



*Illustrated quizzes on problems seen in everyday practice*

## CASE 1: POLLY'S PLAQUES



Polly, 63, presents with scattered annular erythematous, brown plaques with a firm border on her knuckles and ankles.

### Questions

1. What is the diagnosis?
2. What are the most commonly affected areas?
3. How would you manage this patient?

### Answers

1. Granuloma annulare.
2. The most commonly affected areas include the:
  - dorsal hands,
  - fingers,
  - feet and
  - extensor arms and legs.
3. Potent topical or intralesional steroids with or without liquid nitrogen cryotherapy.

Provided by: Dr. Benjamin Barankin

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## CASE 2: TOM'S TONSILS



*The condition is caused by group A  $\beta$ -hemolytic streptococci or oral anaerobes.*

Tom, 24, presents with a history of fever, sore throat, halitosis and has had difficulty when breathing for the past few days. On examination, there is swelling in the left side of the soft palate and his uvula is pushed to the right side.

### Questions

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

### Answers

1. Left-sided peritonsillar abscess.
2. A peritonsillar abscess is an abscess in the potential space between the tonsillar capsule, the superior constrictor and palatopharyngeus muscles. The condition is caused by group A  $\beta$ -hemolytic streptococci or oral anaerobes. Patients often complain of:
  - sore throat,
  - dysphagia,
  - fever and a
  - “hot potato” voice.Classically, there is swelling of the infected tonsillar area and deviation of the uvula to the contralateral side. Airway obstruction is the major complication of this condition.
3. Treatment consists of incision and drainage and the use of systemic antibiotics (penicillin or clindamycin) for 10 days.

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

## CASE 3: HARPER'S HAND

Harper, 25, presents to the ER after having ejected (from an automatic nail gun), a large flooring nail into his fingers. Harper has full sensation of the distal fingers and normal cap refill to digits (though he does have extreme pain when he attempts to move his fingers).

An x-ray of Harper's hand/fingers was performed to establish the exact location of the nail. Lateral views confirmed no bony involvement.



### Questions

1. What is the diagnosis?
2. How would you remove the nail?
3. How would you care for the wound?

### Answers

1. Foreign body in the soft tissue of the fingers.
2. Apply ring block analgesia to the affected fingers. The nail should be removed with instrumentation assistance (e.g., insert a set of pliers into a sterile glove).
3. To care for the wound, do the following:
  - Use prophylactic antibiotics for one week
  - Administer a tetanus booster
  - Start physical therapy once the swelling has improved/resolved

Although not required, a follow-up with plastic surgery is suggested if the fingers have difficulty healing.

Provided by Dr. Katherine J. M. Abel

*The nail should be removed with instrumentation assistance (e.g., insert a set of pliers into a sterile glove).*

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## CASE 4: SAMUEL'S SCANS

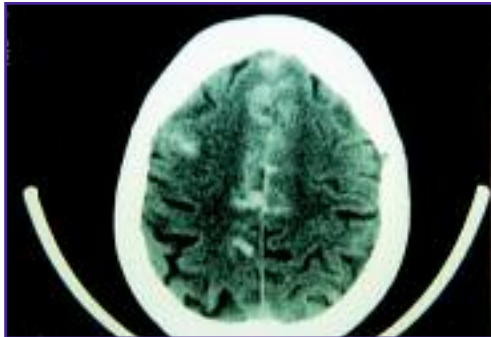


Figure 1. CT scan of the brain.

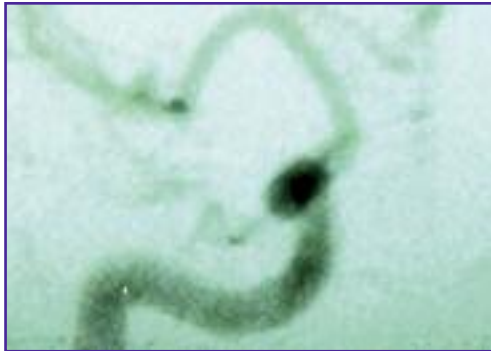


Figure 2. Carotid arteriography.



Figure 3. Clipped aneurysm.

Samuel, 37, presents to the ER with severe headaches. The following scans are taken:

- A CT scan of his brain
- Carotid arteriography
- A second CT scan of the brain

### Questions

1. Do you see any connection between these images?
2. What is the diagnosis of each picture?
3. What is the treatment?

### Answers

1. Yes, there is a connection.
2. The images depict the following:
  - CT scan of the brain shows subarachnoid hemorrhage (Figure 1)
  - Carotid arteriography shows an aneurysm (Figure 2)
3. The aneurysm was clipped at the neck using a titanium clip (Figure 3).

Provided by Dr. Jerzy Pawlak

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### CASE 5: PETULA'S PATCHES



Petula, 40, is concerned about the discolouration on her back. On exam, fine scale and hyperpigmented patches are noted which also extend onto her shoulders.

#### Questions

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

#### Answers

1. Pityriasis (tinea) versicolor.
2. The cause of this condition includes *Malassezia* (M) species, most commonly:
  - *M. globosa*,
  - *M. furfur* and
  - *M. sympodialis*.
3. Management consists of topical agents, such as:
  - selenium sulfide,
  - azole antifungals,
  - ciclopirox and
  - zinc pyrithione.

For widespread disease, oral azoles are occasionally employed. Colour changes can take a few months to resolve.

Provided by: Dr. Benjamin Barankin

*For widespread disease, oral azoles are occasionally employed. Colour changes can take a few months to resolve.*

## CASE 6: NATE'S NAILS

Nate, 55, presents with fingernail problems.

### Questions

- The most likely cause of this problem is:
  - Psoriasis
  - Lichen planus
  - Eczema
  - Onychomycosis
- What is the treatment?



### Answers

- Onychomycosis (answer D).
- Prior to initiating treatment, appropriate nail specimens should be obtained for fungal culture. In this case, a culture shows *trichophyton rubrum* and Nate is treated with oral terbinafine.

Provided by: Dr. Jerzy Pawlak

## Fasting plasma glucose can have its ups and downs



monday a.m.



tuesday a.m.



wednesday a.m.

People with diabetes have often found it difficult to keep their glucose readings consistent – even with excellent diabetes management habits. To make matters worse, many patients with inconsistent fasting plasma glucose levels can still have near-normal A1C results. This frustrating reality creates uncertainty for doctors and patients alike.<sup>1</sup>

### CASE 7: FERRIS' FINGER



*This is a congenital abnormality, usually genetically inherited as an autosomal dominant trait.*

Ferris, one-day-old, was born by an uncomplicated vaginal delivery, following a completely normal pregnancy. He was found to have this appendage to his right fifth finger.

#### Questions

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

#### Answers

1. Polydactyly, or polydactylism. This is an anatomical variant consisting of more than the usual number of digits on the hands and/or feet. It is a congenital abnormality, usually genetically inherited as an autosomal dominant trait. The extra digit is most often a small piece of soft tissue (as seen here) but occasionally, it might contain bone, have joints, or be a complete, functioning digit. The extra digit is most common on the ulnar (little finger) side of the hand, less commonly on the radial (thumb) side and very rarely within the middle three digits.
2. If the digit is non-functional, it is common to surgically remove it during early life. For this infant, it was simply snipped off like a skin tag with local anesthesia.

Provided by: Dr. Katherine J. M. Abel

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## CASE 8: CHARLIE'S CHEST PAIN

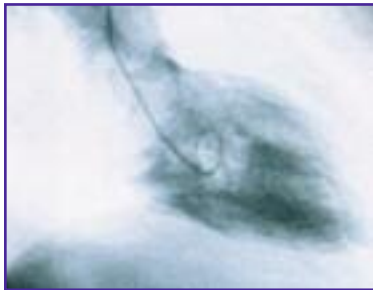


Figure 1. End-diastolic left ventriculography.

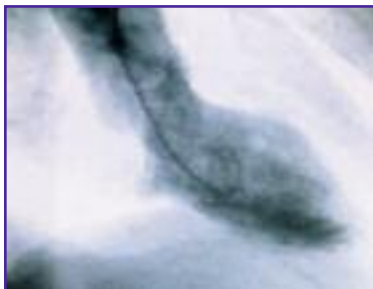


Figure 2. End-systolic left ventriculography.

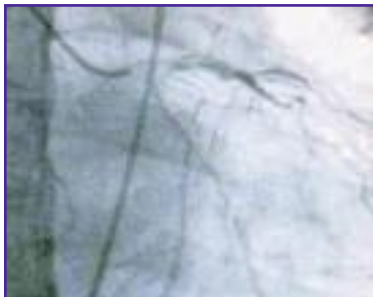


Figure 3. Left coronary angiography.



Figure 4. Stent insertion at narrowed part of obtuse margin branch.

Charlie, 74, was brought to the ER because of severe chest pain. A left ventriculography was performed (Figures 1 and 2) along with a left coronariography (Figure 3).

### Questions

1. What does the left ventriculography show (Figures 1 and 2)?
2. What does the left coronariography show (Figure 3)?
3. What procedure was performed in Figures 4 and 5?

### Answers

1. Normal left ventriculography.
2. Ninety per cent stenosis of obtuse marginal branch.
3. Stent insertion at narrowed part of obtuse margin branch.

Provided by Dr. Jerzy Pawlak; and Dr. T. J. Krocak

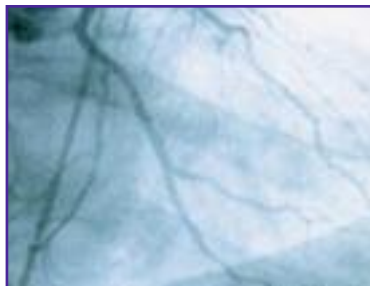


Figure 5. Coronariography shortly after stent insertion.



## CASE 9: PRESTON'S PUSTULES



*The onset is usually between two months and 10-months-of-age. It may continue throughout infancy and early childhood.*

Preston, three-years-old, presents with pruritic pustules on his hands and feet. The pustules have been appearing on and off from eight-months-of-age. The last episode was about six months ago.

### Questions

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

### Answers

1. Acropustulosis of infancy (infantile acropustulosis).
2. Acropustulosis of infancy is a chronic or recurrent benign condition characterized by pruritic vesiculopustular or pustular lesions on the hands and feet. The etiology is not known. Dark-skinned individuals have a predisposition for this eruption. The onset is usually between two months and 10-months-of-age. It may continue throughout infancy and early childhood.
3. Topical corticosteroids or oral antihistamines may be used to minimize the itchiness. Dapsone, 2 mg/kg, divided twice daily may hasten resolution of the lesion. Because dapsone may cause hemolytic anemia and methemoglobinemia, the drug should be used with caution.

Provided by: Dr. Alexander K. C. Leung; and Dr. C. Pion Kao

## CASE 10: BUDDY'S BUMP



Buddy, a 42-year-old truck driver, is concerned about an asymptomatic firm papule on his thumb that he developed three months prior.

### Questions

1. What is your diagnosis?
2. What is the nature and presentation of this condition?
3. What is the treatment?

### Answers

1. Acquired digital fibrokeratoma.
2. This is a benign, asymptomatic, acquired growth usually occurring on the digits. It is usually characterized by a smooth, dome-shaped, skin-coloured papule.
3. Surgery is curative and recurrence is unlikely.

Provided by: Dr. Benjamin Barankin

*This is a benign, asymptomatic, acquired growth usually occurring on the digits.*

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## CASE 11: PIERRE'S PIGMENTATION



Pierre, 20, presents with hyperpigmentation on the neck and in the axillae. Pierre is 170 cm tall and weighs 75 kg.

### Questions

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

### Answers

1. Acanthosis nigricans.
2. Acanthosis nigricans is commonly associated with obesity and can also be associated with endocrinopathies, such as:
  - insulin resistance,
  - diabetes mellitus,
  - polycystic ovary disease,
  - ovarian hyperthecosis,
  - pineal hyperplasia or pinealoma,
  - acromegaly,
  - hypothyroidism,
  - Addison's disease, or
  - Cushing's disease.

Acanthosis nigricans can be induced by systemic corticosteroids, estrogens, nicotinic acid, or fusidic acid and can be a manifestation of internal malignancy.

3. There is no treatment apart from the underlying cause.

Provided by Dr. Alexander K. C. Leung; and  
Dr. W. Lane M. Robson

*This condition is commonly associated with obesity and can also be associated with endocrinopathies.*

## CASE 12: PAUL'S PAPULES

Paul, 56, presents with multiple, dark-coloured, peduncled papules on the neck.

### Questions

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

### Answers

1. Fibroepithelial polyps (acrochordon, skin tags).
2. Fibroepithelial polyps are the most common fibrous lesions of the skin. They present as small, stalk-like lesions with a flattened epithelium or a folded epithelium which may be acanthotic and hyperpigmented. The stroma has loose connective tissue with dilated blood vessels. Skin appendages and nerves are usually absent. These benign and asymptomatic lesions are frequently found on the neck and axillae.
3. The lesions can be treated by:
  - snipping with fine scissors,
  - cryotherapy,
  - electrodesiccation, or
  - carbon dioxide laser photoablation.



*These benign and asymptomatic lesions are frequently found on the neck and axillae.*

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Provided by Dr. Alexander K.C. Leung

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## CASE 13: ELLEN'S EYES



Ellen, eight-years-old, had whooping cough and presents after she develops bright red patches in the bulbar conjunctivae of both eyes.


### Questions

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

### Answers

1. Subconjunctival hemorrhages are the result of rupture of small vessels from increased intravascular pressure during the explosive and repetitive bouts of coughing associated with whooping cough and in patients with hypertension.

These hemorrhages can occur in patients with a blood dyscrasia, such as aplastic anemia and thrombocytopenia.

2. No treatment is required for hemorrhages in this case, but cough suppressant may be helpful. 

Provided by Dr. Jerzy Pawlak

*These hemorrhages can occur in patients with a blood dyscrasia, such as aplastic anemia and thrombocytopenia.*

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