Case 1

White Spots Inside the Cheek

This 54-year-old, female nonsmoker developed white spots inside her left cheek.

Questions
1. What is your diagnosis?
2. What is the significance?
3. Is there any potential for malignancy?

Answers
1. Leukoplakia
2. Leukoplakia is a white or grey patch that develops on the tongue or the inside of the cheek that can not be rubbed off. It is the mouth’s reaction to chronic irritation of the mucous membranes. Leukoplakia patches can also develop on the female genital area; however, the cause of this is unknown. The growth can occur at any time in your life, but it is most common in the elderly.
3. If the lesion persists, there is a high risk that it will develop into squamous cell carcinoma. Predisposing factors include smoking and, occasionally, syphilis.

Provided by: Dr. Lukasz Blaszyk and Dr. Jerzy K. Pawlak

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Case 2

Scaly Plaque on the Chest

A 57-year-old woman presents with a slowly enlarging scaly plaque on her chest, measuring 2 cm in diameter. History reveals that the lesion has not been healing, and it bleeds with friction and mild trauma. On examination, the plaque is located just below the sternal notch and is erythematos, well demarcated, very slightly scaly, and atrophic in the centre. The remainder of the physical examination is otherwise unremarkable. Past history is significant for prolonged periods of sun exposure, largely through her work as a farmer.

Questions
1. What is the diagnosis?
2. What are some of the pertinent clinical features of this condition?
3. What are the risk factors for this condition?
4. How is the condition diagnosed and treated?

Answers
1. The diagnosis is basal cell carcinoma (BCC). Approximately 30% of BCCs are superficial, confined to the epidermis of the skin, and characterized by erythematous papules or plaques, telangiectasias, and a translucent appearance. BCC is rarely seen in dark-skinned individuals. The incidence is higher in males and increases with age. Most BCCs are found on the head and neck (70%), followed by the trunk (20%), and extremities (10%).
2. Superficial BCC lesions are well-demarcated, erythematous, and have a translucent quality, which sometimes reveals telangiectasias with the papules and plaques. Lesions are typically asymptomatic.
3. Risk factors for BCC include sun (UV light) exposure, therapeutic radiation, immunosuppression, chronic arsenic exposure, and smoking.
4. A skin biopsy, sent for histological analysis, is used to make a definitive diagnosis. Complete surgical excision of BCCs is usually curative. Electrodesiccation and curettage and liquid nitrogen cryotherapy can also be effective. For superficial BCC, topical immunotherapeutic agents, such imiquimod cream, are useful for cosmetically-sensitive body sites.
Rash on Sun-exposed Areas

A 34-year-old female presents with a two-month history of erythematous papules and plaques on sun-exposed areas, including the face, arms, neck, upper-chest, and upper-back.

Questions
1. What is the diagnosis?
2. What investigations should be considered?
3. What are the treatments?

Answers
1. Discoid lupus erythematosus
2. A skin biopsy may be necessary to establish the diagnosis. The patient should also be assessed for the presence of systemic lupus erythematosus.
3. Sun protective measures are essential. Topical or intralesional corticosteroids, short pulses of systemic corticosteroids, as well as antimalarials are the main management options.

Provided by: Dr. Francesca Cheung
Right Leg Pain

A 78-year-old, male smoker visits the clinic with a recent history of right leg pain when walking. On physical examination, his right foot is pale and cooler compared to the left one. The dorsal pedis pulse is not palpable, and the lateral plantar is weak. His blood pressure is 172/92 mmHg, and his pulse is regular at 88 bpm.

Questions
1. What is your diagnosis?
2. What is the management?

Answers
1. Peripheral artery disease
2. Management should include an appointment with a vascular surgeon, immediate smoking cessation, treatment for his blood pressure, and ASA. Complete blood work, including sugar, cholesterol, LFT, KFT, vascular Doppler, and CT or MRI angiogram, should be conducted.
Case 5

Red Lesion on the Forehead

A 16-year-old male presents with a red lesion by his left medial eyebrow that has been present since birth.

Questions
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

Answers
1. Port-wine stain
2. Port-wine stains, also known as nevus flammeus, usually present as sharply demarcated, pink or red macules or patches. Most often, lesions are present at the time of birth; acquired lesions are rare. Port-wine stains are present in about 0.3% of newborns, with equal sex distribution. The lesions sometimes appear to fade during the first 12 months of life due to the natural fall in hemoglobin. The capillaries become more ectatic with age, and the colour thereafter gradually deepens. Port-wine stains often become dark red during adolescence and violaceous with advancing age. Although they are initially macular, the surface might become irregular, thickened, and nodular over time. Port-wine stains can occur in any cutaneous location, but the face is most common. They are usually unilateral, segmental, and do not follow the lines of Blaschko. These lesions tend to persist throughout life. Although usually an isolated finding, port-wine stains are also a typical feature of Sturge-Weber syndrome and Klippel-Trenaunay syndrome.
3. Since nevus flammeus is a benign lesion, the indication for treatment is based on cosmetic considerations. Masking with a cosmetic preparation is an option. The intense pulsed light or flash lamp-pumped pulsed dye laser in conjunction with epidermal cooling is the treatment of choice.

Provided by: Ms. Christine C.M. Li and Dr. Alexander K.C. Leung
Case 6

**Flat Head**

A five-month-old boy is brought in by his mother because of a flat head. He is otherwise healthy.

**Questions**
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

**Answers**
1. Positional plagiocephaly
2. Positional plagiocephaly, also known as deformational plagiocephaly or nonsynostotic plagiocephaly, is the most common type of cranial asymmetry in infants. Children with positional plagiocephaly typically present with unilateral occipital flattening, ipsilateral ear displacement anteriorly, and ipsilateral frontal bossing. This configuration, when viewed from above, results in a parallelogram deformity of the head. Positional plagiocephaly results from either intrauterine forces or postnatal positioning. Premature infants are at increased risk for plagiocephaly, possibly due to limited mobility and/or inadequate bone mineralization of the skull. Plagiocephaly has become more prevalent since the introduction of the National Institute of Child Health and Development (NICHD) “Back to Sleep” campaign in Western countries. At birth, approximately 13% of newborns present with positional plagiocephaly; at four-months-of-age, approximately 20% are affected. However, the prevalence decreases to about 3.3% by two-years-of-age, indicating that skull shape, in the absence of treatment, naturally changes within the first two years of life. Positional plagiocephaly is cosmetically unsightly. Affected children may be subjected to teasing or ridicule. Torticollis may develop secondary to positional plagiocephaly.
3. This is a benign condition and resolves in the majority of infants. Treatment consists of reassurance and education of parents, counterpositioning, physiotherapy (if torticollis is involved), and orthotic helmets or headbands for more severe cases in infants six months and older.

Provided by: Ms. Christine C.M. Li and Dr. Alexander K.C. Leung
Case 7

Eyelid Swelling

An otherwise healthy, 30-year-old female presents to the clinic with signs of left eyelid swelling upon awakening. The patient denies any pain, eye discharge, or vision changes. Upon physical examination, there is a questionable scratch on the left upper eyelid. This resolved over the day without any treatment.

Questions
1. What is your diagnosis?
2. What is the etiology?
3. What is the treatment?

Answers
1. Preseptal cellulitis, also known as periorbital cellulitis, is an infection of the eyelid and surrounding skin anterior to the orbital septum.
2. This is a bacterial infection that usually results from the spread of an upper respiratory tract infection, an allergic reaction, or trauma to the eyelid. When a bacterial infection is involved, the most common pathogens include *Staphylococcus* and *Streptococcus*.
3. If an infectious source is suspected, antibiotics are prescribed. These may include cephalexin, clindamycin, or dicloxacillin. A 10-day course is usually warranted. Warm compresses can be helpful in alleviating pain and inflammation. A lubricant, such as petroleum jelly, can be applied with clean cotton swabs to provide relief to dry skin on the eyelids. Further medical attention is advised if symptoms persist beyond 48 to 72 hours.

Provided by: Dr. Fenny Goyal and Dr. Kimmy Goyal
Recurrent Facial Lesions after Shaving

A 33-year-old female develops tender erythematous papules after shaving or waxing facial hair on the mandibular area and neck.

Questions
1. What is the diagnosis?
2. What is the pathophysiology?
3. What are the treatments?

Answers
1. Pseudofolliculitis barbae
2. Extrafollicular penetration of a hair when it re-enters the skin or transfollicular penetration when the sharp tip of a growing hair pierces the follicular wall result in pseudofolliculitis barbae.
3. Avoid shaving the hairs too short. Chemical depilatories might be better than shaving for some patients. Topical and oral antibiotics are used when secondary infection occurs. Hydrocortisone cream helps to reduce inflammation. Topical tretinoin may be useful to remove the epidermis that is covering the hair emerging from the hair follicles.

Provided by: Dr. Francesca Cheung
Intensely Pruritic Rash

A 48-year-old male presents complaining of an intensely pruritic rash that has been occurring intermittently for the past year. He believes it may be associated with specific foods. Allergen testing is found to be negative. OTC antihistamines have provided minimal benefit. Physical examination of the trunk and bilateral arms and legs reveals several erythematosus, circular, well-defined papules and plaques that blanch with pressure.

Questions
1. What is the diagnosis?
2. What is the prognosis?
3. What is the appropriate management?

Answers
1. Chronic urticaria (defined as duration greater than six weeks)
2. Approximately half of patients undergo remission within one year.
3. Patient education and reassurance that the disease is not life-threatening and usually self-limited and well-manageable is essential. It is important to rule out secondary causes, including physical factors (heat, pressure), medications, and foods. H1-antihistamines are first-line treatment and are effective in the majority of patients. Systemic steroids may be used for short periods in refractory cases. Benefit has also been shown with leukotriene-modifying agents, such as montelukast.

Provided by: Dr. Ankush Goyal and Dr. Kimmy Goyal
Case 10

Raised Finger Lesion

An 11-year-old girl presents with a raised, well-circumscribed lesion with a roughened surface on her right index finger.

Questions
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

Answers
1. Verruca vulgaris
2. Verruca vulgaris, also known as common warts, are benign proliferations of the epithelium of the skin caused by the human papilloma virus types 1, 2, 4, and 57, which are trophic to human skin. The virus is transmitted by close physical contact, including person-to-person and autoinoculation. Moist environments and disruption of the epidermal barrier increase the chance of infection. The incubation period is approximately one month. The condition is more common in school-age children, with a prevalence of 4% to 20%. Typically, verruca vulgaris presents as a painless, well-circumscribed, small (2 to 5 mm) papule with a papillated or verrucous surface. Sites of predilection include the fingers and the dorsum surfaces of the hands, toes, elbows, and knees. The lesions are usually yellow or flesh-coloured. Tiny black dots may be visible at the surface of the lesion. These black dots represent thrombosed, dilated capillaries. Trimming the surface keratin makes the capillaries more prominent.
3. Warts are typically self-limited and resolve spontaneously without specific treatment. Most authors suggest active treatment of lesions due to concerns of transmission and autoinoculation and concerns that spontaneous resolution may take months to years. Active treatments may be mechanical (e.g., cryotherapy with liquid nitrogen, laser therapy), chemical (e.g., salicylic acid, cantharidin, bleomycin), and immune-modulating (e.g., imiquimod). Each treatment decision must be individualized, taking into consideration the efficacy and cost of the treatment, the experience of the physician, and the preference of the patient.

Provided by: Ms. Christine C.M. Li and Dr. Alexander K.C. Leung
A 57-year-old female presents with these slowly developing lesions on her upper-back. They are occasionally pruritic.

Questions
1. What is your diagnosis?
2. If she developed these lesions quickly, what would your concern be?
3. How would you manage these lesions?

Answers
1. Seborrheic keratoses
2. If the lesions developed rapidly, one should be concerned that this is a Leser-Trélat sign; this explosion of seborrheic keratoses is associated with colon cancer and other internal malignancies.
3. Reassure the patient as to the benign nature of these lesions. You can treat the lesions using a variety of modalities, including liquid nitrogen, electrosurgery, curettage, excision, ablative laser, and trichloroacetic acid.
**Erythematous Patch with Overlying Vesicles**

A 60-year-old, previously healthy woman presents complaining of two days of progressively worsening burning back pain. Physical examination reveals a large erythematous patch with multiple overlying vesicles clustered over the left lower-back.

**Questions**
1. What is your diagnosis?
2. What is the etiology?
3. What is the treatment?

**Answers**
1. Herpes zoster, commonly known as shingles
2. Shingles results from the reactivation and multiplication of the endogenous varicella-zoster virus that persisted in latent form within sensory ganglia following an earlier episode of varicella.
3. Nonpharmacologic modalities include cool compresses, calamine lotion, and baking soda to alleviate local symptoms and help vesicles dry. Oral antivirals can reduce both acute and chronic pain if treated within 72 hours of rash onset. These include acyclovir (800 mg five times per day for seven days), famciclovir (500 mg q.8.h. for seven days), and valacyclovir (1 g q.8.h. for seven days). Acute pain usually requires analgesics (acetaminophen, NSAIDs, and occasionally opioids). Other therapies, such as gabapentin or tricyclic antidepressants, may be effective for refractory cases.

Provided by: Dr. Fenny Goyal and Dr. Kimmy Goyal
Persistent Forearm Lesions

A 64-year-old male presents with a six-month history of nonpruritic erythematous papules and plaques on bilateral forearms. He has been treated with an increasing potency of topical corticosteroids with no improvement.

Questions
1. What is the diagnosis?
2. What is the cause of this condition?
3. What is the treatment?

Answers
1. The diagnosis is Majocchi granuloma.
2. Majocchi granuloma is a deep folliculitis most commonly caused by a widespread cutaneous dermatophytosis. The condition may be related to, or worsened by, immunosuppression or the use of topical corticosteroids.
3. Systemic antifungal treatments, such as terbinafine, taken for at least four to six weeks, are preferred. Topical antifungal agents alone are generally not effective.

Provided by: Dr. Francesca Cheung