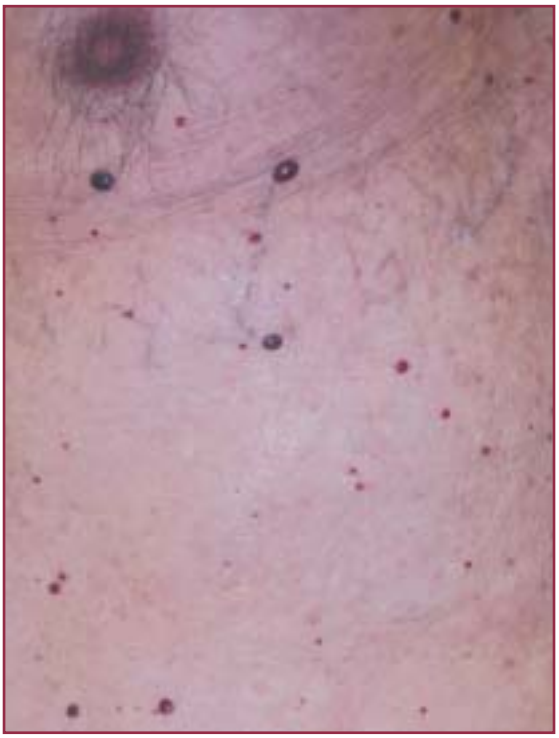
Illustrated quizzes on problems seen in everyday practice

Case 1



A 64-year-old male presents with incidental and asymptomatic, red-purple, 2 mm to 4 mm papules scattered on his trunk.

Questions

1. What is your diagnosis?
2. What is the natural history of these lesions?
3. What is the treatment?

Answers

1. Cherry angiomas (Campbell de Morgan spots).
2. These are benign lesions formed by a proliferation of dilated venules. They occur with advancing age and do not spontaneously resolve.
3. Treatment is mainly cosmetic, although lesions may occasionally be irritated or bleed. Angiomas can be removed by shave-excision, curettage and electrodesiccation, cryotherapy or laser.

Provided by Dr. Benjamin Barankin, Edmonton, Alberta.

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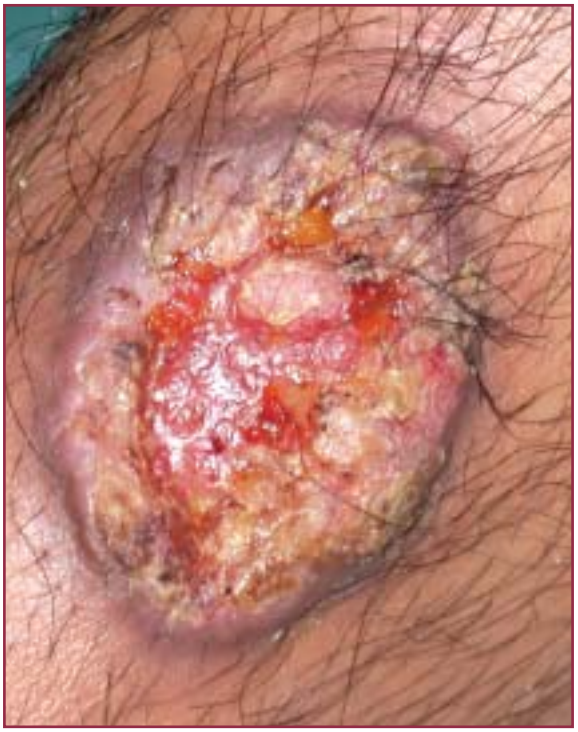
Case 2



A 65-year-old male returned from Afghanistan and noted a non-healing, slowly enlarging ulcer on his lower leg.

Questions

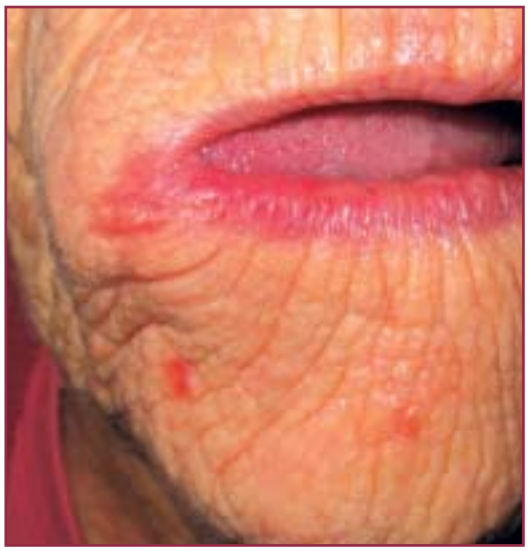
1. What is your diagnosis?
2. What is the organism and how is it transmitted?
3. How will you treat this condition?

Answers

1. Localized cutaneous leishmaniasis. It typically appears as a non-healing, slowly enlarging and well-demarcated, ulcerated nodule.
2. It is caused by a protozoan parasite, most commonly due to Leishmania mexicana in South America and Leishmania major in eastern countries (India, Afghanistan and Sudan). It is transmitted by a sand fly of the *Phlebotomus genus*.
3. Various options of treatment include heat therapy, cryotherapy, ketoconazole, pentavalent antimonials (meglumine antimonate, sodium stibogluconate) and pentamidine. This patient was treated with heat therapy.

Provided by Dr. Scott Walsh and Ms. Jennifer Sharma, Toronto, Ontario.

Case 3



A 76-year-old female presents with erythema and soreness at the corners of her mouth.

Questions

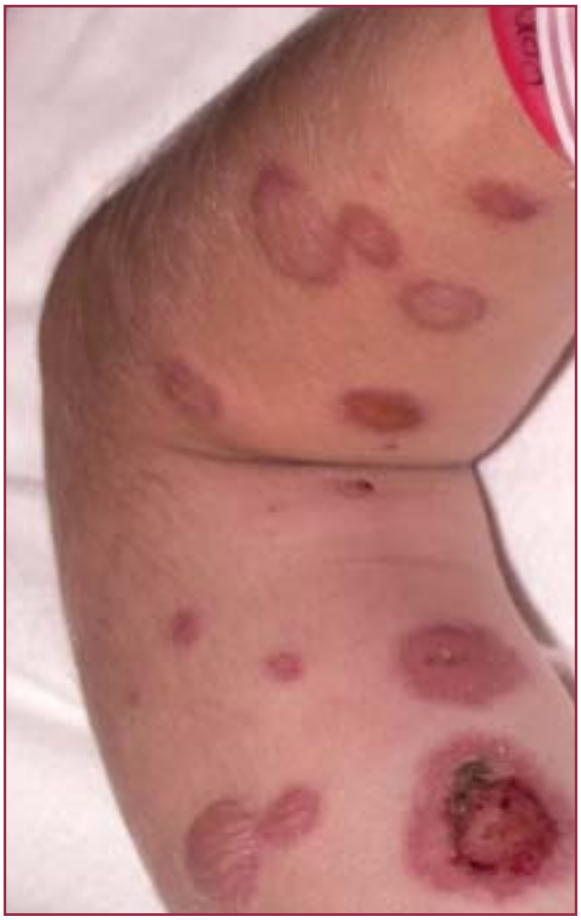
1. What is your diagnosis?
2. What is the etiopathogenesis of this condition?
3. What is the treatment?

Answers

1. Angular cheilitis.
2. It is often observed in the elderly due to sagging facial muscles, mandibular osteoporosis and ill-fitting dentures. *Candida* or *Staphylococcus aureus* infections are occasionally noted. Contact allergy, atopic or seborrheic dermatitis or nutritional deficiencies can result in this presentation, though these are less common.
3. The treatment is dependent on the cause, but in many cases a combination of a topical antibiotic, an anticandidal agent and a mild cortisone are beneficial.

Provided by Dr. Benjamin Barankin, Edmonton, Alberta.

Case 4



A 10-year-old male is admitted to the hospital with a dry cough, shortness of breath during exertion and a bullous eruption on his arms and legs, as well as conjunctival injection and mucosal erosions involving the lips and genitals. He was not taking any medications prior to the eruption. A chest X-ray reveals diffuse infiltrates.

Questions

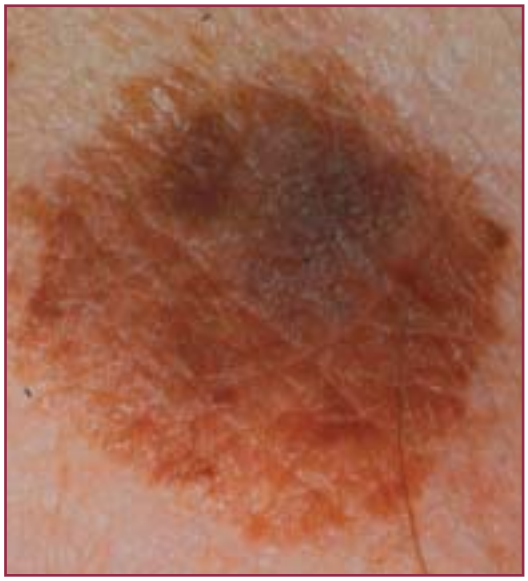
1. What is your diagnosis?
2. What is the etiology?
3. How will you manage this condition?

Answers

1. This is a bullous erythema multiforme with some typical targetoid lesions.
2. Herpes simplex virus, mycoplasma pneumoniae or drugs.
3. Treatment is mainly symptomatic. It can be treated with antivirals/antibiotics (this patient had mycoplasma pneumoniae and was treated with macrolides). A severe episode with extensive mucosal involvement may need a short course of systemic steroids, but this is controversial.

Provided by Dr. Scott Walsh and Ms. Jennifer Sharma, Toronto, Ontario.

Case 5



An elderly female presents with a lesion on her temple, which she has had for five years.

Questions

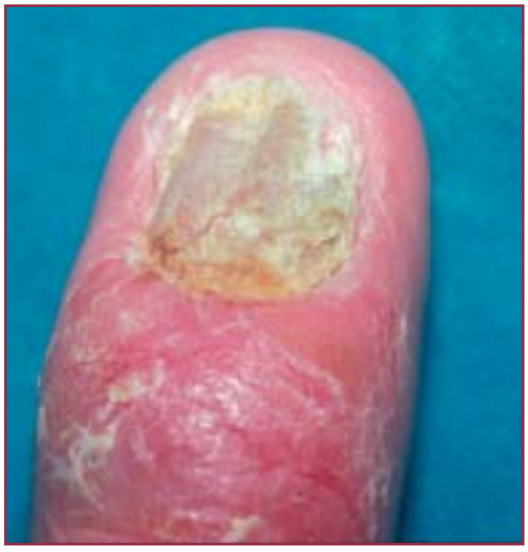
1. What is your diagnosis?
2. What is the treatment?
3. Is this a premalignant lesion?

Answers

1. Seborrheic keratosis.
2. No therapy is necessary; however, it can usually be easily treated with cryotherapy or curettage.
3. Seborrheic keratoses have no malignant potential and are completely benign.

Provided by Dr. Rob Miller, Halifax, Nova Scotia.

Case 6



A 55-year-old female presents with a several-year history of problems with her hands and fingernails.

Questions

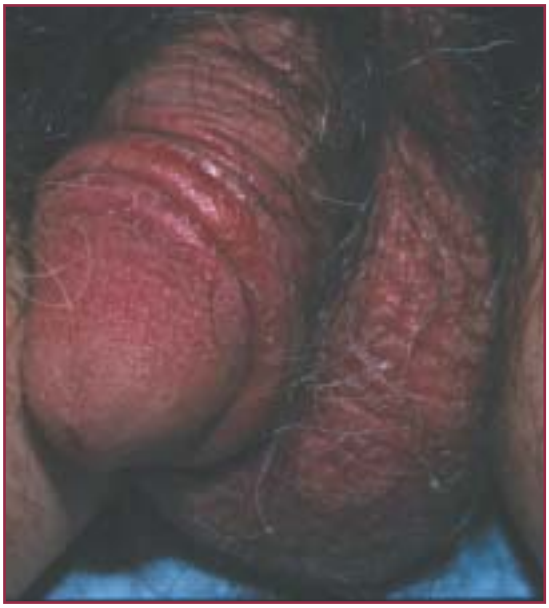
1. What is your diagnosis?
2. What are the usual features of this nail dystrophy?

Answers

1. Psoriatic nail dystrophy.
2. Psoriasis involving the nails is usually characterized by pitting of the nail plates, subungual hyperkeratosis and onycholysis (separation of the nail plate from the underlying nail bed).

Provided by Dr. Rob Miller, Halifax, Nova Scotia.

Case 7



A 30-year-old male develops acute swelling of the penis and scrotum after applying a topical cream containing clioquinol.

Questions

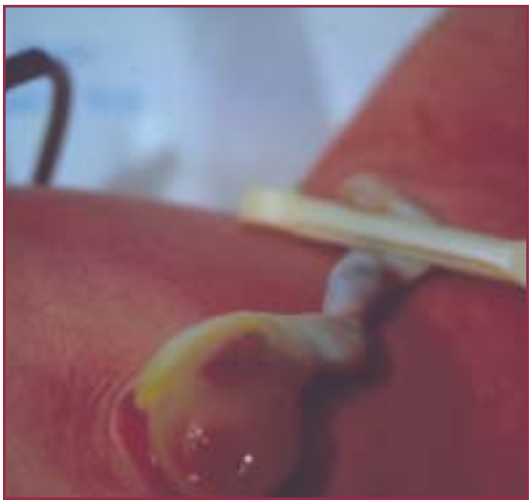
1. What is your diagnosis?
2. What is the cause?
3. What is the treatment?

Answers

1. Allergic contact dermatitis.
2. The causative allergen is clioquinol.
3. Therapy consists of cool wet compresses, topical steroids and/or a 10-day course of systemic steroids.

Provided by Dr. Rob Miller, Halifax, Nova Scotia.

Case 8



This infant was born to a G3 P2 26-year-old mother. At birth, a mass covered by a translucent membrane was noted in the umbilical area.

Questions

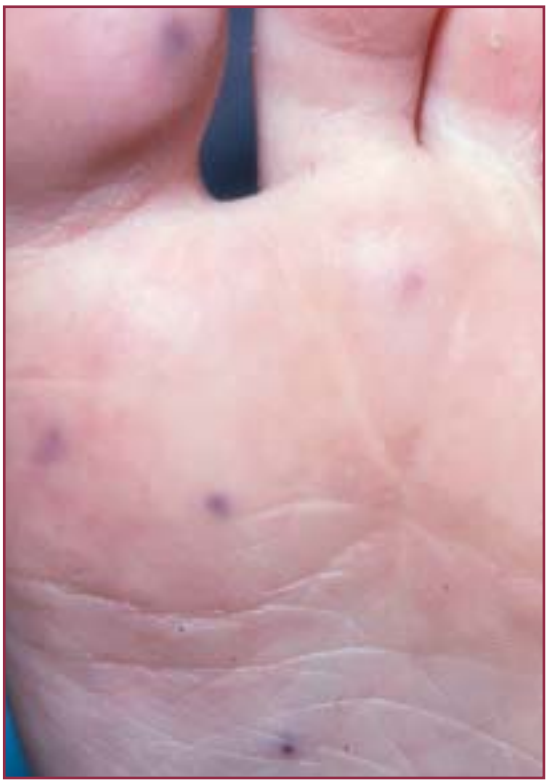
1. What is your diagnosis?
2. What is the significance?
3. What is the treatment?

Answers

1. Omphalocele.
2. During fetal development, the midgut herniates into the amniotic sac and re-enters the abdominal cavity at around 10-weeks gestation. An omphalocele results when some of the abdominal contents fail to return into the abdominal cavity and remain herniated at birth.
3. The omphalocele should be covered immediately with moist saline gauze warmed to body temperature. The infant should be given intravenous hydration and gastric decompression with nasogastric suction. Prophylactic broad-spectrum antibiotics should also be given. Small defects can be managed by primary closure of the abdominal wall, but larger defects may require a staged repair.

Provided by Dr. Alexander K.C. Leung and Dr. Andrew L. Wong, Calgary, Alberta.

Case 9



A 40-year-old female presents with a five-year history of painful bluish lesions on the soles of her feet. There are approximately 15 of these lesions.

Questions

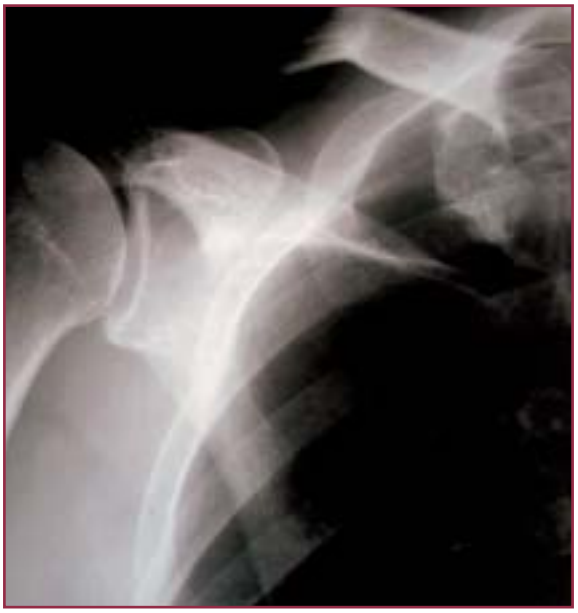
1. What is your diagnosis?
2. What is the histologic nature of these lesions?
3. What is the treatment?

Answers

1. Multiple glomus tumours.
2. Glomus tumours are benign vascular tumours of the glomus cells that surround the blood vessels in the dermis.
3. These vascular tumours were treated with a pulsed dye laser (wave length: 585 nm) with complete resolution of all lesions after two treatments.

Provided by Dr. Rob Miller, Halifax, Nova Scotia.

Case 10



A 55-year-old male presents with pain in the right shoulder. External rotation and abduction of the upper right arm are restricted.

Questions

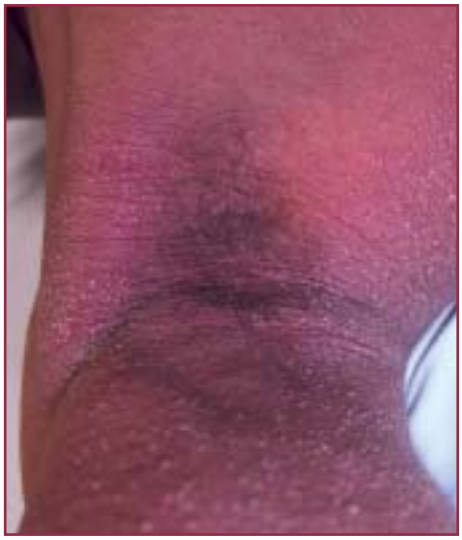
1. What does the radiograph show?
2. What is your diagnosis?
3. What is the significance?
4. What is the treatment?

Answers

1. The radiograph shows a chunk of calcification in the region of the infraspinatus tendon.
2. Calcific tendinitis of the infraspinatus.
3. Calcific tendinitis is characterized by deposition of calcium salts, primarily hydroxyapatite in the tendon. The condition predominantly affects middle-aged individuals. The supraspinatus tendon is frequently affected. When the infraspinatus is affected, the calcification is best seen with the upper limb in internal rotation. Calcific tendinitis of the infraspinatus may be asymptomatic. Other patients may present with shoulder pain that is worsened by external rotation, abduction and elevation of the shoulder joint.
4. Treatment consists of temporary immobilization and the use of non-steroidal anti-inflammatory drugs.

Presented by Dr. Alexander K.C. Leung and Dr. Alexander G. Leong, Calgary, Alberta.

Case 11



A 34-year-old male presents with numerous 1 mm pustules on his neck, axillae and chest.

Questions

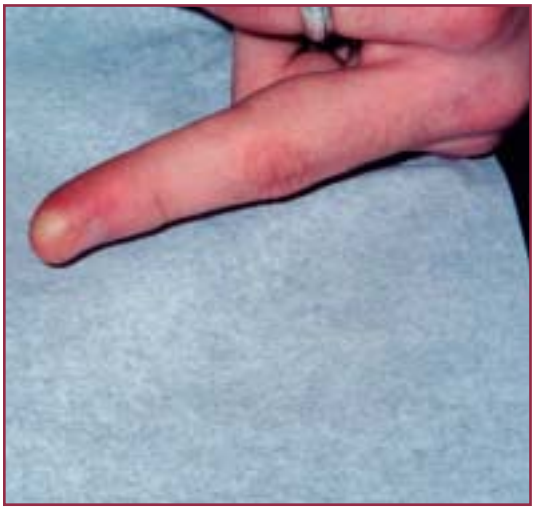
1. What is your diagnosis?
2. What are most cases due to?
3. What is the natural course of this condition?

Answers

1. Acute generalized exanthematous pustulosis (AGEP).
2. Drugs are responsible for most cases, especially antibiotics (beta-lactams). Less common causes are viral infections, mercury exposure or ultraviolet radiation.
3. AGEP resolves spontaneously and quickly, with fever and pustules lasting seven to 10 days, followed by desquamation.

Provided by Dr. Benjamin Barankin, Edmonton, Alberta.

Case 12



A 16-year-old female presents with a four-day history of pain and paresthesia of the left middle finger. She had herpes labialis two weeks earlier.

Questions

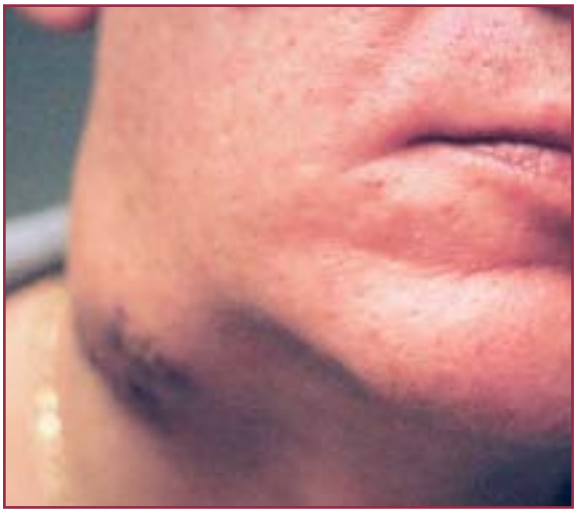
1. What is your diagnosis?
2. What is the causative organism?
3. What is the treatment?

Answers

1. Herpetic whitlow.
2. Herpetic whitlow is an infection of the digits caused by the herpes simplex virus. The lesion is often painful, may become purulent and can be confused with a bacterial infection. Occasionally, it may be necessary to perform a Tzanck smear to identify the virus.
3. Topical acyclovir or penciclovir is the recommended treatment.

Provided by Dr. Alexander K.C. Leung and Dr. C. Pion Kao, Calgary, Alberta.

Case 13



A 39-year-old male presents with an eight-month history of right anterior neck swelling and no other symptoms. The mass is fairly high and fixed, and moves up and down when he swallows. There is no discolouration and the cranial nerve examination is normal.

Questions

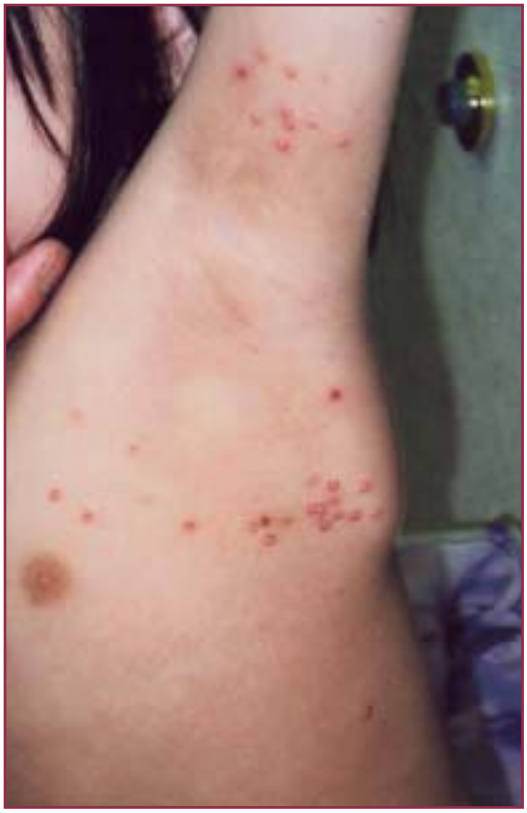
1. What is the differential diagnosis?
   a) Metastatic lymph nodes
   b) Branchial cleft cyst
   c) Carotid body aneurysm
   d) Salivary gland tumour
   e) All of the above
2. What investigations would you order?
3. What is your diagnosis?

Answers

1. e) All of the above
2. Ultrasonography, computed tomography and magnetic resonance imaging are very effective, but carotid angiography is by far the most useful diagnostic test for this case.
3. Carotid body tumour.

Provided by Dr. Jerzy Pawlak and Mr. TJ Kroczak, Winnipeg, Manitoba.

Case 14



A three-year-old female presents with flesh-coloured, discrete, dome-shaped papules on the left lateral upper chest and the inner aspect of the upper left arm.

Questions

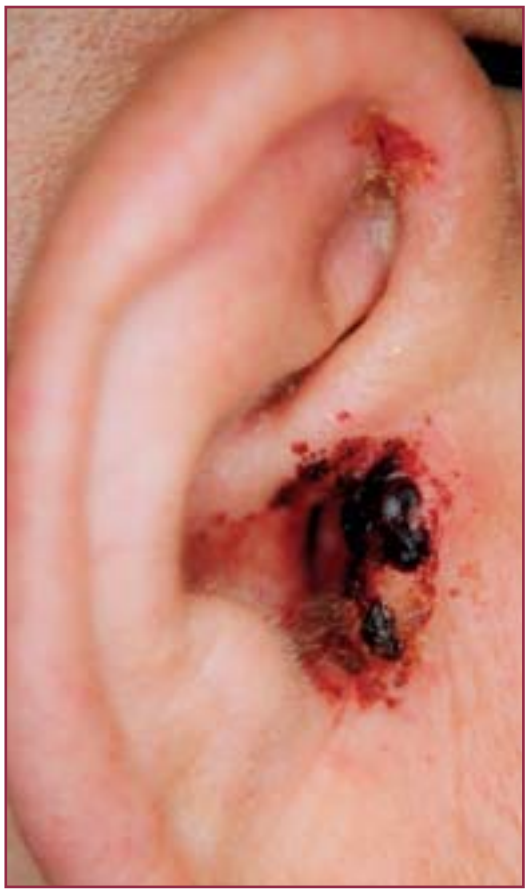
1. What is your diagnosis?
2. What is the causative organism?
3. What is the treatment?

Answers

1. *Molluscum contagiosum*.
2. *Molluscum contagiosum* is caused by a poxvirus.
3. *Molluscum contagiosum* is self-limited; however, lesions can last from months to years. Liquid nitrogen is the treatment of choice. Other alternatives include the topical application of cantharidin, salicylic and lactic acid preparations or podophyllin.

Provided by Dr. Alexander K.C. Leung and Dr. Justine H.S. Fong, Calgary, Alberta.

Case 15



A 72-year-old male presents with a round, crusted ulceration in the preauricular area. The ulceration has been increasing in size very slowly in the last year and recently the lesion ulcerated and now bleeds very often.

Questions

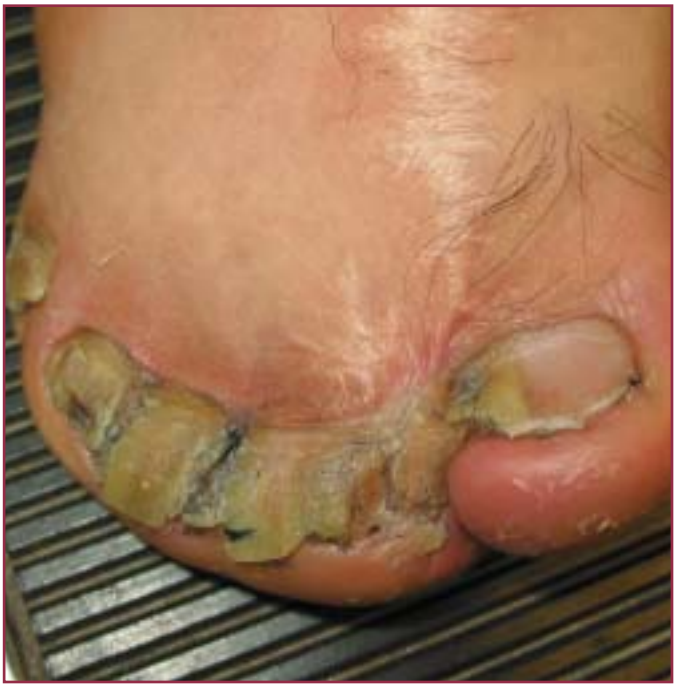
1. What first-line investigations should be performed?
2. How would you manage this patient?

Answers

1. Biopsy of all suspected tumours is essential. In this case, the biopsy showed a basal cell carcinoma.
2. The treatment choice depends on the type of basal cell carcinoma. Tumours around the nose, eyes and ears require management by experts, such as a dermatologic surgeon capable of performing Mohs chomosurgery. Radiotherapy is also an option.

Provided by Dr. Jerzy Pawlak and Mr T.J. Kroczak, Winnipeg, Manitoba.

Case 16



A 14-year-old male presents with a dysmorphic face, and symmetric hand and foot fusion of his digits.

Questions

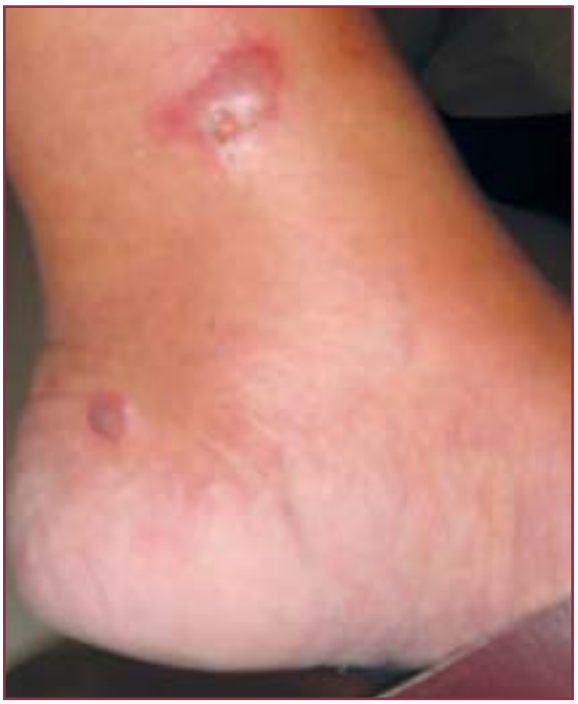
1. What is your diagnosis?
2. What are the other features of this condition?
3. How is it inherited?

Answers

1. Syndactyly, as noted in Apert syndrome.
2. Craniosynostosis, craniofacial anomalies and severe symmetrical syndactyly (cutaneous and bony fusion) of the hands and feet.
3. It is an autosomal dominant disorder, although most cases are sporadic.

Provided by Dr. Benjamin Barankin, Edmonton, Alberta.

Case 17



A 30-year-old female returns from a trip to Barbados with numerous blisters around her ankles.

Questions

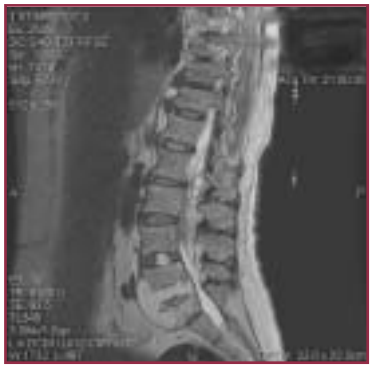
1. What is your diagnosis?
2. What is the concern with this condition?
3. What is the treatment?

Answers

1. Bullous arthropod reaction.
2. It is usually a pruritic and unsightly nuisance. The arthropods that cause these reactions can transmit malaria, leishmaniasis, onchocerciasis, filariasis and rickettsial diseases.
3. Potent topical steroids and reassurance are usually sufficient. Pramoxine (anti-itch) and/or products with camphor or menthol can help. If severe and diffuse, prednisone can be used for a short course.

Provided by Dr. Benjamin Barankin, Edmonton, Alberta.

Case 18



A 69-year-old male presents with an eight-week history of fever and back pain. He presented to the emergency room with weakness in both legs. The magnetic resonance image shows L5-S1 destruction with a mass in the disc space. An epidural inflammatory mass is also present.

Questions

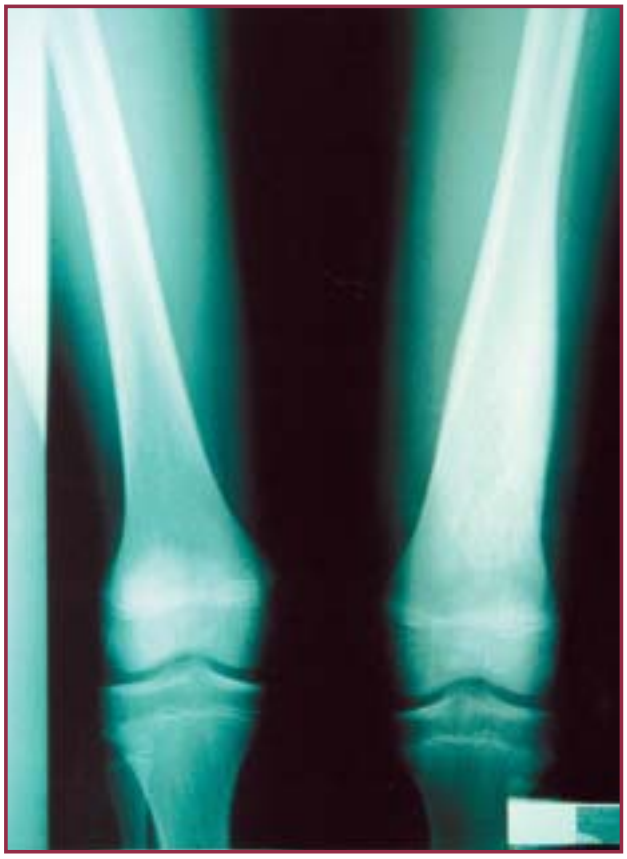
1. What is the likely problem?
2. What treatment is required?
3. What other tests are useful?

Answers

1. Tuberculous osteomyelitis (Pott's disease)
2. The patient had urgent surgery with laminectomies and spinal fusion. Anti-tuberculous therapy was continued for 12 months.
3. The chest radiograph shows granulomas. An HIV test is negative. Household members were investigated for tuberculosis.

Provided by Dr. Irving Salit, Toronto, Ontario.

Case 19



A 13-year-old female presents with pain and swelling at the distal end of her left femur with tenderness over her left thigh and no history of injury. An X-ray of the left thigh is performed.

Questions

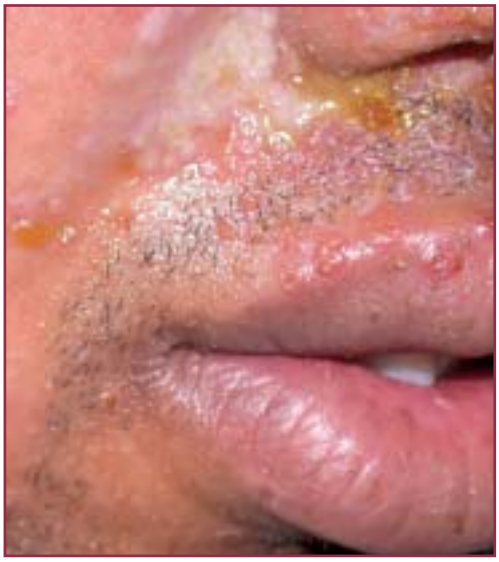
1. What are your possible diagnoses?
2. What test can confirm the diagnosis?

Answers

1. Primary bone cancer-osteogenic or Ewings sarcoma.
2. A biopsy is necessary for histologic assessment, as with all bone tumours.

Provided by Dr. Jerzy Pawlak and Mr. M. Sochocki, Winnipeg, Manitoba.

Case 20



A 34-year-old male with a long history of atopic dermatitis presents with grouped, "punched-out" ulcerations on the face and neck with concomitant fever and malaise.

Questions

1. What is your diagnosis?
2. What is the etiology and complications?
3. How will you manage this condition?

Answers

1. Eczema *herpeticum*.
2. This is most commonly caused by the herpes virus infection in an atopic dermatitis patient. It can be complicated by a superimposed bacterial (*Staphylococcus aureus*) infection.
3. It is a medical emergency (especially in a child) and needs treatment with antivirals, with or without antibiotics. After the subsidence of the acute episode, ongoing management of the atopic dermatitis with moisturizers and topical steroids will help prevent further skin compromise and subsequent risk of widespread cutaneous herpes infection.

Provided by Dr. Scott Walsh and Ms. Jennifer Sharma, Toronto, Ontario.