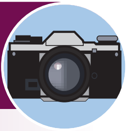
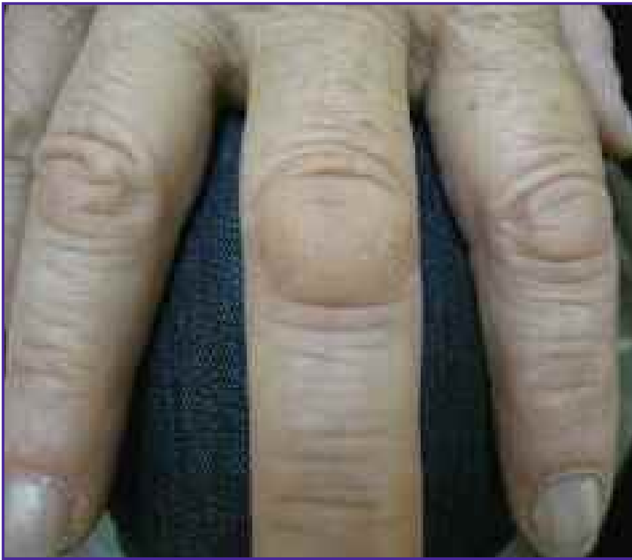


Illustrated quizzes on problems seen in everyday practice

Case 1



Thickening of the Joint

A 44-year-old female has developed asymptomatic thickening of her proximal interphalangeal joint of the third digit of her dominant hand.

Questions

1. What is your diagnosis?
2. What is the cause of this condition?
3. How would you manage this person?

Answers

1. Knuckle pad, a benign asymptomatic smooth firm thickening over a joint.
2. It can be due to repetitive trauma from one's work or sport. In some cases it is genetic and in many cases idiopathic.
3. The patient should minimize repetitive trauma or friction, perhaps by wearing gloves. Topical steroids, intralesional steroids, or keratolytics (*e.g.*, salicylic acid, urea) can also be somewhat beneficial.

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Provided by: Dr. Benjamin Barankin

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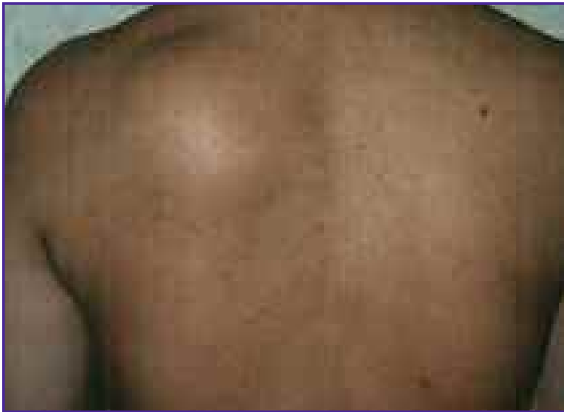
Case 2



Mobile Mass

A 33-year-old man presents with a round, mobile mass on his left upper back. The mass is slow-growing and has been present for > 10 years. The mass is soft, has a smooth surface and is lobulated.

Questions

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

Answers

1. Lipoma.
2. A lipoma is a benign subcutaneous tumour composed of mature adipocytes. Clinically, a lipoma presents as a slow-growing, asymptomatic, soft, well-circumscribed, lobulated mass which is not attached to the overlying skin or underlying structures. A "slipping sign" elicited by gently sliding the fingers off the edge of the tumour is characteristic. Sites of predilection include the back, shoulders and neck. The condition is more common in adults and rarely seen in children. Most lipomas are solitary, painless and asymptomatic. Rarely, the condition may be associated with hereditary multiple lipomatosis, adiposis dolorosa, Madelung's disease and Gardner's syndrome. A lipoma may be complicated by fatty necrosis, calcification and xanthomatous change. Liposarcoma usually arises *de novo* and not from a benign lesion.
3. The condition is benign and no treatment is necessary. Treatment should be considered for cosmetic reasons and for painful or rapidly growing lesions. Treatment options include excision, steroid injections and liposuction.

Provided by: Dr. Alexander K. C. Leung; and Andrew S. Wong

Case 3

Numbness of the Left Side

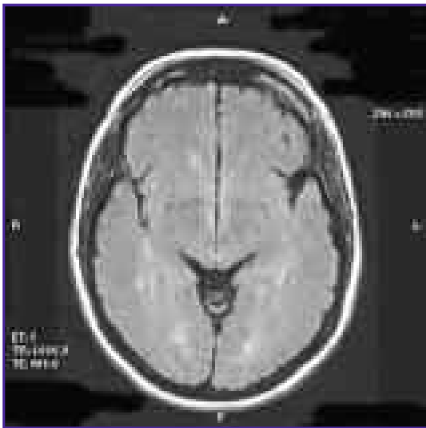


Figure 1. MRI brain.

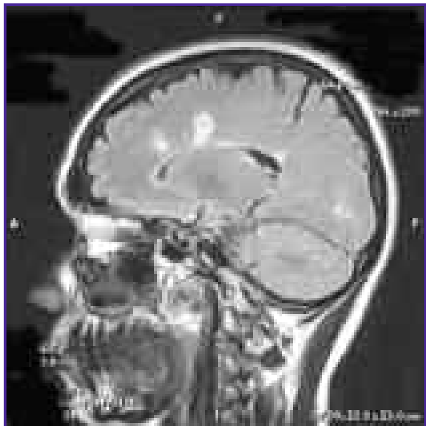


Figure 2. MRI brain.

A 43-year-old female presented with progressive numbness from her right axilla down to involve her trunk and both legs. There was no problem with her vision, speech or swallowing. She had no weakness or bowel or bladder symptoms. The symptoms improved over the next four weeks. Three months later, she developed persistent numbness of the left side—these symptoms resolved after three weeks.

Questions

1. What does MRI show?
2. What is your diagnosis?
3. What is your treatment

Answers

1. MRI fluid-attenuated inversion recovery (FLAIR) images show multiple asymmetrical oval hyperintense signal abnormalities in the brain consistent with white matter lesions of different sizes and target appearances. These lesions also involve corpus callosum and are highly suggestive of demyelinating disease.
2. Diagnosis is multiple sclerosis.
3. Treatment of acute exacerbations is with high dose IV corticosteroids and long-term treatment is with disease modifying agents such as interferons.

Provided by: Dr. Abdul Qayyum Rana; Dr. Faisal R. Khan; and Dr. Waheed Khan

Case 4

Blisters on the Fingertips

A 24-year-old male presents to the ER with blisters on his fingers that formed 48 hours after working on an oil-rig in severely cold temperatures.

Questions

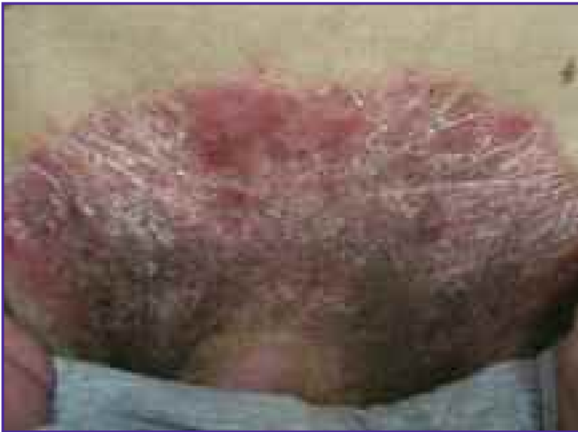
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

Answers

1. Clinically, he had stage two frostbite to the fingertips of both hands.
2. Frostbite refers to the clinical situation where water molecules freeze and crystallize within tissue, resulting in cellular damage. Frostbite is classified as follows:
   - First degree: Central white plaque surrounded by a ring of hyperemia
   - Second degree: Appearance of clear blisters with surrounding erythema
   - Third degree: Hemorrhagic blisters, usually followed by eschar formation
   - Fourth degree: Focal necrosis with tissue loss
3. Treatment can be instituted according to severity and rewarming is the logical first step in the acute phase. Topical treatment with aloe vera, analgesics and tetanus toxoid should be considered. More severe cases may need antibiotics, tetanus toxoid and surgical options.
   - The blisters were left intact and the skin treated with aloe vera ointment
   - The blisters dried out and he made an uneventful recovery over a three week period

Provided by: Dr. Werner Oberholzer

Case 5



Red, Scaly Plaque

A 49-year-old male presents with a red, scaly plaque in his groin. It is mildly pruritic and he has a few similar scattered plaques elsewhere.

Questions

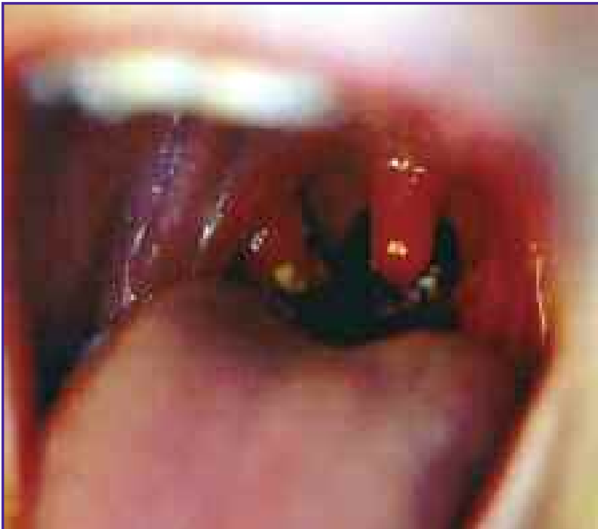
1. What is your diagnosis?
2. What is the term for this condition or subtype when it affects the groin or axillae?
3. How would you treat this patient?

Answers

1. Psoriasis (plaque type). This is a chronic inflammatory skin disorder with genetic predisposition.
2. Inverse psoriasis.
3. Topical steroids, topical calcipotriol or a combination product can be tried. More widespread involvement might require methotrexate, cyclosporine, phototherapy, acitretin, or the new biologic agents.

Provided by: Dr. Benjamin Barankin

Case 6



White-Yellow Tonsillar Spot

This 23-year-old male presented with a white-yellow spot on his right tonsil lasting the last two months. Otherwise he is feeling well. No sore throat, tonsils enlargement or local lymphoadenopathy.

Questions

1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?
4. What is the differential diagnosis?

Answers

1. Tonsillar stone, tonsillolith.
2. Tonsilloliths or tonsil stones are calcifications that form in the crypts of the palatal tonsils. They are also known to form in the throat and on the roof of the mouth. Tonsils are filled with nooks and crannies where bacteria and other materials, including dead cells and mucous, can become trapped. When this occurs, the debris can become concentrated in white formations that occur in the pockets. Tonsilloliths are formed when this trapped debris combines and hardens, or calcifies. This tends to occur most often in people who suffer from chronic inflammation in their tonsils or repeated bouts of tonsillitis.
3. Treatment consists of removal of the calculi either by using a cotton swab to extrude them from the crypts or by curettage—larger lesions may require local excision.
4. Differential diagnosis of tonsilloliths includes foreign body, calcified granuloma, malignancy, an enlarged styloid process or rarely, isolated bone which is usually derived from embryonic rests originating from the branchial arches.

Provided by: Dr. Jerzy Pawlak

Case 7

Figure 1. MRI scan.

Weakness of the Legs

A 56-year-old female presented with gradual onset of weakness of both legs for the last three months. On examination, she had mild weakness of both lower extremities with hyperreflexia in lower extremities and extensor plantar reponses. She had sensory level slightly above her umbilicus. MRI scan of whole spine was performed.

Questions

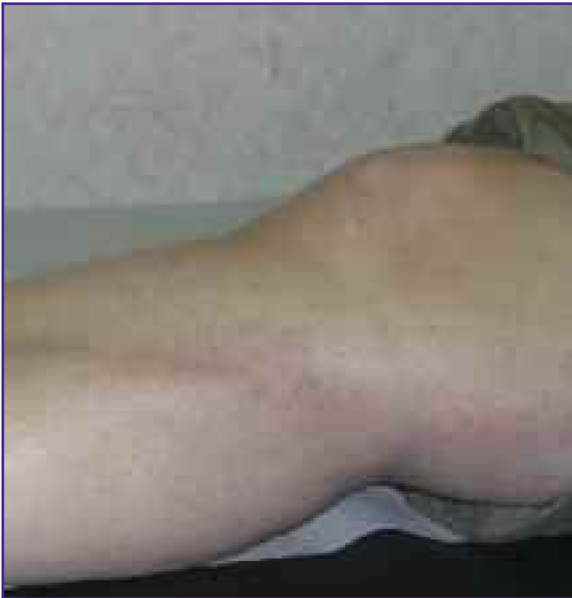
1. What does this MRI show?
2. What is the diagnosis?
3. How will you treat this case?

Answers

1. This MRI scan shows a focal mass lesion at T7 level.
2. Nerve sheath tumour compressing the spinal cord at T7 level.
3. Surgical removal of the tumour.

Provided by: Dr. Abdul Qayyum Rana; Dr. Faisal R. Khan; and Dr. Waheed Khan

Case 8



Palpable Cord-Like Structure

A 48-year-old woman presented with pain in the right leg and right lower thigh for six days. There was no associated fever, weight loss, shortness of breath, or recent IV catheterization. Physical examination showed a red, palpable, tender, cord-like structure in the right leg extending to the right lower thigh.

Questions

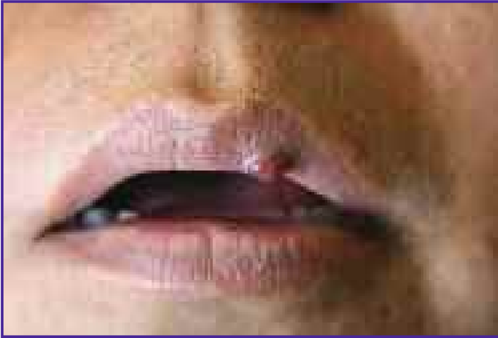
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

Answers

1. Superficial thrombophlebitis.
2. Superficial thrombophlebitis is characterized by a painful or tender, erythematous, palpable, cord-like structure along the course of a superficial vein usually in the lower extremity. It is associated with hypercoagulable states such as pregnancy, use of birth control pills, vasculitides (Behçet's and Buerger's disease) or malignancy (Trousseau sign). A suppurative form of superficial thrombophlebitis occurs mainly in children and is often secondary to infected IV catheters and needles. Extension of superficial thrombophlebitis to the deep venous system may rarely occur through the perforating veins and result in deep vein thrombosis (DVT) and pulmonary embolism. DVT is most likely when the proximal greater saphenous vein or the saphenous-femoral junction is involved.
3. Although most cases spontaneously resolve, supportive treatment includes the use of compression stockings and NSAIDs. Systemic anticoagulation or surgery may be indicated in cases associated with venothromboembolism. The use of an antibiotic is warranted if the condition is secondary to bacterial infection.

Provided by: Dr. Alexander K. C. Leung; Andrew S. Wong; and Dr. Alexander A. A. Leung

Case 9

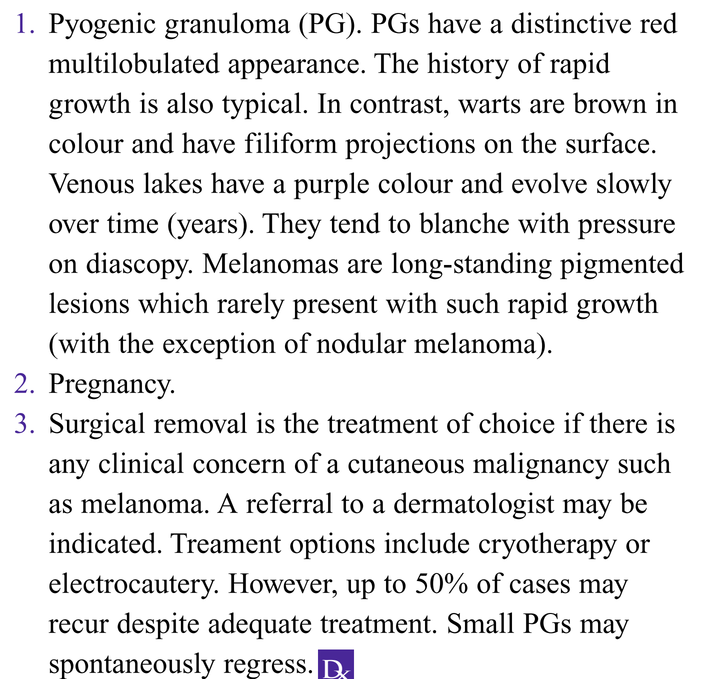


A Pimple on the Lip

A 23-year-old man recently developed a "pimple" on his upper lip. He tried to remove it with a sterile needle. The lesion has doubled in size during the past several weeks and bleeds easily with minor trauma. Now he is worried about skin cancer. Inquiry reveals there is no history of a pre-existing nevus.

Questions

1. What is the diagnosis?
2. Which condition is this lesion often associated with?
3. What are treatment options?



Answers

1. Pyogenic granuloma (PG). PGs have a distinctive red multilobulated appearance. The history of rapid growth is also typical. In contrast, warts are brown in colour and have filiform projections on the surface. Venous lakes have a purple colour and evolve slowly over time (years). They tend to blanche with pressure on diascopy. Melanomas are long-standing pigmented lesions which rarely present with such rapid growth (with the exception of nodular melanoma).
2. Pregnancy.
3. Surgical removal is the treatment of choice if there is any clinical concern of a cutaneous malignancy such as melanoma. A referral to a dermatologist may be indicated. Treament options include cryotherapy or electrocautery. However, up to 50% of cases may recur despite adequate treatment. Small PGs may spontaneously regress. Dx

Provided by: Dr. Simon Lee