Test your knowledge with multiple-choice cases

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Case 1

Leg, Arm, and Chest Papules

This 50-year-old male has been experiencing developing papules on his legs, arms, and chest over the past 15 years. Those on the left thigh are violaceous, grouped, and tender. His mother has similar lesions. He has a history of renal cancer.

What is your diagnosis?

a. Multiple leiomyomata
b. Glomus tumours
c. Angiomata
d. Spiroadenomata
e. Angiolipomas

Answer

Multiple leiomyomata (answer a) are benign tumours arising from the arrector pili muscles. They may also arise in dartotic, vulvar, or mammillary muscle.

Multiple, cutaneous leiomyomata are firm, brownish to violaceous papules, ranging in size from 2 mm to 20 mm, single or grouped on the trunk and extremities. Most commonly they appear in individuals who are 10- to 40-years-of-age.

This type is inherited as a dominant trait. There is a predisposition to type 2 papillary renal carcinoma (Reed’s Syndrome), and women are prone to uterine leiomyomata.

Most patients with multiple leiomyomata have a mutation in the fumarate hydratase gene. As the lesions are benign, they can be left alone, excised, or ablated if symptomatic or cosmetically unacceptable. Patients with multiple leiomyomata should be appropriately checked for renal carcinoma as well as uterine leiomyomata in women.

Stanley Wine, MD, FRCPC, is a Dermatologist in North York, Ontario.
A 35-year-old-male is noted to have a stable, asymptomatic lesion on his nose of over 10-years duration.

What is your diagnosis?

a. Pyogenic granuloma  
b. Nevus sebaceous  
c. Nevus anemicus  
d. Fibrous papule  
e. Basal cell carcinoma

Answer

Fibrous papule (answer d) is a common, benign tumour of the face. It is best considered to be a variant of an angiofibroma. Pathology reveals a proliferation of dendritic cells within fibrous tissue.

Clinical examination displays a translucent-white papule with a smooth dome shaped surface in a young adult to middle aged person. The majority of lesions are asymptomatic, although there may be a history of bleeding with minor trauma. The most common site of involvement is the nose, although it may occur elsewhere on the face and body. Fibrous papule tends to be solitary in nature and measure less than 5 mm in diameter.

The main differential diagnosis is a basal cell carcinoma (BCC). BCC is characterized by rapid growth with a history of spontaneous bleeding. Fibrous papules may be removed on a cosmetic basis or due to a medical concern to rule out the possibility of BCC. Simple shave excision is sufficient for a nice cosmetic result.

Simon Lee, MD, FRCPC, is a Dermatologist who practices in Richmond Hill, Ontario.
An eight-and-a-half-year-old girl presents with a linear plaque of white and black papules above the left nasolabial fold. It has been present for a year.

**What is your diagnosis?**

a. Lichen striatus  
b. Facial angiofibromas  
c. Milia  
d. Acne vulgaris  
e. Nevus comedonicus

**Answer**

Nevus comedonicus (answer e) is a rare lesion of follicular origin. It is usually present at birth and may become more evident during the first decade of life. It appears as a plaque composed of hyperkeratotic papules and horny plugs resembling the comedones of acne vulgaris. They often present in a linear distribution. The lesions may give the texture of the skin a grater-like feeling. Nevus comedonicus tends to grow in proportion with the affected child. Management is very challenging, as most medical therapies are ineffective. Definitive therapy for cosmetically significant lesions is surgical excision.

Facial angiofibromas are benign dermal neoplasms that consist of dermal fibroplasia and dilated blood vessels. Multiple facial angiofibromas are frequently seen in patients with tuberous sclerosis (also known as adenoma sebaceum complex), multiple endocrine neoplasia type 1, and Birt-Hogg-Dubé syndrome. Lesions of adenoma sebaceum are discrete, firm, reddish papules that frequently develop in the nasolabial folds during late childhood to early adolescence, increasing in size and number during puberty. These may be removed by laser treatment.

Lichen striatus is a self-limiting dermatitis that presents with a unilateral-curvedlinear collection of small, erythematous, flat-topped papules that follow Blaschko's lines (the path of ectodermal embryologic development of skin). The mean age of onset is four-years-of-age, and girls are two-to-three-times more frequently affected than boys. Most commonly, it affects the extremities. The lesions are usually asymptomatic and resolve spontaneously within 3 to 24 months (with a mean duration of six months).

Milia are small retention cysts commonly seen on the faces of newborns. They result from retention of keratin within the dermis and appear as tiny 1 to 2 mm pearly white or yellow papules. They are most prominent on the cheeks, nose, chin, and forehead. Milia usually disappear by the first three to four weeks of life and require no therapy. Secondary milia may also occur following blistering or trauma and also in certain predisposing conditions, such as bullous pemphigoid, inherited and acquired epidermolysis bullosa, bullous lichen planus, porphyria cutanea tarda, and burns. Variants of milia include milia en plaque and multiple eruptive milia.

Acne vulgaris is an extremely common disease and is characterized by noninflammatory, open or closed comedones and by inflammatory papules, pustules, and nodules. Acne vulgaris affects the areas of skin with the densest population of sebaceous follicles, including the face, the upper part of the chest, and the back.

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

Joseph M. Lam is a Clinical Assistant Professor of Paediatrics and Associate Member of the Department of Dermatology and Skin Sciences at the University of British Columbia. He practices in Vancouver, British Columbia.
This lesion was detected during this man’s yearly physical. Though he was not concerned about it, as he has had it for about 10 years now, he did, however, wish to know what the lesion could be symptomatic of.

**What is your diagnosis?**

a. Keratoacanthoma  
b. Basal cell carcinoma  
c. Hypertrophic lichen planus  
d. Seborrheic keratosis

**Answer**

Seborrheic keratosis (answer d) (also known as seborrhoeic verruca, senile keratosis, and senile wart) is a non-cancerous benign skin growth that originates in keratinocytes. Seborrheic keratoses are seen more often in aging persons. In fact, they are sometimes humorously referred to as “the barnacles of old age.”

Seborrheic keratoses are benign, but secondary tumours, however, Bowen’s disease (squamous cell carcinoma in situ) or malignant melanoma may occasionally arise within the lesion. Seborrheic keratoses can also catch on clothing and become irritated. They can itch, grow, and bleed.

They appear in various colours, from light tan to black. They are round or oval, feel flat or slightly elevated (like the scab from a healing wound), and range in size from very small to more than 2.5 cm across. They can resemble warts, though they do not have a viral origin. They can also resemble melanoma skin cancer, though they are unrelated to melanoma as well. Because only the top layers of the epidermis are involved, seborrheic keratosis are often described as having a “pasted on” appearance. Some dermatologists refer to seborrheic keratosis as “seborrheic warts;” however, these lesions are usually not associated with HPV, and, therefore, such nomenclature should be discouraged.

Generally, the treating physician should reassure the patient of the benign nature of these lesions, however, because they can be unsightly, there are some treatment options available to ameliorate their appearance. Ketoconazole cream can be applied twice daily, ketoconazole tablets 200 mg q.d. for 7 to 14 days can be tried as well. Low potency glucocorticoid creams can give very good results; the lesions can also be surgically removed.

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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.
A 43-year-old, overweight female presents with pruritic, purple papules on her shins and wrists.

**What is your diagnosis?**

a. Lichen planus  
b. Pustular psoriasis  
c. Nummular eczema  
d. Pityriasis rosea  
e. Lichen simplex chronicus

**Answer**

Lichen planus (answer a) is a fairly common, pruritic, inflammatory disease of unknown etiology. These lesions are characteristically small, violaceous, flat-topped, polygonal papules. They predominantly affect the skin and can also affect the hair follicles, mucous membranes, and nails (5 to 10%). On the surface of some lesions, grey or white streaks may be noted (Wickham’s striae), although this is most commonly seen on the mucous membranes. It has a predilection for the flexor wrists, shins, ankles, and glans penis.

Lichen planus is a clinical diagnosis, although a biopsy is sometimes needed for confirmation. It is considered a self-limited disease, often resolving within 10 to 15 months. Mild to moderate cases can be managed with moderate to potent topical steroids. More severe or generalized involvement can be treated with phototherapy and in some cases with systemic steroids or oral retinoids.

Benjamin Barankin, MD, FRCPC, is a Dermatologist practicing in North York, Ontario.
An abnormality of an infant male’s toe is noticed during a routine visit to the clinic.

**What is your diagnosis?**

a. Syndactyly  
b. Congenital curly toe (clinodactyly)  
c. Club foot  
d. Normal variation

**Answer**

Congenital curly toe (answer b) is a condition of an underlapping toe. Commonly involved toes are the third, fourth, or fifth toes of both feet. Although the exact cause of this condition is unknown, it tends to follow a familial pattern.

Choice of treatment depends on the degree of the deformity, presence of symptoms, and age of the child. If the patient’s symptoms are minimal, the wait-and-see approach is recommended. If surgery is indicated, the plastic surgeon will release the tendon in the bottom of the toe for flexible deformity. Removal of a small portion of the toe might be necessary.

Cheriniet 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.
Proven performance in allergic rhinitis.
A 16-month-old girl presents with skin coloured papules over the left axillae and trunk of five-weeks duration.

**What is your diagnosis?**

a. Eruptive vellus hair cysts  
b. Papular urticaria  
c. Impetigo  
d. Molluscum contagiosum  
e. Fox-Fordyce disease

**Answer**

Molluscum contagiosum (answer d), caused by a member of the poxvirus family, presents with smooth, skin coloured, dome shaped papules and is common in children. The lesions can range from 2 to 8 mm and may contain a small central depression that houses the viral bodies. The papules usually present in clusters and occasionally in linear configurations, due to koebnerization. This infection spreads from skin-to-skin contact, usually in areas where rubbing occurs. Some children may also present with a red, scaly dermatitis surrounding the papules, which can be itchy. Molluscum is self-limiting and spontaneously clears over the years. Common interventions to expedite clearance for cosmetic purposes include topical tretinoin cream, cantharidin blistering agent (off-label use), imiquimod cream, cryotherapy, and curettage.

Although eruptive vellus hair cysts are similar in appearance to molluscum, hair cysts are often hyperpigmented and are commonly found on the anterior chest. The lesions are comparatively smaller in size, ranging from 1 to 3 mm.

Papular urticaria is characterized by intense pruritis and surrounding erythema, often preceded by a weal at the same site. These lesions form in response to insect bites that commonly occur in open, exposed areas.

Impetigo typically presents as erythematous papules with honey yellow coloured crusting, caused by a superficial *staphylococci* or *streptococci* skin infection. These papules occur most frequently on exposed areas of the body and can occur as a secondary complication of atopic dermatitis.

Fox-Fordyce disease is rare in prepubertal children and is a chronic papular eruption in apocrine gland-bearing areas, such as the axillae, and perineal regions. The papules are similar in appearance to molluscum, but erythema and pruritis can be more pronounced.
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. Achrocordons
e. Pedunculated nevi

Answer
Achrocordons 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 particularly common in pregnancy and obesity, and 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 North York, Ontario.