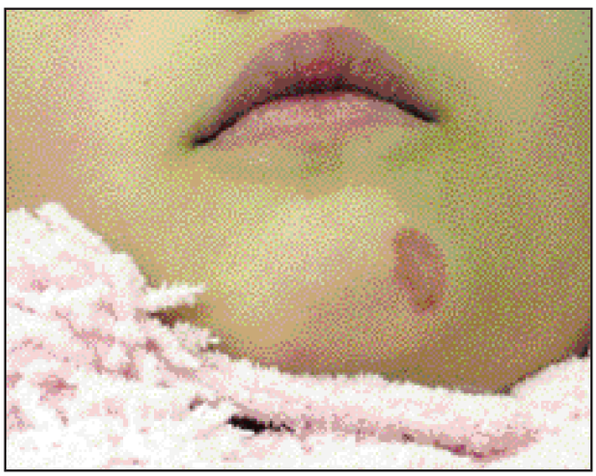
Case 9

A Red Rash On the Chin

A six-year-old girl was assessed because of a circular red rash that had been present on her chin for one week. She has a pet dog.



What is your diagnosis?

a. Tinea faciei
b. Seborrheic dermatitis
c. Lupus erythematosus
d. Contact dermatitis

Answer

Tinea faciei **(answer a)** is a dermatophyte infection of the face. *Trichophyton rubrum*, *Trichophyton mentagrophytes*, *Trichophyton tonsurans* and *Microsporum canis* are the most prevalent etiologic organisms. Tinea faciei is characterized by an erythematous, scaly lesion with a well-defined border. As the lesion spreads peripherally, the center of the lesion tends to clear and produces the characteristic annular lesion that is responsible for the designation of ringworm.

The diagnosis can be established by demonstration of the fungus in a scraping prepared with potassium hydroxide and observed by microscopy, or by culture. The best results are obtained with a scraping from the scales at the edge of the lesion.

The best results are obtained with a scraping from the scales at the edge of the lesion.

Tinea faciei usually responds to topical application of an antifungal agents, such as:

- miconazole,
- ketoconazole,
- clotrimazole,
- econazole,
- naftifine, or
- terbinafine.

In difficult to treat cases, oral itraconazole or fluconazole should be considered.

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

Wm. Lane M. Robson, MD, FRCPC, is the Medical Director of The Children's Clinic in Calgary, Alberta.

Case 10

A Hair Loss Problem

A 46-year-old man presents with an area of hair loss which was noticed by his barber. He was unaware of it and it is not causing him any problems.

What is your diagnosis?

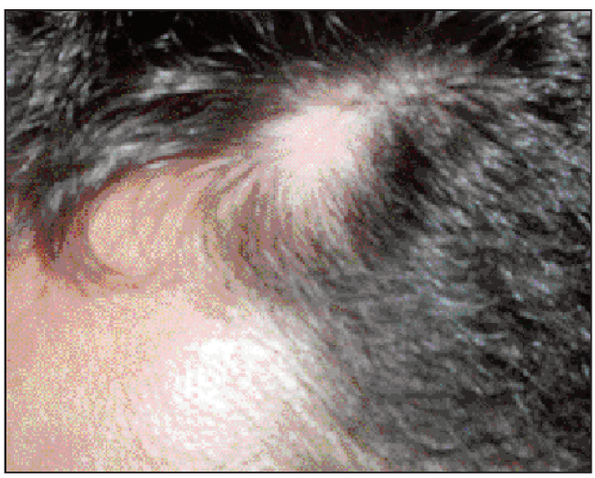
a. Androgenic alopecia
b. Telogen effluvium
c. Alopecia areata
d. Trichotillomania
e. Tinea capitis

Answer

In *alopecia areata* (AA) **(answer c)**, round patches of hair loss develop rapidly and asymptomatically. The patches are well-circumscribed, round and without inflammation or scaring. Hair loss occurs most commonly on the scalp, but other areas, such as the eyebrows and beard are often involved. AA is a chronic condition that often begins in childhood or in young adults. The term alopecia totalis is used if all scalp hair is lost and alopecia universalis is the term used for complete loss of all body hair. As much as 1% of the population may have at least one spot of AA by the age of 50. There is a positive family history of AA in 10% to 20% of patients.

One pathognomonic sign of AA is the *exclamation point hair*, which is wide distally, narrows at the base and occurs at the periphery of a patch of hair loss. Hairs that regrow in a patch of AA are often white. In about 40% of patients, pitting of the nails accompanies hair loss. Most patients are in good health and no additional medical workup is required. However, in a small number of cases, there is an association with other autoimmune conditions such as:

- Hashimoto's thyroditis,
- connective tissue disease,



- myasthenia gravis,
- cataracts and
- vitiligo.

Treatment of AA has a variable course and new lesions may develop, even as old ones are resolving. This makes evaluation of treatments difficult and no treatment has been extremely effective. The main treatment option in AA is intralesional injections of diluted glucocorticosteroids, such as triamcinolone actenoid suspension in a concentration of 2.5 mg/ml to 5 mg/ml. An injection is given every 3 weeks to 4 weeks. Topical corticosteroid ointments or creams may be used as an additional treatment, but efficacy is marginal. Topical anthralin, which elects a mild contact immune response, has been used with modest success. Minoxidil solution 2% or 5% is of mild benefit in some patients.

About 33% of patients with AA have complete hair regrowth within one year.

Hayder Kubba 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, Fort McMurray, Alberta.

Case 11

"What are these lesions?"

A 55-year-old female presents with lesions that she has had for one month. She is not taking any medications.

What do you think?

a. Tinea corporis
b. Necrobiosis lipoidica
c. Lichen planus
d. Granuloma annulare

Answer

Granuloma annulare **(answer d)** is a self-limited, rarely symptomatic, chronic dermatosis that exhibits papules in an annular or arciform arrangement, that may sometimes be generalized, but shows a predilection for the:

- dorsa of the hands and feet,
- elbows and
- knees.

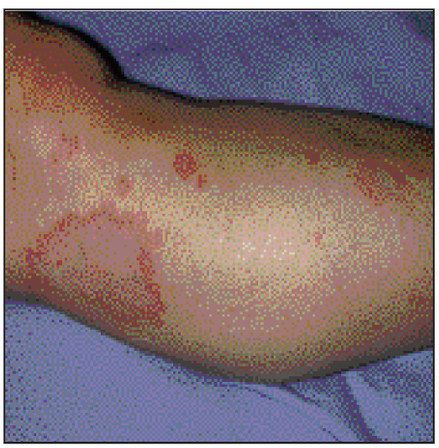
It lacks scale.

GA is more common in women than in men and it usually appears before the age of 30. Half of patients experience resolution within two years, with many patients experiencing recurrences.

Where clinically ambiguous, a biopsy will help confirm the diagnosis. Perivascular inflammation, granuloma formation and altered collagen and elastic tissue in the dermis are characteristic. No lab tests are indicated.

Asymptomatic disease requires no treatment, whereas high potency topical steroids and intralesional steroids are usually the first-line therapies for symptomatic patients. Cryotherapy and psoralens and UVA light phototherapy are sometimes helpful.

Tinea corporis has a characteristic scaly leading border.



The plaques of necrobiosis lipoidica display characteristic atrophic yellow-brown centers with telangiectasias and are typically pretibial.

Annular lichen planus is characterized by flat-topped violaceous plaques with an overlying lacy white network (Wickham's striae).

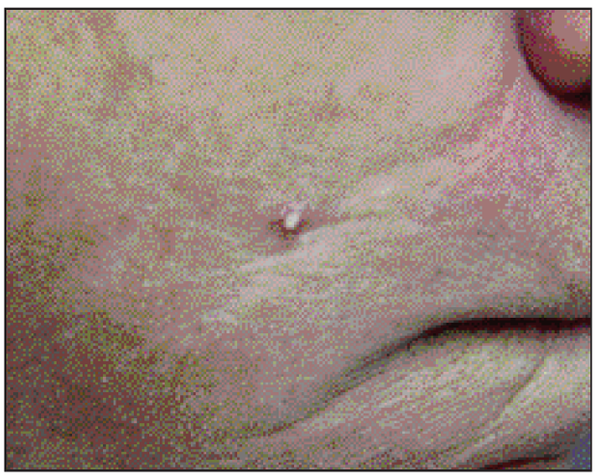
Hanna Nicolas, MD 2007, Laval University, Laval, Quebec.

Mark Krasny, MD, is a Dermatology Resident, University of Montreal, Montreal, Quebec.

Case 12

"There's a spike on my face!"

This 69-year-old man presents with a single spike-like lesion on his right cheek.



What is the Diagnosis?

a. Filiform wart
b. Keratosis punctata
c. Seborrheic keratoses
d. Cutaneous horn
e. Lichen spinulosus

Answer

This patient has a *filiform wart* **(answer a)**. Filiform warts are a type of common wart or verruca vulgaris. They are caused by the human papilloma virus. Filiform warts, in particular, tend to occur on the face and the scalp and present as a single spike or as multiple spikes with a stuck-on appearance.

Often, common warts will spontaneously resolve, but treatment is often demanded by patients. Destructive methods are the most common therapies used and these include cryotherapy and electrocautery.

Other destructive therapies include:

- salicylic acid,
- cantharone and
- simple occlusion with impermeable tape.

This patient was treated with a single round of electrocautery to the base of the lesion.

Destructive methods are the most common therapies used and these include cryotherapy and electrocautery.

Carrie Lynde is a Second Year Medical Student at the University of Toronto, Toronto, Ontario.

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Charles Lynde, MD, is an Assistant Professor of Dermatology at the University of Toronto, Toronto, Ontario and he has a large dermatology practice in Markham, Ontario.

Case 13

Nail Changes

A 41-year-old female presents with nail changes.

What does she have?

a. Subungal hematoma
b. Longitudinal melanonychia
c. Drug-induced lesion

Answer

Longitudinal melanonychia **(answer b)** is frequently seen in individuals with darkly pigmented skin, but is uncommon in Caucasians. Clinically, the nail displays one or more longitudinal pigmented bands extending from the proximal nail fold to the free margin. Brown and black longitudinal streaks within the nail plate are caused by an activation or hyperplasia of:

- normally non-functional matrix melanocytes,
- a nail matrix nevus, or rarely
- subungal melanoma.

Clinically, the nail displays one or more longitudinal pigmented bands extending from the proximal nail fold to the free margin.

The differential diagnosis of longitudinal melanonychia includes:

- traumatic lesions (subungal hematoma) and
- drug-induced lesions (azidothymidine and tetracycline antibiotics are commonly implicated).

Subungal melanoma should be considered:

- when longitudinal melanonychia begins in a single digit of a patient during adult life,
- in the absence of recent trauma or
- inciting medications.

Bilateral and symmetric nail involvement effectively excludes the diagnosis of subungal melanoma; however, the absence of Hutchinson's sign (spread of pigmentation to proximal and lateral nail folds characteristic of subungal melanoma) does not.

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