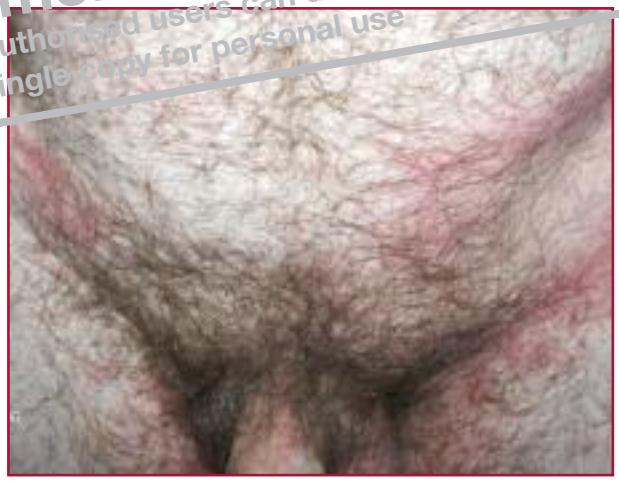
This month – 10 cases:

Case 1

Itchy Skin Rash

This gentleman started getting this worsening itchy rash when he changed his clothing detergent three weeks ago.



What is your diagnosis?

a. Chemical irritant contact dermatitis
b. Urticaria
c. Urticarial vasculitis
d. Erythema multiforme

Answer

Chemical irritant contact dermatitis **(answer a)** is either acute or chronic, which is usually associated with strong and weak irritants respectively.

The mechanism of action varies between toxins. Detergents, surfactants, extremes of pH, and organic solvents all have the common effect of directly affecting the barrier properties of the epidermis. These effects include removing fat emulsion, inflicting cellular damage on the epithelium, and increasing transepidermal water loss by damaging the horny layer water-binding mechanisms and damaging the DNA, which causes the layer to thin out. Strong concentrations of irritants cause an acute effect, but this is not as common as the accumulative, chronic effect of irritants whose deleterious effects build up with subsequent doses.

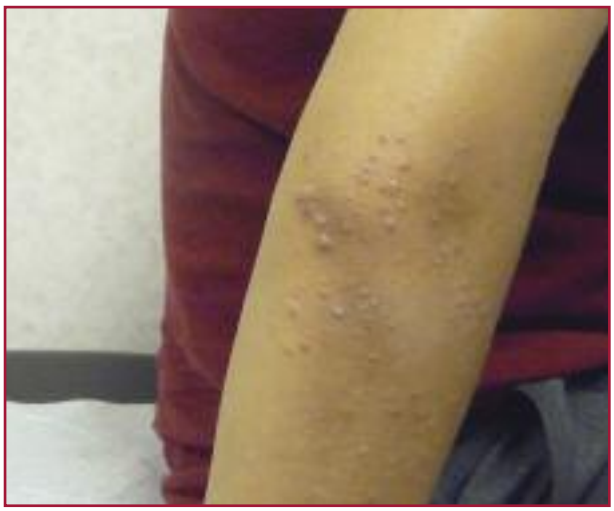
Common chemical irritants implicated include solvents (alcohol, xylene, turpentine, esters, acetone, ketones, and others); metalworking fluids (neat oils and water-based metalworking fluids with surfactants); latex; kerosene; ethylene oxide; surfactants in topical medications and cosmetics (sodium lauryl sulfate); alkalies (drain cleaners and strong soap with lye residues).

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 2

Nonpruritic Skin Coloured Papules

A 12-year-old boy presents with nonpruritic skin-coloured papules on the elbows and extensor surfaces of both forearms. These lesions have been present for six months. The patient used to participate in a lot of outdoor sports. His past history is significant for atopic dermatitis. Viral studies are negative. The lesions respond to treatment with a mild corticosteroid cream and do not recur after cessation of treatment.



What is your diagnosis?

a. Molluscum contagiosum
b. Gianotti-Crosti syndrome
c. Dermatitis papulosa juvenilis
d. Papular urticaria

Answer

Dermatitis papulosa juvenilis **(answer c)**, also known as frictional lichenoid eruption, typically presents as lichenoid, reddish or skin-coloured papules, mainly seen on the elbows and knees. It is also not uncommonly found on the extensor surfaces of the forearms. The papules have regular borders, are 1 to 2 mm in diameter, and sometimes aggregate into plaques. Inquiry may reveal contact with irritant or abrasive materials, such as sand, grass, or wool blankets. A history of atopy can be elicited in 15 to 50% of cases. Treatment consists of topical application of a mild corticosteroid.

Gianotti-Crosti syndrome is characterized by an acute onset of a papular or papulovesicular eruption with a symmetrical distribution. The eruption is found predominantly on the cheeks, extensor surfaces of the extremities, and buttocks. Epstein-Barr virus is the most common pathogen associated with Gianotti-Crosti syndrome and other viral infections (hepatitis B virus mainly in Europe). The eruption usually lasts 10 days to several weeks.

Molluscum contagiosum is caused by a pox virus of the molluscipox genus. Typically, molluscum contagiosum presents as discrete, smooth, flesh-coloured papules with central umbilication from which a plug of cheesy material can be seen.

Papular urticaria is intensively pruritic and is caused by hypersensitivity to insect bites. Lesions initially appear as wheals and progress to papules.

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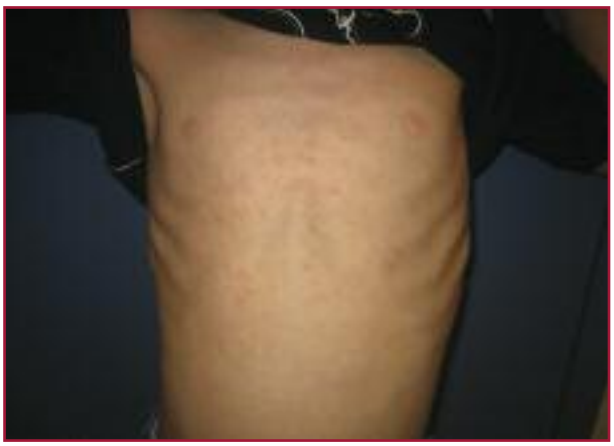
Case 3

Small Domed Papules

A 5-year-old boy presents with small domed skin-coloured papules over the chest that were noticed three months ago. He has no other lesions.



What is your diagnosis?

a. Bronchogenic cysts
b. Molluscum contagiosum
c. Verruca plana (flat warts)
d. Accessory nipples
e. Eruptive vellus hair cysts (EVHC)

Answer

Eruptive vellus hair cysts (EVHC) **(answer e)** are small domed papules, 1 to 3 mm in size, that may be skin-coloured or hyperpigmented. These cysts are most typically found on the anterior surface of the chest and usually affect children between 4- and 18-years-of-age. These keratinizing cysts are found in the dermis and are filled with lamellar keratin and small vellus hairs. Patients seeking treatment for EVHC for cosmetic purposes have a few different options, including incision and removal of the content of the cyst, light electrodesiccation, topical tretinoin, lactic acid, or laser therapy. Without treatment, they tend to resolve spontaneously over a period of a few months to years.

The key to ruling out other diagnoses lies within recognizing the morphology of the lesions and differentiating between congenital and acquired lesions.

Molluscum contagiosum lesions are characterized by their pearly appearance and typical central umbilication. Verrucae plana (flat warts) are flat-topped papules, often with pinpoint thrombosed capillaries. Morphologically, the lesions described in this case are atypical of molluscum or flat warts. In addition, given the infectious nature of both alternative diagnoses, having lesions localized to the chest makes either of these diagnoses unlikely.

Unlike EVHC, supernumerary nipples and bronchogenic cysts are types of congenital malformations. In this case, the papules presented five years after birth, making either of these diagnoses unlikely. In identifying the alternative diagnoses, it is important to remember that supernumerary nipples are found along, or just medial to, the embryologic milk line, and bronchogenic cysts are typically located over the suprasternal notch.

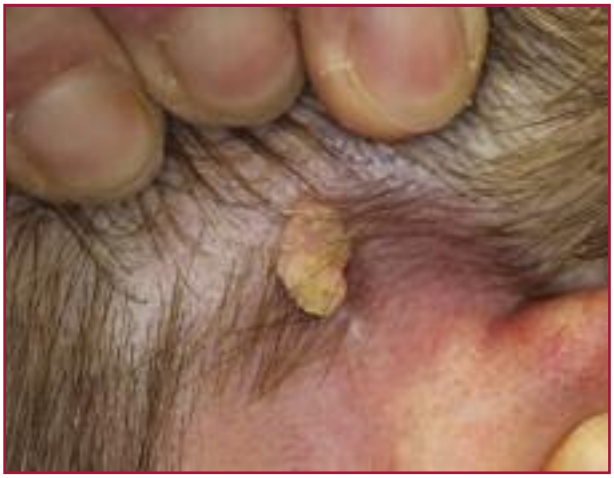
Joseph M. Lam is a Clinical Assistant Professor of Pediatrics and an Associate Member of Dermatology. He practices in Vancouver, British Columbia.

Willa Liao is a final year medical student at McMaster University, Hamilton, Ontario.

Case 4

Large Lesion Behind the Ear

This 53-year-old female presents with a lesion that has been present behind the right ear for approximately two years. It initially grew in size, but it has remained stable now for some time. It is occasionally pruritic.



What is your diagnosis?

a. Squamous cell carcinoma
b. Basal cell carcinoma
c. Melanoma
d. Seborrheic keratosis
d. Wart

Answer

The correct diagnosis is seborrheic keratosis **(answer d)**. Seborrheic keratosis is a benign epithelial tumour that typically occurs in adult patients over the age of 40. Clinically, this lesion can resemble squamous cell carcinoma or a wart. This may be differentiated in that squamous cell carcinomas tend to be evolving lesions with gradual but persistent growth and crusting (if it is a case of well differentiated squamous cell carcinoma) or friability (if it is a case of undifferentiated squamous cell carcinoma).

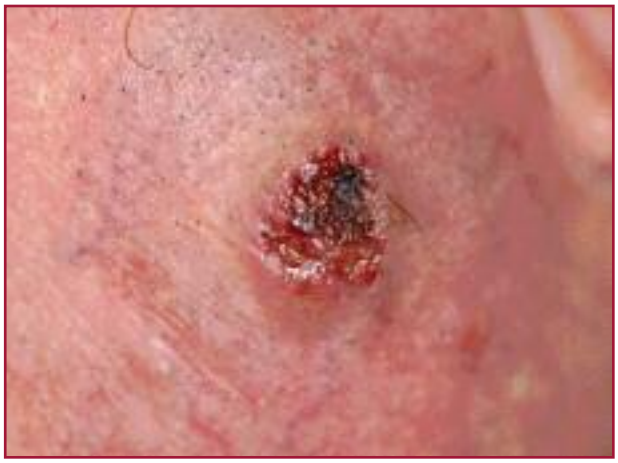
A wart may be differentiated by clinical examination, as they typically have pinpoint hemorrhagic puncta present within them. Typicaaly onset occurs in younger patients, and it presents in different locations.

Dr. Richard Langley, MD, FRCPC, Professor of Dermatology, Director of Research, Division of Dermatology, Dalhousie University, Halifax, Nova Scotia.

Case 5

Ulcerated Nodule

A 50-year-old male presents with multiple crusted and ulcerating nodules on the face, scalp, and back, including this lesion on his cheek.



What is your diagnosis?

a. Primary Cutaneous Anaplastic Large Cell Lymphoma
b. Folliculitis
c. Viral infection
d. Basal Cell Carcinoma

Answer

The correct diagnosis is Primary Cutaneous Anaplastic Large Cell Lymphoma (ALCL) **(answer a)**. ALCL is a primary cutaneous CD30+ lymphoproliferative disorder. CD30+ anaplastic large cell lymphoma can be divided into a primary cutaneous form without extracutaneous involvement at presentation and a systemic form in which skin involvement occurs secondarily.

The initial diagnostic evaluation of patients with any lymphoproliferative malignancy should include a careful history and physical examination. A systemic work up for lymphoma is indicated.

Sarah MacPhee BSc, Research Assistant, Division of Dermatology, Dalhousie University, Halifax, Nova Scotia.

Dr. Richard Langley MD, Professor of Dermatology, Director of Research, Division of Dermatology, Dalhousie University, Halifax, Nova Scotia.

Case 6

Eyelid Papules and Plaques

This 39-year-old female presented with yellow papules and plaques located on the upper medial eyelids and right lower lid.

Dr. Richard Langley, MD, FRCPC, Professor of Dermatology, Director of Research, Division of Dermatology, Dalhousie University, Halifax, Nova Scotia.

What is your diagnosis?

a. Milia
b. Xanthelasma
c. Redundant tissue
d. Contact dermatitis

Answer

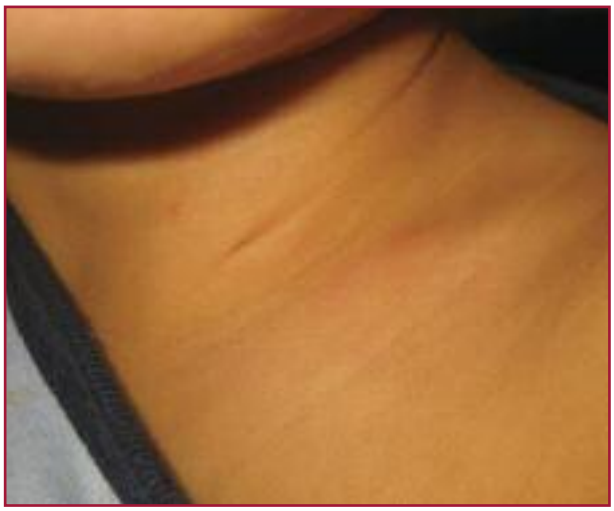
Xanthelasma **(answer b)** are yellow papules or plaques that can occur on the eyelids near the inner canthus. They typically occur more frequently on the upper eyelid and are not usually associated with dyslipidemia, and the patients are usually normal lipemic, as in this patient.

No treatment is required, and patients need only to be reassured about teh papule's benign nature. It is reasonable to do plasma lipid levels, LDL, cholesterol, and HDL in these patients. However, most patients do not have an associated dyslipidemia.

Case 7

Dimple on the Neck

A 21-month-old boy presents with a deep dimple on the left lower neck, which has been present since birth. The dimple is located in the anterior region of the sternocleidomastoid muscle. There is no local discharge or swelling. The lesion is asymptomatic. On physical examination, a firm, mobile cyst can be palpated under the dimple. He is otherwise healthy with normal development and no abnormal facies.



What is your diagnosis?

a. Cystic hygroma
b. Dermoid cyst
c. Plunging ranula
d. Thyroglossal duct cyst
e. Branchial cleft sinus and cyst

Answer

Branchial cleft sinus and cyst **(answer e)** is a benign, lateral neck lesion resulting from improper closure of the first and second branchial clefts during embryonic development. It is the most common of all branchial apparatus abnormalities. Lesions may be unilateral or bilateral. Complications may include infection, following enlargement and mass effect, which compromise respiration. Treatment includes complete surgical removal, with good prognosis.

Cystic hygromas are most commonly found on the head, neck, axilla, and chest. They are associated with malformation syndromes, including Down syndrome, trisomy 18, and Noonan syndrome. Dermoid cysts are usually congenital, thin-walled lesions containing fatty masses, which can be accurately differentiated using MRI. A plunging ranula is a midline neck mass that forms secondarily to a salivary duct obstruction, with a female predilection. Patients often present first with oral swelling. Thyroglossal duct cysts are midline lesions that are remnants from an incomplete thyroid descent. These cysts can be seen to move upward with protrusion of the tongue.

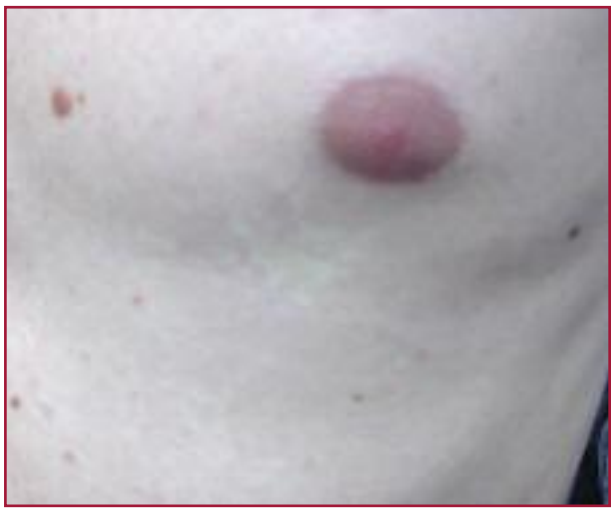
Joseph M. Lam is a Pediatric Dermatologist practicing in Vancouver, British Columbia.

Kayi Li is a fourth year medical student at the University of Toronto, Toronto, Ontario.

Case 8

Hypopigmented Area on the Chest

During this man's yearly physical examination, this hypopigmented area on his chest was discovered. He does not remember how long he has had it. He is healthy and fit and on no regular medications.



What is your diagnosis?

a. Pityriasis versicolor
b. Post-inflammatory hypopigementation
c. Vitiligo
d. Nevus anemicus

Answer

Nevus anemicus **(answer d)** is characterized by its white appearance, which results from a paucity within the lesion secondary to permanent vasoconstriction.

This vasoconstriction is a result of hyperactivity to normal levels of circulating catecholamines. Vitiligo may look similar, but it is whiter than nevus anemicus and the edges cannot be obliterated with pressure.

In addition, Wood's light accentuates vitiligo, but makes the nevus anemicus invisible.

This uncommon, congenital, white patch most commonly occurs on the trunk. The border is irregular and sharply demarcated, but can be obliterated by blanching the surrounding skin. This condition seems to be more common in females and may be seen in association with a port wine stain.

There is no known effective treatment.

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 9

Lesion on Palm

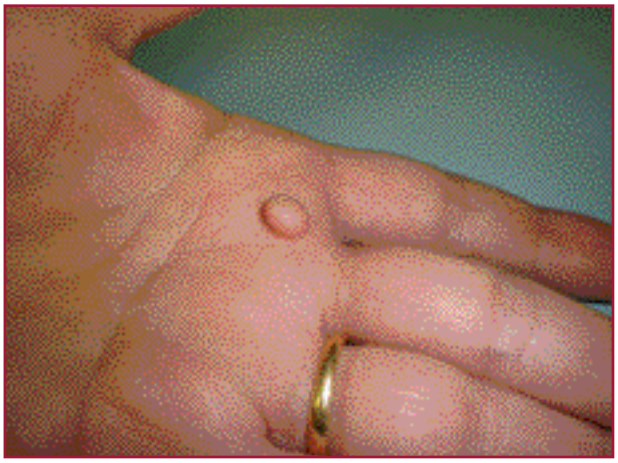
This 60-year-old man has had this lesion on his palm for 20 years. It is asymptomatic.

What is your diagnosis?

a. Verruca
b. Supernummery digit
c. Acral fibrokeratoma
d. Dermatofibroma
e. Cutaneous horn

Answer

Acral fibrokeratoma **(answer c)** are relatively uncommon lesions especially when the occur on the palm. They usually appear on the fingers, but have been noted on other acral areas including toes and soles. They generally occur in middle age adults. Their cause is unknown.



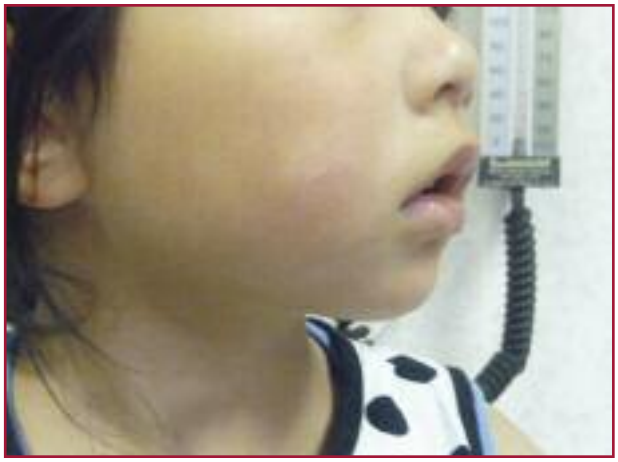
They can easily be removed by a shave excision.

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

Case 10

Hypopigmented Lesions on Cheeks

A seven-year-old girl presents with hypopigmented lesions on her cheeks. The lesions have been present for about four months. Her past health is unremarkable. In particular, she did not have a history of seizure.



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

Jacky Truong, BSc, is a medical student at the University of Calgary.

What is your diagnosis?

a. Vitiligo
b. Pityriasis alba
c. Tinea versicolor
d. Tuberous sclerosis

Answer

Pityriasis alba **(answer b)** is a common nonspecific skin disorder characterized by hypopigmented, round or oval macules with fine, loosely adherent scales and indistinct margins. The lesions appear mainly on the face and range from 0.5 to 5 cm in diameter. Most lesions are asymptomatic. Pityriasis alba occurs predominantly in children between the ages of 3 and 16 years.

The sex incidence is approximately equal. The condition is noted in up to 40% of dark-skinned children in the susceptible age group. The condition is more common in atopic patients and during the spring and summer. Xerosis is an important pathogenic factor.

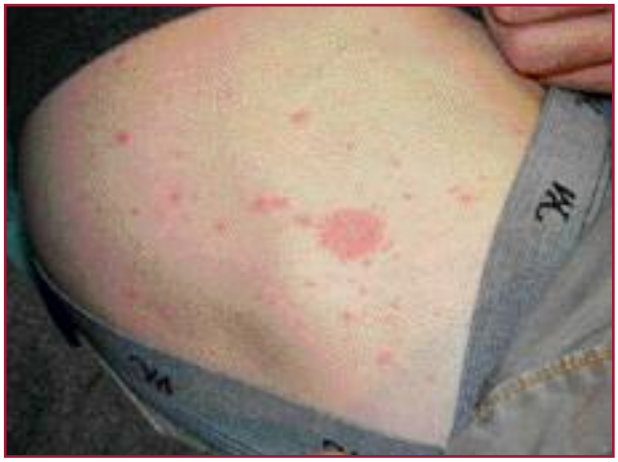
The condition is self-limited and usually lasts two to three years. The use of a low potency hydrocortisone might hasten resolution of the lesion.

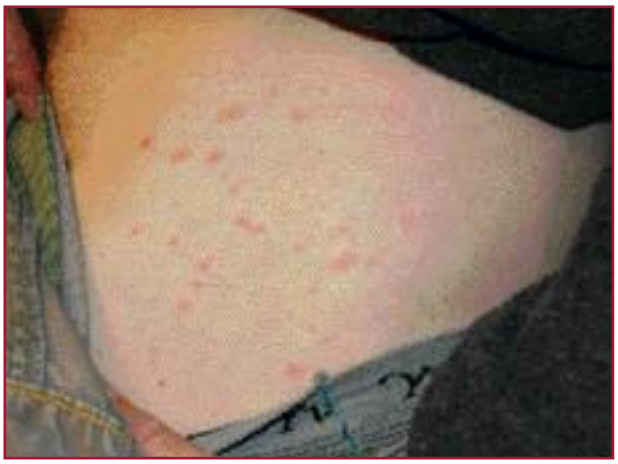
Pityriasis alba is distinguished from vitiligo by the indiscrete margin and the presence of melanin on Wood's lamp examination. Tinea versicolor is rarely restricted to the face, is uncommon in childhood, and has a distinct margin. The hypopigmented macules of tuberous sclerosis are usually present at birth or develop during the first years of life, and have the appearance of an "ash leaf."

Case x

Non-Pruritic Rash

This 22-year-old male visited a clinic with a history of a non-pruritic rash on both sides of his back which he has had for two weeks. It started with one single patch on the right side of his back. His condition is generally good and he has no fever or any drug history.





What is your diagnosis?

a. Tinea corporis
b. Pityriasis rosea
c. Secondary syphilis
d. Guttate psoriasis

Answer

Pityriasis rosea **(answer b)** is an acute self-limited disorder of unknown etiology characterized by scaly, oval papules and plaques which mainly occur on the trunk. The generalized eruption is preceded in most patients by the appearance of a single lesion of 2 cm to 5 cm in diameter known as a "herald patch." A few days later, many smaller plaques appear mainly on the trunk but also on the upper arms and thighs. Individual plaques are oval, pink and have a delicate peripheral of scale. Itching is mild or moderate and their eruption fades spontaneously in four to eight weeks. It tends to affect teenagers and young adults. The cause is unknown, but epidemiological evidence of "clustering" suggests an infective etiology (mostly likely a virus). In most cases, treatment is not necessary Meand there is no recurrence.

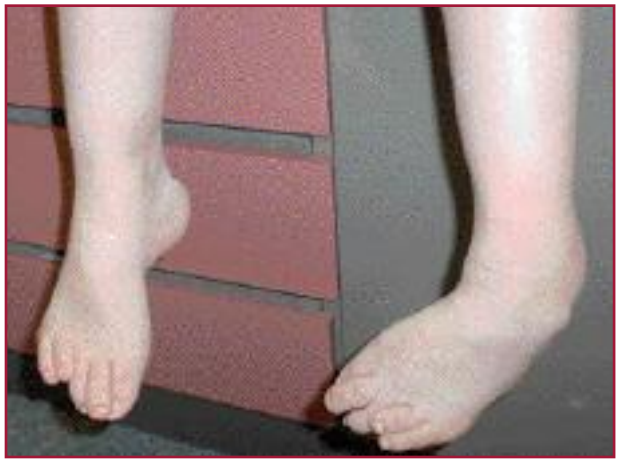
Jerzy K. Pawlak, MD, MSc, PhD, is a General Practitioner, Winnipeg, Manitoba.

T.J.Kroczak is a General Practitioner, Winnipeg, Manitoba.

Case x

xxx

A 13-year-old girl, was brought in by her mother who requested treatment for her leg deformity, which developed a few months after she was born and has been gradually increasing ever since. The mother had an uneventful pregnancy and her daughter was born vaginally at 40 weeks of gestation.



What is your diagnosis?

a. Myotonic muscular dystrophy
b. Talipes equino varus
c. Cerebral palsy
d. Arthrogryposis multiplex congenita

Answer

Talipes Equino Varus: The common ("classic") form of clubfoot **(answer b)**. With this type of clubfoot, the foot is turned in sharply and the person seems to be walking on their ankle.

It's late occurrence demonstrates that it was not caused by uterine factors such as oligohydraminios, amniotic band syndrome or large fibroid, but rather by an inherited disease.

After conducting a full investigation, it was discovered that Charcot-Marie-Tooth Syndrome (CMT), (also known as Hereditary Motor and Sensory Neuropathy (HMSN), Hereditary Sensorimotor Neuropathy (HSMN), or Peroneal Muscular Atrophy), is a hereditary factor in this patient's history. It is a heterogeneous inherited disorder of nerves (neuropathy) that is characterized by loss of muscle tissue and touch sensation, predominantly in the feet and legs, but also in the hands and arms in the advanced stages of disease. Presently incurable, this disease is one of the most common inherited neurological disorders, with 37 in 100,000 affected.

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