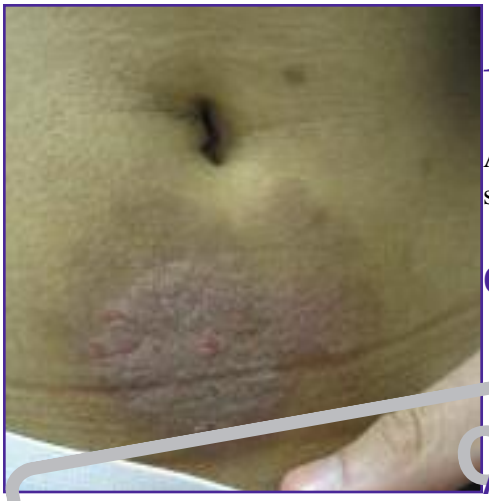
Illustrated quizzes on problems seen in everyday practice

Case 1



Itchy Abdomen

A 15-year-old male presents with a very itchy area on his abdomen of several months duration.

Questions.

1. What is your diagnosis?
2. What is a modern-age location for this allergy?
3. How would you treat this lesion?

Answers

1. Allergic contact dermatitis – likely a reaction to nickel in his belt buckle or jean snap.
2. Allergic reactions to the nickel found on cell phones have now been observed on the ears and the sides of the head in numerous cases.
3. Potent topical steroids and avoidance of the allergen are recommended.

Provided by: Dr. Benjamin Barankin

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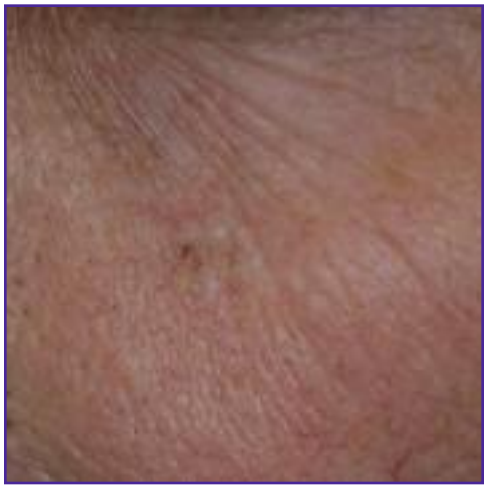
Case 2



A Pearly-white Papule

This 72-year-old man presents with a translucent papule on the right intra-orbital region.

Questions

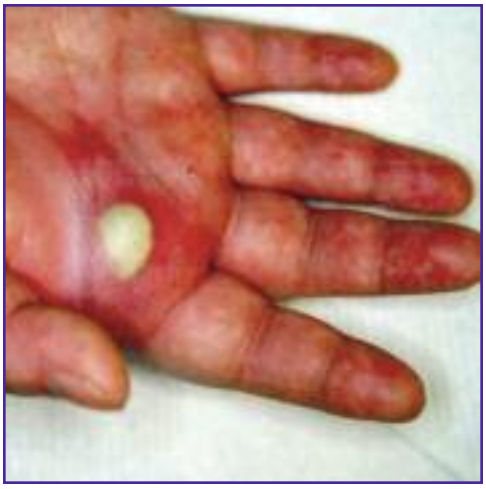
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

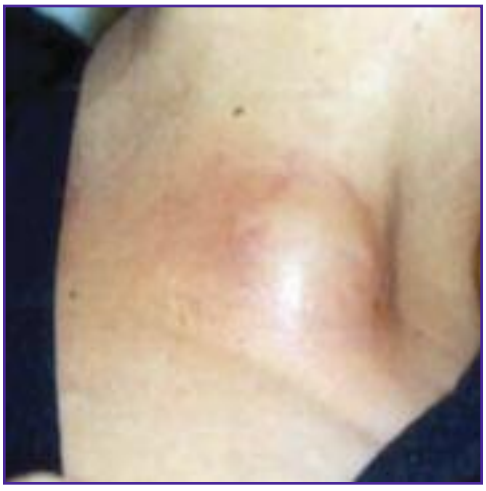
Answers

1. This patient has a basal cell carcinoma (BCC). BCC is the most common form of skin cancer. There are several types including nodular, pigmented, sclerosing, and superficial. Classically, lesions appear as pearly-white or pink dome-shaped papules with telangiectasias. In nodular BCC, the centre may, ulcerate and patients can present with a bleeding, crusted lesion that seems to heal but recurs. Almost 90% of basal cell carcinomas occur on the head and neck.
2. Although BCCs rarely metastasize, they should be treated as other malignancies of the skin. Untreated lesions have the potential to invade locally and cause destruction if they penetrate into the subcutaneous tissue.
3. Surgery with excision is the treatment of choice for BCC. Electrodessication and curettage may also be performed in certain cases. Topical immunotherapy with 5% imiquimod (applied two times a week for five weeks) may be recommended for lesions on the trunk measuring less than 2 cm. Yearly follow-ups, with a complete skin examination, are recommended for patients with a history of BCC.

Provided by: Ms. Lesley Latham and Dr. Richard Langley

Case 3





Swollen Abcesses

Two different patients present with similar pustular, swollen abcesses. Each has recently been treated in the ED.

Questions

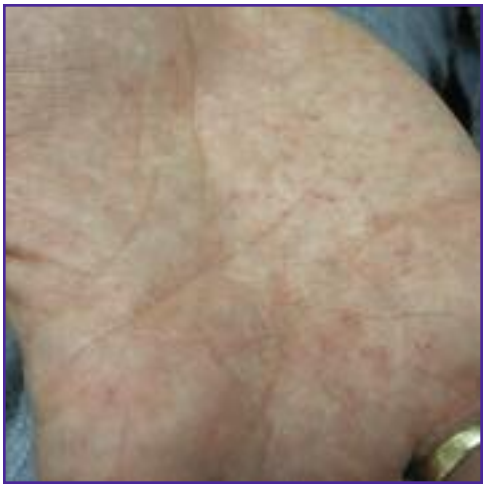
1. What is the diagnosis?
2. What is the cause?

Answers

1. Severe cellulites with abscess formation
2. IV drugs

Provided by: Dr. Jerzy Pawlak and Dr. T.J. Kroczac

Case 4



Pits on Palms

A 24-year-old male presents with occasionally tender pits on his palms.

Questions

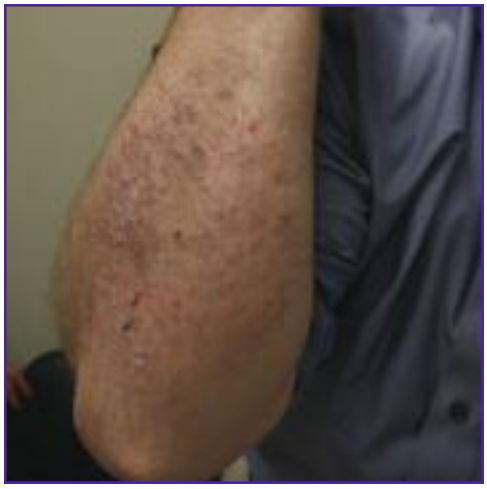
1. What is your diagnosis?
2. What are other findings in this condition?
3. Who should this patient be referred to?

Answers

1. Nevoid basal cell carcinoma syndrome
2. Early development of basal cell carcinoma, odontogenic keratocysts, medulloblastoma, various skeletal abnormalities, ovarian or cardiac fibromas, and various other tumours
3. The patient should be referred to a dermatologist for ongoing surveillance of skin cancers, a genetic counselor, and others where appropriate, such as a gynecologist, neurologist, pediatrician, cardiologist, or dentist.

Provided by: Dr. Benjamin Barankin

Case 5

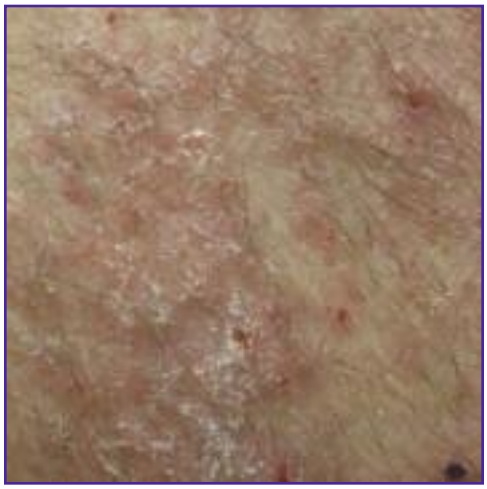


Eczematous Eruption

A 45-year-old male presents with a several year history of a pruritic right forearm rash that is erythematous and flaky. He was treated with short courses of topical steroids and antifungals in the past with no improvement to his condition.

Questions

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

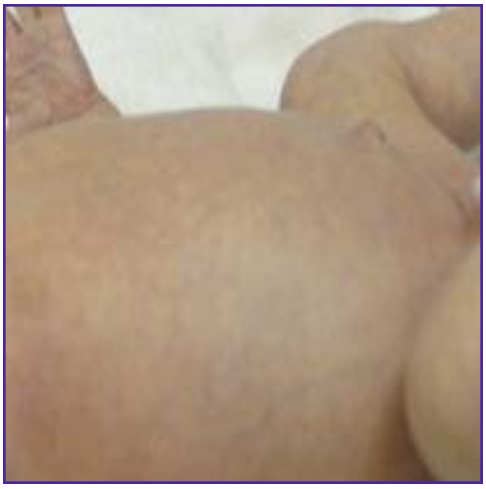


Answers

1. Lichen simplex chronicus
2. This disorder is caused by persistent and chronic itching and scratching that can be secondary to pruritic skin conditions (*i.e.*, eczema). The itch-scratch cycle can also occur without a primary skin condition. The recurrent trauma from scratching causes the skin to undergo lichenification.
3. The primary treatment for lichen simplex chronicus is to discontinue scratching. Topical therapy to control the primary lesions and pruritus should be considered and may include antihistamine or corticosteroid medications. Topical salicylic acid may be used to break down excess keratin in the lesions. A reasonable therapeutic course for this patient would be Diprosalic ointment (betamethasone with salicylic acid) applied topically b.i.d. for four to six weeks.

Provided by: Mr. John Taylor and Dr. Karen Choi

Case 6



Mottled Skin

A 10-day-old infant is noted to have mottled skin on the limbs and trunk during a routine physical examination. According to his mother, the mottling becomes more intense after exposure to cold temperatures, and it disappears when the skin is warmed. Physical examination is otherwise normal.

Questions

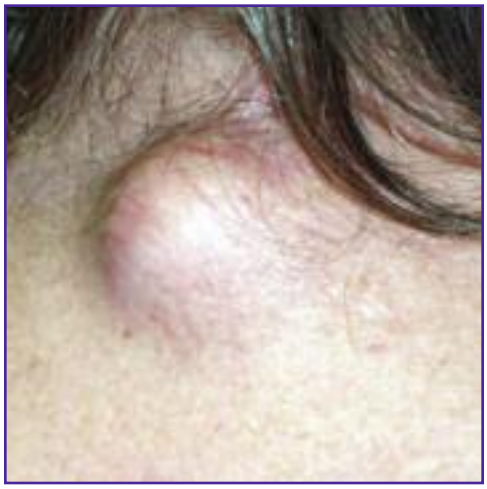
1. What is the diagnosis?
2. What is the significance?
3. What is the treatment?

Answers

1. Cutis marmorata
2. Cutis marmorata is characterized by a symmetrical, reticular, and reddish mottling of the skin after exposure to cold temperatures. The lesion is usually found on the extremities and trunk. The evanescent, lacy network of small blood vessels is due to an exaggerated vasomotor response to cold temperatures that produces vasospasm, with subsequent hypoxia and vasodilatation of venules and capillaries. The mottling disappears when the skin is warmed. Cutis marmorata is a common phenomenon in healthy infants. The condition is most commonly seen in children with hypothyroidism, lupus erythematosus, Down syndrome, trisomy 18, Menkes disease, familial dysautonomia, and Cornelia de Lange syndrome. It must be distinguished from cutis marmorata telangiectatica congenital, a vascular malformation where the lesions do not resolve with warming.
3. Treatment should be directed at any known underlying cause, if possible. In healthy children, treatment is usually not necessary, as the tendency to mottle usually resolves by 6- to 12-months-of-age.

Provided by: Dr. Alexander K.C. Leung and Ms. Carmen Fong

Case 7



Lump on Neck

A 63-year-old female presents with a lump located over the posterior part of her neck. The lump is asymptomatic and has been growing very slowly over the last five years. Two years ago, the lump's surface was broken and discharged a foul smelling, soft, yellow mass.

Questions

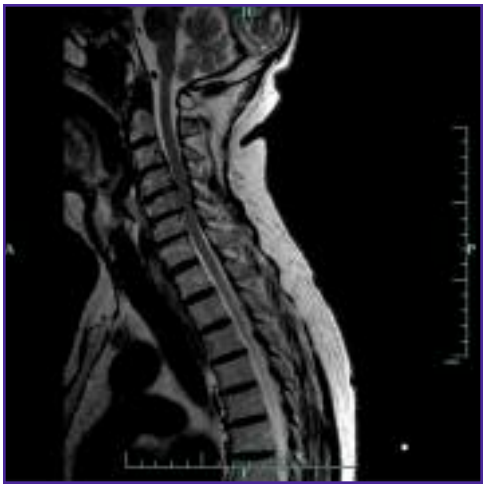
1. What is the diagnosis?
2. What is the treatment?

Answers

1. Epidermal cyst
2. Like boils, fluctuant inflamed cysts must be drained and evacuated. An asymptomatic cyst does not need to be treated.

Provided by: Dr. Jerzy Pawlak

Case 8



Neck Pain

A 68-year-old, right handed male presents with history of neck pain and tingling of hands, which started three years ago and has gotten worse with time. The neck pain is exacerbated with physical activity. He has no weakness, bowel, or bladder symptoms.

Questions

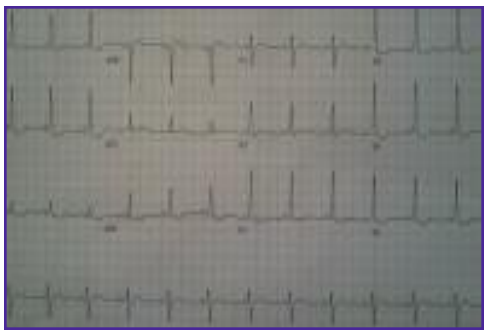
1. What does the image show?
2. What is your diagnosis?
3. What is the treatment?

Answers

1. This is a sagittal view of T2 weighted MRI of the cervical spine, showing disk herniations at C3-4, C4-5, and C5-6 with obliteration of cerebrospinal fluid space and mild compression of the thecal sac with myelopathic changes of spinal cord.
2. Spinal stenosis with cervical myelopathy
3. Surgical decompression of spinal stenosis

Provided by: Dr. A.N. Rana, Dr. I. Haq, Mr. Atif Khan, and Dr. Abdul Qayyum Rana

Case 9



Odd ECG Pattern

A 57-year-old-man presents with pneumonia. His routine ECG shows normal sinus rhythm.

Questions

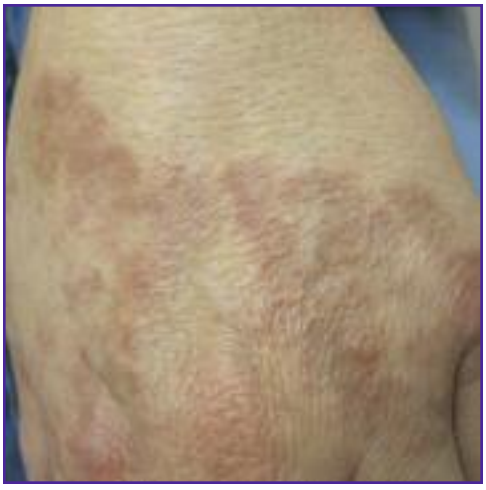
1. What is your diagnosis?
2. What should you ask about?
3. How would you treat this patient?

Answers

1. Wolff-Parkinson-White (WPW) "pattern" (short PR interval < 120 ms, prolonged QRS >120 ms, and the presence of delta waves). The diagnosis has nothing to do with the presenting illness. The incidence of WPW pattern has been estimated to be 0.4% at the higher end. This pattern suggests the presence of an accessory pathway in the conduction system of the heart. Importantly, this extra pathway can be a cause of sudden death.
2. It is important to ask about symptoms related to WPW, such as chest discomfort, palpitations, presyncope, and syncope. If the patient is symptomatic, his diagnosis would then be upgraded to WPW "syndrome," and the corresponding management is dramatically different from that administered for merely having the ECG pattern.
3. Refer to specialist care (immediately if the patient has symptoms). The issue of conducting the invasive electrophysiological study is controversial. In the absence of symptoms, recent evidence suggests that the study should not be routinely performed. Always keep in mind that, in the appropriate setting, catheter ablation of the accessory pathway constitutes a "cure."

Provided by: Dr. Lawrence Wong

Case 10



Asymptomatic Plaques

A 55-year-old female presents with asymptomatic plaques on her dorsal hands and ankles. She is worried she may have skin cancer.

Questions

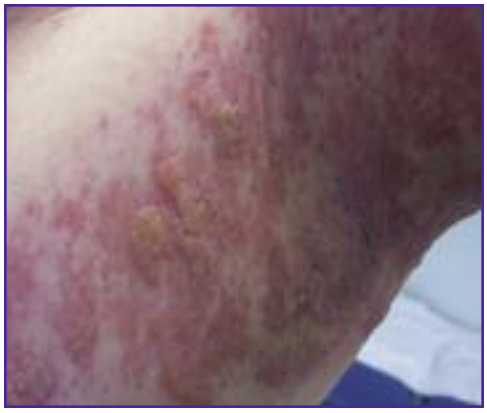
1. What is your diagnosis?
2. What are the different types of this lesion?
3. How might you treat these lesions?

Answers

1. Granuloma annulare
2. Localized, generalized, subcutaneous, perforating, and arcuate dermal erythema
3. Potent topical steroids or intralesional steroids are useful for localized disease. Liquid nitrogen cryotherapy can also be helpful. More widespread lesions may be treated with phototherapy, oral isotretinoin, or occasionally various oral antibiotics.

Provided by: Dr. Benjamin Barankin

Case 11



Painful, Vesicular Rash

A 54-year-old male developed a painful and vesicular rash in a unilateral dermatomal distribution. He has been experiencing malaise and myalgia for the past two days.

Questions

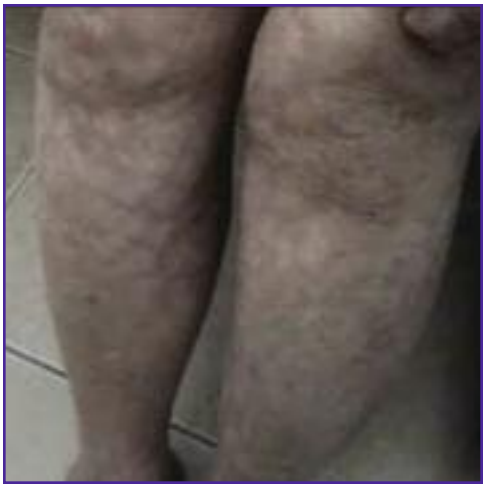
1. What is your diagnosis?
2. What is the pathogenesis of the condition?
3. What is the management?

Answers

1. Herpes zoster
2. Varicella zoster virus remains dormant in the spinal dorsal root ganglia after resolution of varicella. A decrease in cellular immunity triggers the reactivation of the virus, resulting in herpes zoster.
3. Treatments reduce the extent and duration of symptoms as well as the risk of chronic sequelae. Antiviral agents, such as acyclovir, valacyclovir, and famciclovir, promote healing of cutaneous lesions and prevent or reduce the severity of postherpetic neuralgia. Narcotic and non-narcotic analgesics, tricyclic antidepressants, and anticonvulsant agents may be used for acute zoster associated pain. The use of oral corticosteroid therapy in conjunction with an antiviral for uncomplicated herpes zoster is controversial. Previous studies found steroids accelerate the resolution of acute neuritis in comparison to those patients treated with antivirals alone.

Provided by: Dr. Francesca Cheung

Case 12



Rash in Parkinson's Disease Patient

A 63-year-old, right-handed female with Parkinson's disease presents to the ED. She had a resting tremour of her right upper extremity, rigidity of both upper extremities, and bradykinesia, which is greater on the right side than the left. She was started on a medication for Parkinson's disease, mainly to help her tremour. Three weeks after she was started on this medication, she developed the condition shown in the picture.

Questions

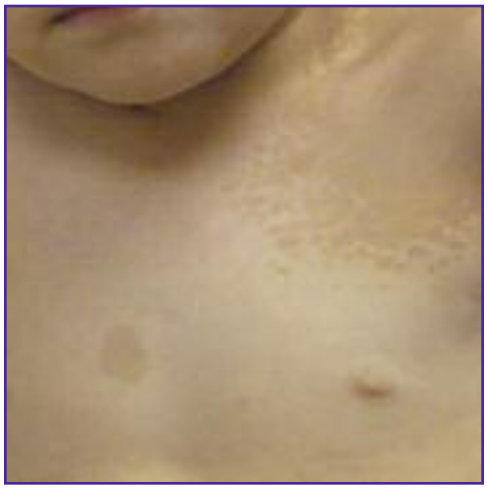
1. What does this image show?
2. What is your diagnosis?
3. How would you manage this case?

Answers

1. This image shows mottled, blotchy skin on both legs, with discolouration causing a reticulated rash.
2. Livedoreticularis due to amantadine
3. The rash resolves after amantadine is stopped.

Provided by: Dr. Abdul Qayyum Rana, Dr. A. Alsarawi, and Ms. Ishraq Siddiqui

Case 13



Hyperpigmented Lesions

A 3-year-old boy presents with multiple hyperpigmented lesions, many of which have been present since birth. On examination, there are ten brownish macules greater than 10 mm in diameter. There are two brownish patches greater than 7 cm in diameter.

Questions

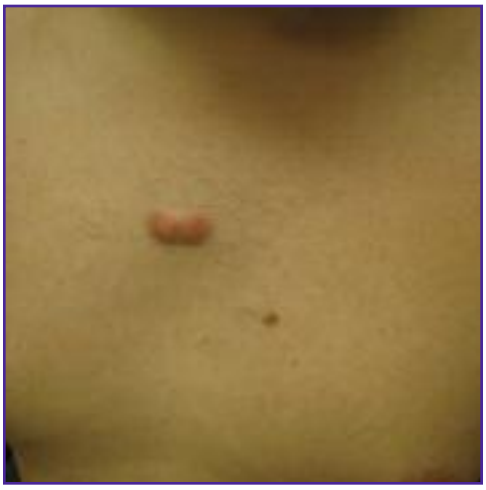
1. What is the most likely diagnosis?
2. What is the significance?
3. What is the treatment?

Answers

1. Type 1 neurofibromatosis
2. Type 1 neurofibromatosis is diagnosed clinically based on the National Institutes of Health (NIH) criteria. The criteria are six or more café au lait spots, 1.5 cm or larger in postpubertal persons and 0.5 cm or larger in prepubertal persons; two or more neurofibromas of any type or one plexiform neurofibroma; freckling in the axillary or inguinal regions; optic glioma; two or more Lisch nodules; a distinctive osseous lesion, such as dysplasia of the sphenoidal bone or dysplasia or thinning of the long bone cortex; and a first degree relative with type 1 neurofibromatosis. Two or more of the diagnostic criteria must be present for the diagnosis to be made. It should be noted that multiple café au lait spots, the most important hallmark of type 1 neurofibromatosis, may be the only clinical manifestation in young children, as is illustrated in the present case.
3. Treatment is mainly symptomatic.

Provided by: Dr. Alexander K.C. Leung and Mr. Jacky Truong

Case 14



Thick, Itchy Lesion

A 24-year-old Asian male presents with a thick, itchy lesion on his chest.

Questions

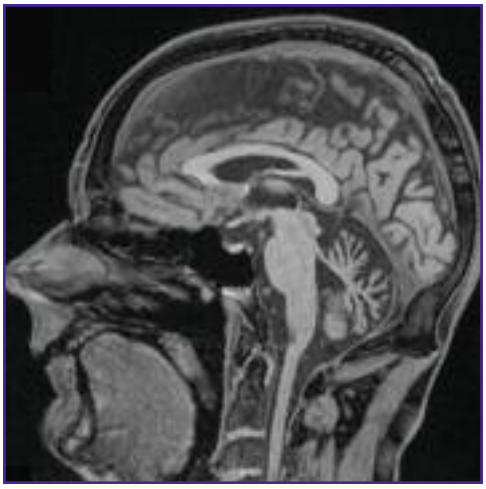
1. What is your diagnosis?
2. What are common areas of the body for this lesion?
3. How would you manage this lesion?

Answers

1. Keloid scar
2. Earlobe, chest, upper back, and shoulders
3. Reassure the patient of the lesion's benign nature. Potent topical steroids provide modest benefit. Intralesional kenalog, with or without cryotherapy, is the treatment of choice. Occasionally, excision followed by topical imiquimod or radiation can be beneficial.

Provided by: Dr. Benjamin Barankin

Case 15



Balance Problems

A 54-year-old right handed male developed balance problems three years ago. He feels unsteady on his feet and has had multiple falls. In addition, he has sexual dysfunction and postural dizziness. His systolic blood pressure drops by 40 degrees upon assuming an upright position after being supine. He has mild dysarthria with scanning of speech. He has mild features of Parkinsonism with bradykinesia and rigidity.

Questions

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

Answers

1. This is a sagittal view of a T1 weighted MRI of the brain showing generalized cerebral and marked cerebellar atrophy.
2. Multiple system atrophy
3. Symptomatic treatment, including prescribing levodopa for slowness and increasing fluid intake for postural hypotension, should be the focus. Fludrocortisone and amatine, in addition to compression stockings, may also be helpful. Dx

Provided by: Mr. Atif Khan, Dr. Abdul Qayyum Rana, and Dr. A.N. Rana