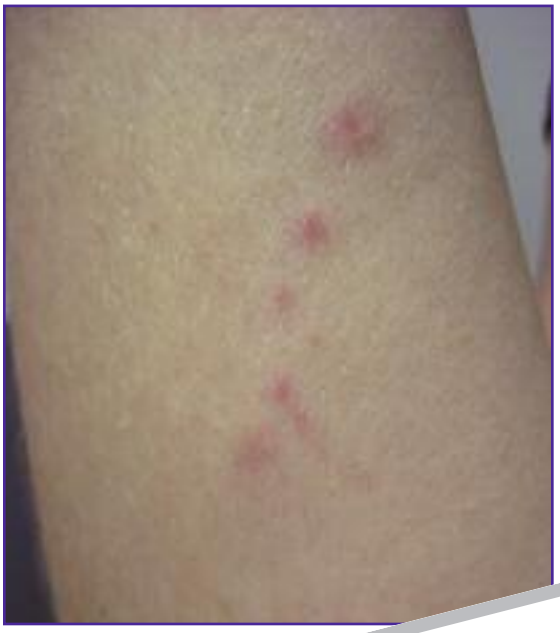
Illustrated quizzes on problems seen in everyday practice

Case 1: Mary's Marks



Mary, 37, presents with pruritic papules on her arms. She awoke this morning with these lesions.

Questions

1. What is the diagnosis?
2. What is the name of the organism?
3. How would you manage this patient?

Answers

1. Bedbug bites.
2. Cimex lectularius. These 5 mm to 7 mm red-brown insects are blood-sucking ectoparasites of birds and mammals.
3. Using insecticides and eliminating bedbug hiding sites reduces bedbug infestations; an exterminator may be needed for this. Topical antibiotics and steroids can be used to prevent secondary infection and treat the associated pruritus.

Provided by: Dr. Benjamin Barankin

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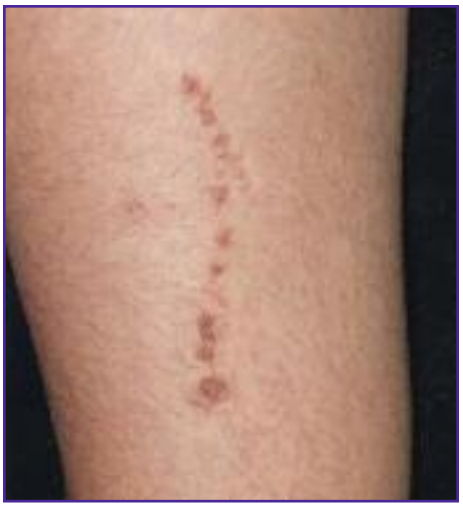
Case 2: Lewis' Lesions



Lewis, 14, presents with a linear band of lesions on his right arm.

Questions

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

Answers

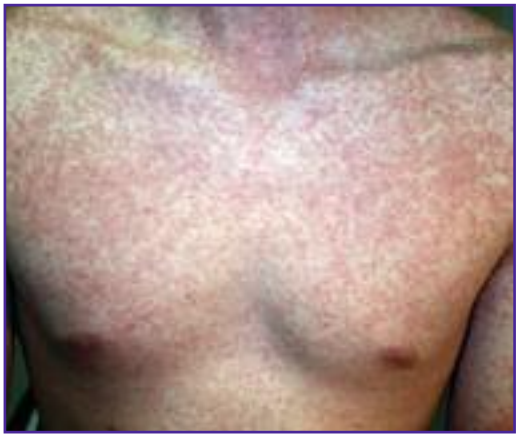
1. Lichen striatus.
2. Lichen striatus is a benign, self-limited T-cell mediated dermatosis. The condition is more common in children and presents with an inflamed, linear, papular eruption.

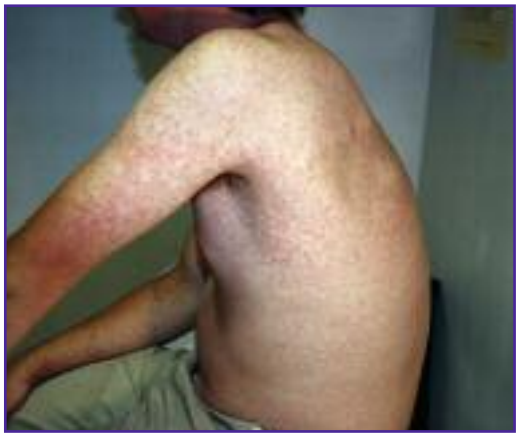
   The onset is usually abrupt. The initial eruption consists of discrete, flesh-coloured or pink, flat-topped papules that are 1 mm to 3 mm in diameter. The papules often coalesce to form either a continuous or an interrupted linear band.

   The lesion is usually asymptomatic and non-pruritic. When the eruption involves the posterior nail fold and matrix, onychodystrophy can occur and can precede the development of the skin lesion, but nail lesions are uncommon.
3. Lichen striatus commonly resolves within one year and tends to persist longer when associated with onychodystrophy. When therapy is desired for cosmetic reasons, a topical corticosteroid or an immunomodulator (*e.g.*, tacrolimus or pimecrolimus) hastens resolution.

Provided by: Dr. Alexander K. C. Leung; and Dr. Alex H. C. Wong

Case 3: Robert's Rash





Robert, 18, presents with a sudden development of a burning rash over his entire body. A few days before the rash appeared, he started a prescription of amoxicillin for his existing pharyngitis.

Questions

1. What is the possible diagnosis?
2. How will you confirm the diagnosis?
3. What is the treatment?

Answers

1. Infectious mononucleosis. A maculopapular rash (which usually faint, widely scattered and erythematous) occurs in 3% to 15% of patients and is more common in young children.

   Treatment with amoxicillin or ampicillin is associated with a rash in approximately 80% of patients. This is often encountered when the Epstein-Barr virus (EBV) is initially misdiagnosed as strep throat and is treated as such.

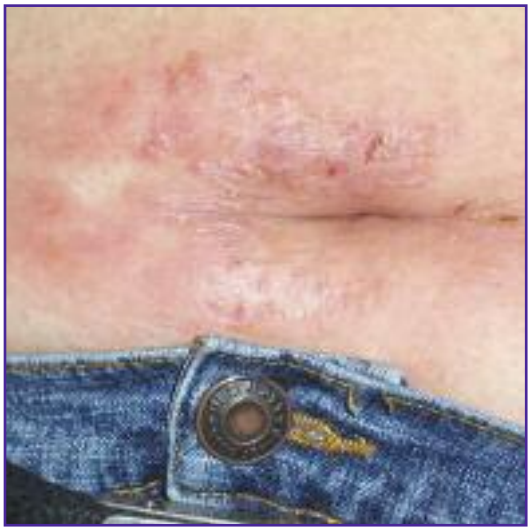
2. Diagnosis is made based on laboratory confirmation of the three classic criteria for acute infectious mononucleosis:
   - Lymphocytosis
   - The presence of at least 10% atypical lymphocytes on a peripheral smear
   - A positive serologic test result for EBV (which is positive in Robert's case)

   Most patients with acute infectious mononucleosis (80% to 100%) have elevated liver function test results.
3. This is a self-limited illness that does not usually require specific therapy. Because of low transmissibility of the EBV, isolation is not indicated.

   Most affected individuals can be evaluated and treated as outpatients.

Provided by: Dr. Jerzy Pawlak

Case 4: Patty's Itchy Patch



Patty presents with an itchy paraumbilical lesion. It appeared a few months ago when she went on a long camping holiday.

Questions

1. What is the diagnosis?
2. What is the most important step in diagnosis?
3. What is an essential step in the treatment of this lesion?

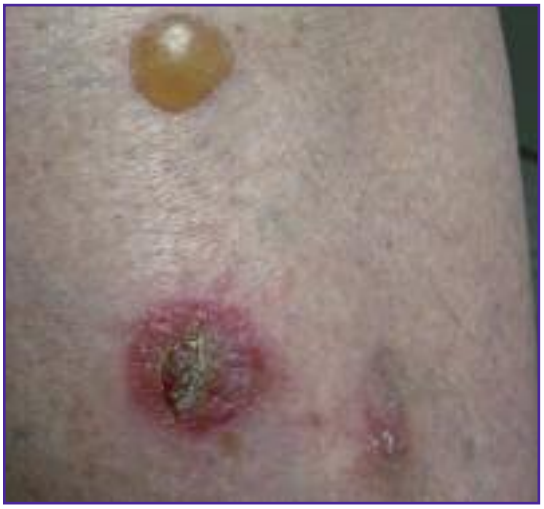
Answers

1. Contact dermatitis occurs through an allergic mechanism in which a topically-applied allergen incites an allergic response. A variety of allergens may be implicated. The possibility of allergic contact eczema should be considered whenever faced with a patient who presents with an eczematous or even vesicular eruption.
2. The history is the most important step in diagnosis. If the patient recognizes that the lesion occurs every time they have contact with a particular item, the diagnosis becomes clear.
3. Eliminating the contactant is a crucial part of the treatment.

A variety of allergens may be implicated in this condition.

Provided by: Dr. Hayder Kubba

Case 5: Bryanne's Bullae



Bryanne, 74, presents with bullae on her shins. She has hypertension which is controlled by three antihypertensives. She has no systemic symptoms.

Questions

1. What is your diagnosis?
2. How would you treat this patient?

Answers

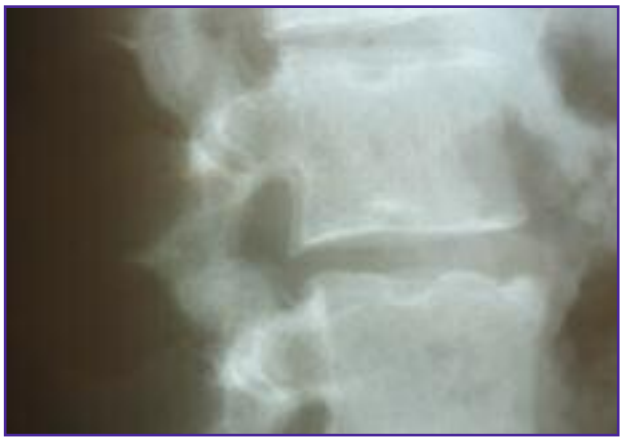
1. Bullous pemphigoid is a chronic, autoimmune blistering skin disease which rarely affects mucosae. In bullous pemphigoid, IgG is targeted against the hemidesmosomal bullous pemphigoid antigens BP230 (BPAG1) and BP180 (BPAG2).

   Always consider this diagnosis in elderly patients with tense bullae.
2. Potent topical steroids can be quite effective in localized disease. In more widespread disease, systemic immunosuppression is warranted with azathioprine, methotrexate or mycophenolate mofetil. Systemic anti-inflammatories, such as oral steroids, tetracyclines or dapsone, may also be employed.

Potent topical steroids can be quite effective in localized disease. In more widespread disease, systemic immunosuppression is warranted.

Provided by: Dr. Benjamin Barankin

Case 6: Logan's Lumbar Pain



Logan, 21, presents with longstanding lumbar pain. His backache, which started four years ago, is intermittent and is aggravated by sitting. He also complains of lumbar stiffness. Logan is told by his teachers and parents that he frequently slouches. Radiographs of his thoracic/lumbar spine are performed.

Questions

1. What are the lesions demonstrated on the x-rays and what do they mean?
2. What clinical diagnosis do they suggest?
3. What is the management?

Answers

1. Schmorl's nodes are herniations of the nucleus pulposus of the disc through the end plate of the vertebral bone. The etiology is unknown, but may be growth related when the disc is relatively stronger than the bone during adolescence. Frequently, this is associated with wedging compression fractures in the thoracic spine.
2. Scheuermann's disease: a juvenile kyphosis deformity of the thoracolumbar spine due to osteochondrosis of the vertebral secondary ossification centers.
3. The management depends of the severity of the pain and the degree of mechanical changes seen on examination. The thoracic kyphosis frequently becomes exaggerated.

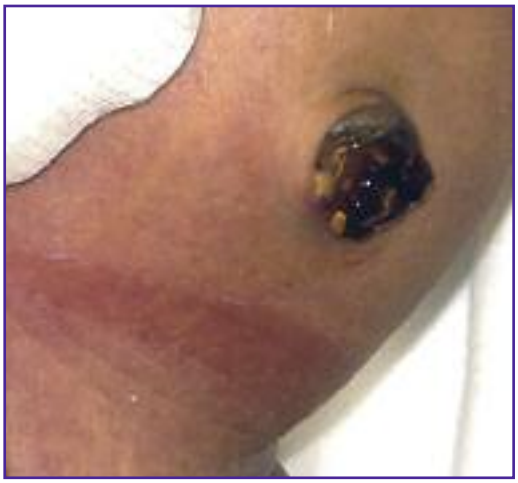
   Physiotherapy is paramount, focusing on strengthening the abdominal "core" muscles and improving the flexibility of the spine muscles. On occasion, careful manipulation and mobilization are needed. It is very important to maintain fitness and swimming is the most suitable exercise.

   General analgesics are useful and correct posture during sitting is important, as well as is maintaining correct lifting techniques and the modification of work tasks.

   The pain frequently improves as the spinal bones mature. However, younger patients may sometimes require rest if they experience postural deformities, back mobility changes, hamstring tightness, or if they perform activities with repetitive overload and/or practice contact sports.

Provided by: Dr. Juan Antonio Garcia-Rodriguez

Case 7: Diana's Discharge



Diana, a newborn infant, is noted to have feculent discharge from her umbilicus.

Questions

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

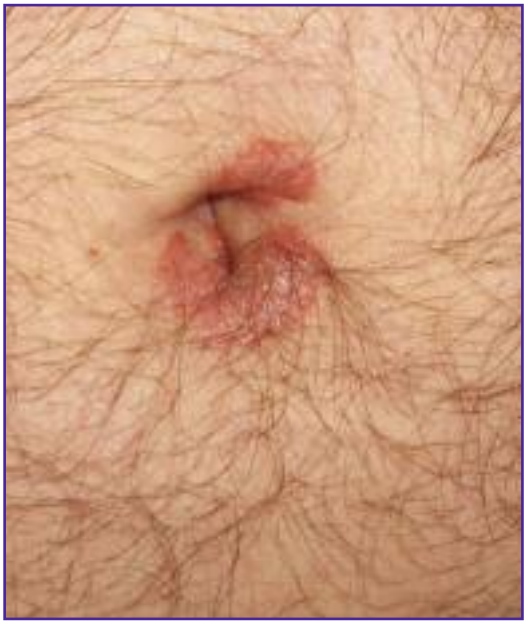
Answers

1. Patent omphalomesenteric duct.
2. A patent omphalomesenteric duct typically presents with an umbilical discharge which is often feculent. Less commonly, it presents with an umbilical mass. If the patent omphalomesenteric duct is large enough, prolapse or intussusception of the small bowel may occur. This may necessitate urgent surgical intervention to prevent infarction of the bowel. Other complications include bleeding from the umbilical mucosa, umbilical infection and the potential for malignancy.
3. A patent omphalomesenteric duct should be ligated and excised. Perioperative IV antibiotics should be given. Full exploration and identification of all umbilical structures should be performed.

This condition may necessitate urgent surgical intervention to prevent infarction of the bowel.

Provided by: Dr. Alexander K. C. Leung; and Dr. Justine H. S. Fong

Case 8: Radley's Red Patches



Some body-sites, notably elbows, knees, scalp and sacrum, are common areas of eruption for this condition.

Radley presents with widespread, red, scaly patches on his trunk and limbs.

Questions

1. What is the most likely diagnosis?
2. What topical treatments are available?

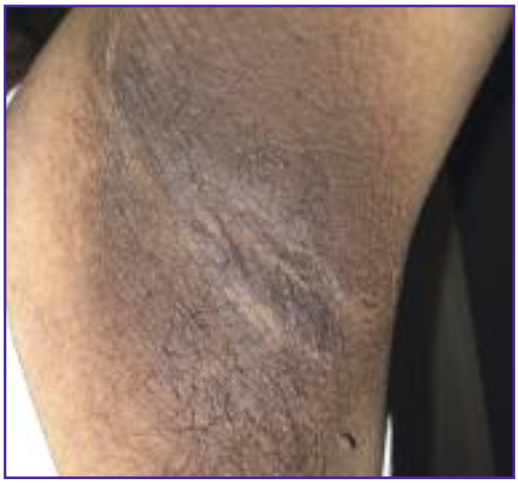
Answers

1. Plaque psoriasis is a common pattern of psoriasis. Plaques may occur at very localized areas or may be widespread, usually with symmetrical body-site distribution. Some body-sites, notably elbows, knees, scalp and sacrum, are common areas for plaque psoriasis. Central clearing of plaques is a common feature, leading to annular morphology.

   In Radley's case, the central plaque has been gently scraped and shows the white, scaly surface more clearly than the surrounding plaques.
2. Topical treatments include:
   - emollients,
   - keratolytics (*e.g.*, salicylic acid),
   - tar,
   - dithranol,
   - topical steroids and
   - vitamin D analogs.

Provided by: Dr. Hayder Kubba

Case 9: Sheila's Dark Skin



Sheila is a 57-year-old East Indian who presents with thick and darkened skin in the axillae and around her neck and groin.

Questions

1. What is the diagnosis?
2. Which populations are at increased risk for this condition?
3. With which malignancy is this condition most commonly associated?

Answers

1. Acanthosis nigricans. This is an asymptomatic darkening and thickening of the skin most commonly due to:
   - insulin-resistance,
   - obesity and/or
   - diabetes.

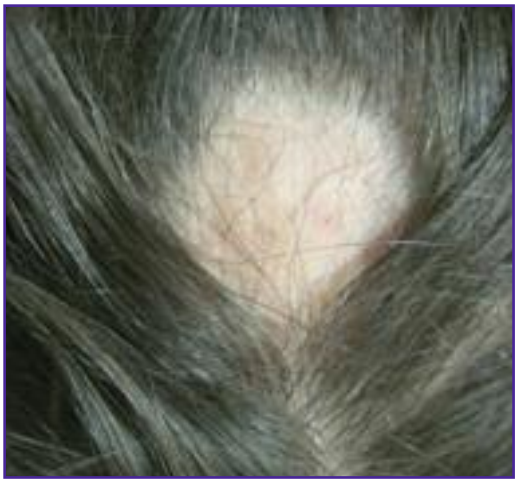
   Familial, secondary to drug and malignancy and idiopathic types of this condition exist.

   Treatment options consist predominantly of weight and diabetes management. Topical therapy with hydroquinones, tretinoin, mild steroids or a combination of the three can be beneficial.
2. Hispanic, African American and Aboriginal populations are at increased risk for this condition.
3. GI adenocarcinoma is most commonly associated with this condition.

This is an asymptomatic darkening and thickening of the skin most commonly due to insulin-resistance, obesity and/or diabetes.

Provided by: Dr. Benjamin Barankin

Case 10: Helen's Hair Loss



Helen, 40, presents with a round, asymptomatic area of hair loss. She has a history of vitiligo and a family history of diabetes.

Questions

1. What is the diagnosis?
2. With which conditions is this associated?
3. How would you treat Helen?

Answers

1. Localized alopecia areata is a non-scarring, likely autoimmune form of alopecia that can affect any hair-bearing area and most typically the scalp.
2. It has been associated with other autoimmune conditions, including:
   - Pernicious anemia
   - Diabetes
   - Vitiligo
   - Addison's disease
   - Thyroid disease
3. Potent topical steroids can be tried first, although intralesional steroids are more effective. Dx

Provided by: Dr. Benjamin Barankin