



## Case 1



## Spinal Lesions

An 84-year-old female presents with gradual onset of weakness in both legs and difficulty ambulating. She had slowly become paraplegic, with bowel and bladder incontinence. On examination, she is found to have decreased sensation in both legs with a sensory level between the umbilicus and xiphisternum. An MRI of the spine is performed.

### Questions

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

### Answers

1. This is a sagittal view of a cervical and thoracic spine MRI, which shows a lesion involving T7 and T8 vertebral bodies, with abnormal signal changes in the spinal cord.
2. It is likely that this is a metastatic lesion involving T7 and T8 vertebral bodies, with spinal cord compression.
3. Neurosurgery and medical oncology consultation are required for further treatment, depending upon the primary pathology.

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

## Share your photos and diagnoses with us!

Do you have a photo diagnosis? Send us your photo and a brief text explaining the presentation of the illness, your diagnosis and treatment and receive \$25 per item if it is published.

*The Canadian Journal of Diagnosis*  
955, boul. St. Jean, Suite 306  
Pointe-Claire, Quebec H9R 5K3

Email: [diagnosis@sta.ca](mailto:diagnosis@sta.ca)  
Fax: (888) 695-8554

### Case 2



## *Diffuse Erythematous Skin Eruption*

An 80-year-old man, treated with prednizone and azathioprine for idiopathic pulmonary fibrosis, comes to Emergency for a diffuse erythematous skin eruption, hypotension and hyperthermia. He also has numerous buccal ulcers. A chest X-ray does not show any new lesions or fibrosis progression. He has been on bisphosphonates for a few weeks already.

### Questions

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

### Answers

1. The patient is having an allergic reaction to bisphosphonate. A cutaneous biopsy rules out bullous conditions, such as pemphigus, and blood cultures rule out toxic shock syndrome.
2. Bisphosphonates must be stopped. Symptomatic treatment consists of moisturizing cream for the skin, and magistral preparation of gargarism with lidocaine, prednisone, diphenhydramine and nystatin for the buccal ulcers.

Provided by: Dr. Jean-François Roussy

## Case 3

## Pruritic Foot Lesion



A 24-year-old female has a two week history of an erythematous, serpiginous and pruritic lesion on the dorsum of her right foot, which developed after her return from a Caribbean vacation. There was no improvement after the use of betamethasone 0.1% cream and terbinafine cream.

### Questions

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



### Answers

1. Cutaneous larva migrans
2. This condition is caused by percutaneous penetration and subsequent migration of the larvae of various nematode parasites. Humans are usually infected by walking barefoot on beaches or soil that have been contaminated with animal feces.
3. Cutaneous larva migrans is a self-limiting condition. Humans are “dead-end” hosts, and the lesions will clear within four to eight weeks, in most cases. However, intense pruritus and the risk of secondary infection warrant treatment. Topical thiabendazole is the treatment of choice for localized lesions. Systemic treatments such as mebendazole, albendazole and ivermectin are used if the lesions are widespread, or if topical treatment fails.



Provided by: Dr. Francesca Cheung

Case 4



## *Discoloured Toenail*

A 45-year-old female presents with a thickened, dark, yellow toenail. She reports no recent history of foot injury.

### Questions

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

### Answers

1. Onychomycosis: a nail infection caused by dermatophyte, or nondermatophyte, fungi or yeasts. Four clinical types of onychomycosis exist: (1) candidal onychomycosis, (2) distal subungual onychomycosis, (3) proximal subungual onychomycosis, and (4) white superficial onychomycosis. This nail dystrophy presents as distal subungual onychomycosis with an accumulation of hyperkeratotic debris. The nail separates from the underlying bed and becomes thick and yellow. Diagnostic confirmation by KOH examination and fungal culture is recommended prior to treatment.
2. Onychomycosis is a common infection, with an incidence of almost 50% by age 70. Patients with peripheral arterial disease or diabetes mellitus require special consideration. Onychomycosis can negatively impact patients' lives both physically and psychologically. It may affect a patient's life by disrupting daily activities, or via a social stigma.
3. Ciclopirox (8% lacquer) may be used to topically treat fungal nail infection, although the efficacy is low. Oral antifungals may be used for refractory, severe or nondermatophyte onychomycosis. Terbinafine 250 mg q.d. for six weeks may be used to treat fingernail infections, while twelve weeks of treatment is required for toenail infections. Itraconazole may be administered as pulse therapy. For fingernails, 400 mg q.d. one week per month for two pulses is recommended, and three pulses for toenails. The dosage recommendations vary according to the infection being treated.

Provided by: Ms. Jessica Corbin, and Dr. Richard Langley



## *Hypopigmentation of Extremities*

A 22-year-old woman presents with a two year history of hypopigmented macules on both anterior lower legs. In the past two months, the macules have spread to her forearms.

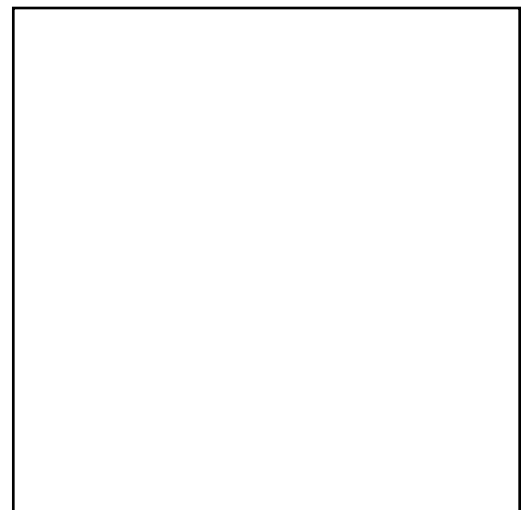
### Questions

1. What is the diagnosis?
2. What are the clinical findings?
3. What is the treatment?

### Answers

1. This patient has idiopathic guttate hypomelanosis, a benign, acquired condition involving hypopigmentation of skin on the extremities and sun-exposed areas. The cause of these macules is not known, however, sun exposure is thought to play a role.
2. A diagnosis is made based on clinical findings. Patients typically present with circular macules approximately 1 to 3 mm in diameter, appearing first on the lower extremities and spreading to the upper extremities over time. The macules usually increase in size and number with age. Differential diagnosis may include vitiligo, tinea versicolor, and post-inflammatory hypomelanosis.
3. There are currently no effective treatments for idiopathic guttate hypomelanosis. Sun protection should be recommended to reduce exacerbation of the lesions from UV exposure.

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



### Case 6



## Tongue Patches

A three-year-old boy is noted to have irregular erythematous patches on the dorsal surface of the tongue during a routine oral examination. The child is otherwise asymptomatic.

### Questions

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

### Answers

1. Geographic tongue
2. Geographic tongue, also known as benign migratory glossitis, is an inflammatory disorder of the tongue mucosa. The prevalence ranges from 1 to 2.5% in the pediatric age group. Most cases are idiopathic. Clinically, geographic tongue presents as multifocal, circinate or irregular erythematous patches that represent loss of filiform papillae. There is often a slightly elevated white or yellowish-white border. These lesions tend to change in shape, size, and location over time. The majority of patients are asymptomatic. The diagnosis is mainly clinical based on the history of a migrating pattern and the characteristic appearance.
3. The condition is benign and self-limiting. Typically, the lesion resolves spontaneously without sequelae, but tends to recur on other areas of the tongue. No treatment is required apart from reassurance.

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



## *Dyspigmented Forehead*

A 37-year-old female of Latin American origin presents with a mottled dyspigmentation of her forehead, which she has had for the past few years.

### Questions

1. What is the diagnosis?
2. What is believed to be the cause of this condition?
3. How would you manage this patient?

### Answers

1. Melasma
2. This condition is caused by a combination of sun exposure, genetic and racial susceptibility, and estrogen (especially with the use of an oral contraceptive pill or during pregnancy).
3. The patient should be managed with daily sunscreen with excellent UVA & UVB protection, along with a bleaching formulation that contains hydroquinone, a topical steroid and retinoid. A topical vitamin C cream can also help, and chemical peels and laser treatment may be of benefit.

Provided by: Dr. Benjamin Barankin

Case 8



## *Purple Head and Neck Swelling*

A 76-year-old male presents with a large, soft, semi-globular, purple swelling on the top of his head and the left side of his neck. The patient mentions that the tumour has been present since birth.

### Questions

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

### Answers

1. Large head and neck cavernous haemangioma
2. Cavernous haemangioma may involve only the skin, or extend into the muscles, joints, and bone (similar to any other birthmark). A cavernous haemangioma is a collection of dilated vessels in the dermis and subcutaneous tissue that is present at birth. Haemangiomas do not generally pose any health problems, but they are sometimes prone to ulceration and bleeding. Some cavernous haemangiomas may be associated with thrombocytopaenia, as in Kasabach-Merritt syndrome. Hemangiomas of the skin are usually classified into three basic groups: capillary haemangiomas, immature haemangiomas, and cavernous haemangiomas.

Provided by: Dr. Jerzy Pawlak, and Mr. Pawel Utko



## Case 9



## Visual Field Loss

A 67-year-old man presents with a two-month history of headaches and peripheral visual field loss.

### Questions

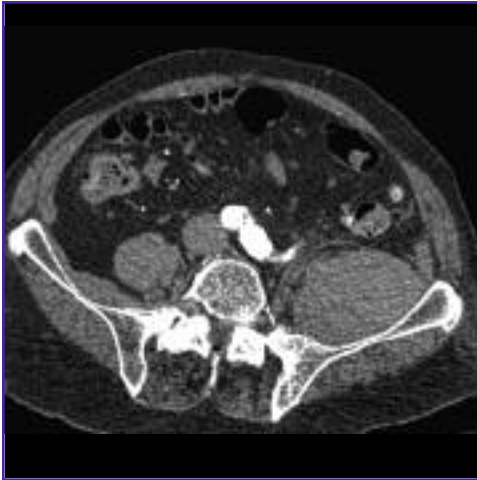
1. What is the diagnosis?
2. What is the significance?
3. What is the appropriate management?

### Answers

1. Papilledema
2. Papilledema refers to swelling of the optic disc margins, secondary to raised intracranial pressure.
3. Urgent neuroimaging (head CT or MRI) and ophthalmic consultation is required to rule out an intracranial lesion.

Provided by: Mr. Sean A. Kennedy, and Dr. Jason Noble

### Case 10



## Inner Thigh Pain

An 84-year-old male presents to emergency with acute-on-chronic pain in his inner left thigh, with a one-week history of recurrent falls. Medical history includes atrial fibrillation treated with warfarin, non-insulin dependent diabetes mellitus, urothelial carcinoma, stenosis of the lumbar spine, gout, and a left total hip replacement. On examination, vital signs are stable. Hemoglobin is 135 and INR is 2.1. Patient has decreased pinprick sensation along the L2-L3 dermatomes, some discomfort with internal/external rotation of the left hip, and weakness on knee extension and hip flexion. Straight leg testing is negative. The differential diagnosis includes a radiculopathy, and an

MRI lumbar spine is requested. In the meantime, an abdominal ultrasound performed for deranged liver function tests is abnormal, and a contrast-enhanced CT scan of the abdomen and pelvis is requested.

### Questions

1. What is seen in this CT scan?
2. What can be interpreted from this scan?
3. What is the treatment?

### Answers

1. The CT scan shows a large, left iliopsoas hematoma, extending from the level of the iliac crest to the lesser trochanter.
2. This patient has a femoral neuropathy. Compression by such a hematoma can occur at the level of the femoral nerve itself, or more proximally at the level of the lumbar nerve roots. Iliopsoas hematoma is a rare but well-described complication of anticoagulation. Hemoglobin levels may initially be normal, and then fall, as seen in this patient. Spontaneous hemorrhage can also occur with therapeutic INR levels. With psoas irritation, patients experience increasing pain with hip extension; hence, they prefer to have the hip flexed (the psoas test). Electromyography can help differentiate a nerve root (L2-4) lesion from a peripheral lesion of the femoral nerve, and documents decline and recovery of nerve function. If hip adductor strength is preserved, a peripheral lesion of the femoral nerve may be more likely.
3. The patient was given a bolus of vitamin K, and warfarin was replaced with ASA; after one week there was symptomatic improvement. A follow-up CT scan showed a resolving hematoma. Hematomas that enlarge or cause progressive neuropathy may require percutaneous or surgical evacuation.

Provided by: Mr. Misagh Ziaei, and Dr. Martin Moran



## *Pruritic Bullae*

A 78-year-old female presents with generalized pruritic bullae.

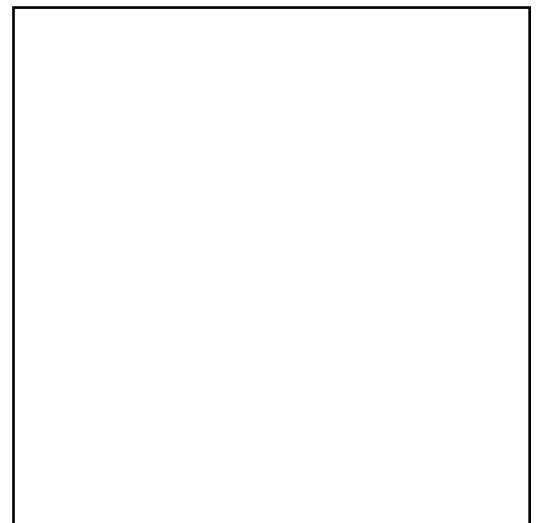
### Questions

1. What is the diagnosis?
2. What demographic is typically affected?
3. How might you treat these lesions?

### Answers

1. Bullous pemphigoid
2. The elderly are typically affected; average age of onset is 65.
3. Potent topical steroids are useful for localized disease. For more generalized involvement, consider prednisone, methotrexate and mycophenolate mofetil.

Provided by: Dr. Benjamin Barankin



Case 12




## *Skin and Soft Tissue Infection*

This man had a very serious skin and soft tissue infection caused by the group A streptococcus bacterium after a minor injury.

### Questions

1. What is the diagnosis?
2. What are the predisposing factors?

### Answers

1. Necrotizing fasciitis is an infection of the skin, subcutaneous tissues, and skeletal muscles that is life threatening and requires surgical removal.
2. Predisposing factors are: heart disease with low cardiac output, lung disease with reduced tissue  $pO_2$ , alcohol abuse, hepatic cirrhosis, renal failure and cancer. 

Provided by: Dr. Jerzy Pawlak, and Mr. Lukasz Blaszyk

