

*Illustrated quizzes on problems seen in everyday practice*

## Cases this month

- |                               |                               |                             |
|-------------------------------|-------------------------------|-----------------------------|
| 1. <b>Laura's Lesion</b>      | 7. <b>Theo's Thigh</b>        | 13. <b>Swollen Scrotum</b>  |
| 2. <b>Bill's Bloody Stool</b> | 8. <b>Aching Axilla</b>       | 14. <b>Infant's Fingers</b> |
| 3. <b>Nola's Neck</b>         | 9. <b>Vein Pain?</b>          | 15. <b>Noduled Knee</b>     |
| 4. <b>Painful Groin</b>       | 10. <b>Baby's Bowel</b>       | 16. <b>Linda's Lungs</b>    |
| 5. <b>Warren's Wrists</b>     | 11. <b>Danny's Dots</b>       | 17. <b>Pain in the Neck</b> |
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## CASE 1: LAURA'S LESION



Laura, 35, presents with this asymptomatic lesion on her right leg, which has been present for the last three years.

### Questions

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

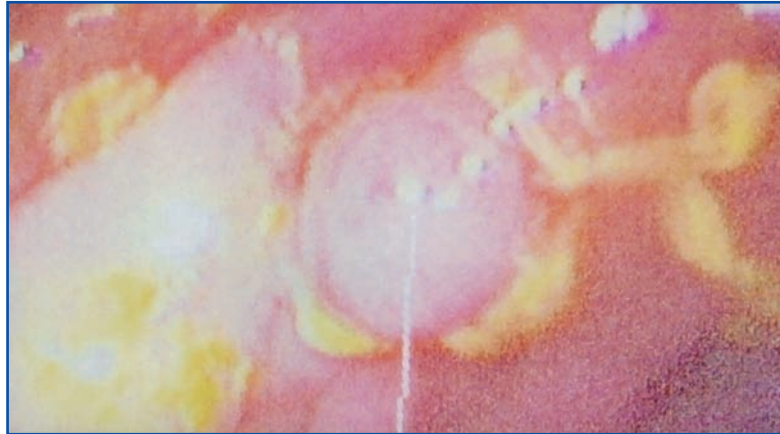
### Answers

1. Dermatofibroma.
2. Compound or intradermal nevus.
3. Reassurance. One can excise them for cosmetic reasons; however, the scar may look as unsightly as the lesion.

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

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### CASE 2: BILL'S BLOODY STOOL



Bill, 55, presents to clinic with a six-month history of intermittent blood, but no mucus, in his stool. The consistency and the size of the stools were normal. His appetite is normal and there is no weight loss. His physical examination is normal. In particular, no hemorrhoid or anal fissure is noted. A colonoscopy is performed.

#### Questions

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

#### Answers

1. Hyperplastic polyps in the sigmoid colon.
2. Hyperplastic polyps are most commonly found in the distal colon or rectum. They are usually:
  - small,
  - sessile,
  - smooth,
  - round,
  - pinkish and
  - numerous.Hyperplastic polyps are the most common colonic polyp. The incidence of hyperplastic polyps increases with age. The lesions are benign and not precancerous.
3. Resection of the polyps.

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

## CASE 3: NOLA'S NECK

Nola, 25, was noted to have a swollen neck for six months. She is otherwise asymptomatic. On examination, her thyroid gland is diffusely enlarged. Her pulse is 74 bpm. There is no tremor in her hands. Her serum free T3 is 3 pmol/L, free T4 was 9 pmol/L and thyroid stimulating hormone is 12 mU/L.

### Questions

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

### Answers

1. Diffuse nontoxic (simple) goiter.
2. A diffuse nontoxic (simple) goiter refers to a diffuse enlargement of the thyroid in the absence of nodules and hyperthyroidism. The enlargement results from excessive replication of benign thyroid epithelial cells in response to elevated TSH secretion in a compensatory effect to produce sufficient thyroid hormone under conditions in which thyroxine synthesis is relatively insufficient.
3. The aim of therapy is to reduce the size of the goiter and achieve a euthyroid state. Levothyroxine can be started at 100 µg per day and adjusted to suppress TSH into the low-normal, but detectable range.

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



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### **CASE 4: PAINFUL GROIN**



This five-year-old girl has had redness in the groin area for the last year.

#### **Questions**

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

#### **Answers**

1. Psoriasis.
2. Contact dermatitis, seborrheic dermatitis and tinea cruris, rare in this age group.
3. Topical steroids or topical calcipotriol.

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

### **CASE 5: WARREN'S WRISTS**



Warren, 50, has developed these whitish patches on his wrists over the last five years.

#### **Questions**

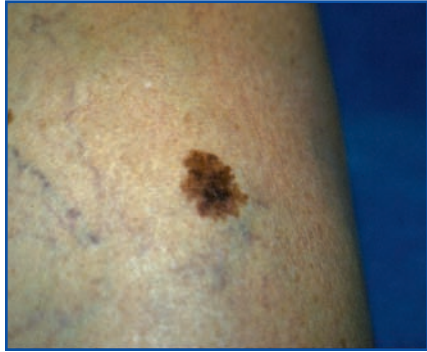
1. What is the diagnosis?
2. What is the treatment?
3. Is there any malignant potential to this condition?

#### **Answers**

1. Lichen sclerosis et atrophicus.
2. If symptomatic, topical steroids can be used.
3. There is no malignant potential when this condition is seen on non-genital skin. However, there is a malignant potential when it involves the genital region.

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

## CASE 6: GROWING CONCERN



A 45-year-old female presents with a gradually enlarging lesion on her right upper arm, which is of concern to her.

### Questions

1. What is the diagnosis?
2. What are the diagnostic features of this lesion that raise suspicion?
3. What is the treatment?

### Answers

1. Superficial spreading malignant melanoma (level 1).
2. Irregularity of color and border.
3. Complete surgical excision.

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

## CASE 7: THEO'S THIGH



This 55-year-old male has had this ulcerated lesion on his thigh for the last six weeks.

### Questions

1. What is the diagnosis?
2. What are the diagnostic features of concern?
3. What is the treatment?

### Answers

1. Nodular malignant melanoma (level 4).
2. There is some pigmentation on the border of the lesion which suggests an ominous diagnosis, as well as the fact that the pigmented lesion is ulcerated.
3. Complete surgical excision, plus metastatic workup.

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

## CASE 8: ACHING AXILLA



An 18-year-old female presents with a red lump in the left axilla that has been there for 10 days. The lesion is very painful.

### Questions

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

### Answers

1. Hidradenitis suppurativa.
2. Hidradenitis suppurativa is an inflammatory, suppurative disorder of an apocrine gland. The condition is due to occlusion of the apocrine duct by a keratinous plug, with secondary bacterial infection, most commonly *Staphylococcus aureus*. The female to male ratio is approximately four-to-one. Complications include cellulitis, abscess formation, ulceration and scar formation with contracture.
3. Patients should wear loose fitting clothing to avoid pressure on the lesion. When infection is suspected, treatment with a topical antibiotic such as clindamycin and a systemic antibiotic such as dicloxacillin, is indicated. Incision and drainage might be necessary if the mass becomes fluctuant and is unresponsive to antibiotic therapy.

Provided by Dr. Alexander K.C. Leung and  
Dr. Lane M. Robson, Calgary, Alberta.

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## CASE 9: VEIN PAIN?



A 48-year-old female presents with dull aching heaviness in her lower limbs after prolonged standing.

### Questions

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

### Answers

1. Varicose veins.
2. Varicose veins are dilated, tortuous, superficial veins with incompetent valves. They are most commonly found in the thighs and legs and are more visible in a standing position. The great and small saphenous veins are most commonly involved. Predisposing factors include:
  - prolonged standing,
  - pregnancy and
  - thrombophlebitis.

When isolated clusters are observed in atypical locations, the possibility of an underlying incompetent perforating vein or arteriovenous fistula should be considered.

3. Varicose veins can usually be treated with conservative measures, such as wearing of elastic stockings, periodic leg elevation and regular exercise. Small symptomatic ones can be treated with sclerotherapy. Surgical treatment, such as ligation and stripping of the affected vein, should be reserved for severe cases.

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

## CASE 10: BABY'S BOWEL



A 16-month-old child presents with severe constipation. His serum calcium is elevated at 3.65 mmol/L (normal = 2.10 mmol/L to 2.55 mmol/L). His phosphate is 1.5 mmol/L (normal = 1.1 mmol/L to 2.1 mmol/L), alkaline phosphatase 148 U/L (normal = 40 U/L to 390 U/L), vitamin D2 65 nmol/L (normal = 40 nmol/L to 130 nmol/L) and PTH 14 ng/L (normal = 13 ng/L to 54 ng/L), all normal. A renal ultrasound is obtained.

### Questions

1. What did the renal ultrasound show?
2. What are the underlying causes?
3. What is the treatment?

### Answers

1. Nephrocalcinosis.
2. Nephrocalcinosis is the abnormal deposition of calcium in the renal parenchyma. Most cases are bilateral. Nephrocalcinosis can develop due to hypercalcemia or hypercalciuria.

The causes of hypercalcemia include:

- hypervitaminosis D,
- milk-alkali syndrome,
- hyperparathyroidism,
- idiopathic infantile hypercalcemia,
- William syndrome,
- phosphate depletion in low-birth weight infants,
- immobilization and
- sarcoidosis.

The causes of hypercalciuria include:

- furosemide therapy in a newborn infant,
  - distal renal tubular acidosis,
  - Bartter's syndrome,
  - Dent's disease,
  - familial hypomagnesemia and hypercalciuria,
  - medullary sponge kidney and
  - idiopathic hypercalciuria.
3. The treatment should be directed at the specific underlying cause.

Provided by Dr. Alexander K.C. Leung and Dr. Lane M. Robson, Calgary, Alberta.



## CASE 11: DANNY'S DOTS



A three-year-old boy presents with numerous bright red, protuberant, compressible and sharply demarcated lesions all over his body. There were fewer lesions than at birth, since some had spontaneously disappeared. His past health is unremarkable.

### Questions

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

### Answers

1. Benign neonatal hemangiomatosis.
2. Benign neonatal hemangiomatosis is characterized by numerous cutaneous hemangiomas that follow a benign course and spontaneously resolve. There is no clinical evidence of visceral involvement. Typically, the lesions are present at birth or develop within the first month of life. The lesions often increase in size and number for the first few months before they start to involute. It is important to differentiate benign neonatal hemangiomatosis from diffuse neonatal hemangiomatosis. The latter is characterized by the presence of multiple cutaneous and visceral hemangiomas and has a poor prognosis.
3. The disease is self-limited and no treatment is necessary.

Provided by Dr. Alexander K.C. Leung and Dr. Lane M. Robson, Calgary, Alberta.

## CASE 12: ONE-SIDED SPOTTING



A seven-year-old boy presents with numerous hyperpigmented lesions on the right side of his chest and abdomen. The lesions were first noted at birth. The child is otherwise healthy and is of normal intelligence. There is no family history of cutaneous anomalies.

### Questions

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

### Answers

1. Partial unilateral lentiginosis.
2. Partial unilateral lentiginosis is characterized by numerous lentiginos in a segmental distribution and may involve one-half of the body. The condition is not associated with other abnormalities. Partial unilateral lentiginosis has to be differentiated from other disorders associated with multiple lentiginos, such as:
  - autosomal dominant inherited generalized lentiginos (lentiginosis profusa),

- LEOPARD syndrome (Lentiginos, Electrocardiographic conduction defects, Ocular hypertelorism, Pulmonary stenosis, Abnormalities of genitalia, Retardation of growth and Deafness),
  - Carney complex, which includes LAMB syndrome (Lentiginos, Atrial myxoma, Mucocutaneous myxomas and Blue nevi) and NAME syndrome (Nevi, Atrial myxoma, Myxoid neurofibroma and Ephelides) and
  - Peutz-Jeghers syndrome.
3. The condition is benign and no treatment is necessary.

Provided by Dr. Alexander K.C. Leung and Dr. Tom Y. Woo, Calgary, Alberta.



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## CASE 13: SWOLLEN SCROTUM



A 19-year-old male presents with a scrotal mass which was first noticed many years ago. The mass was initially reducible. Recently, it became irreducible and was painful at times. On examination, the mass is irreducible and does not transilluminate. The right spermatic cord is found to be thickened (“silk glove sign”). The right testes was palpable separately.

### Questions

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

### Answers

1. Incarcerated right indirect inguinal hernia.
2. An indirect inguinal hernia is caused by a patent processus vaginalis, with resultant descent of the bowel through the inguinal canal. An incarcerated inguinal hernia is one in which the contents of the sac cannot be reduced into the abdominal cavity. The mass may be painful. Although incarceration may be tolerated in adults for years, most incarcerated hernias in children, unless treated, progress to strangulation with infarction of the hernial contents.
3. Surgery to treat the hernia should be carried out as soon as possible.

Provided by Dr. Alexander K.C. Leung, Dr. Benny C.L. Cheung and Dr. Lane M. Robson, Calgary, Alberta.

**CASE 14: INFANT'S FINGERS**

An newborn infant of East Asian descent is noted to have abnormalities in both hands. There is no family history of a similar problem. The rest of the examination is normal.

**Questions**

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

**Answers**

1. Bilateral preaxial polydactyly.
2. Polydactyly can be an isolated finding, or might be present as part of a generalized disorder. When present as an isolated finding, polydactyly is more common in Asian individuals and is sometimes due to the presence of a dominant gene. Polydactyly can be associated with Trisomy 13 or a variety of syndromes such as Carpenter, Ellis-van Creveld, Meckel-Gruber, Rubinstein-Taybi and Orofacio-digital syndrome.
3. Amputation of the extra digit is often performed for cosmetic reasons.

Provided by Dr. Alexander K.C. Leung and Dr. Lane M. Robson, Calgary, Alberta.

## CASE 15: NODULED KNEE



A 42-year-old man presents with a painful erythematous nodule just below his left knee. Seven days prior, he was hospitalized with acute pancreatitis.

### Questions

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

### Answers

1. Pancreatic panniculitis.
2. Pancreatic panniculitis occurs in patients with either pancreatitis or pancreatic carcinoma. Panniculitis results from the necrosis of subcutaneous fat due to the abnormal presence of pancreatic enzymes in the blood. The lesions are more common in the pretibial region and present as tender, erythematous nodules that might be fluctuant.
3. The underlying cause should be treated and symptomatic relief should be offered.

Provided by Dr. Alexander K.C. Leung, Dr. Lane M. Robson and Dr. Alex H.C. Wong, Calgary, Alberta.

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## CASE 16: LINDA'S LUNGS



Figure 1. Chest X-ray, antero-posterior view.



Figure 2. Chest X-ray, antero-posterior view of the upper part of the right lung.

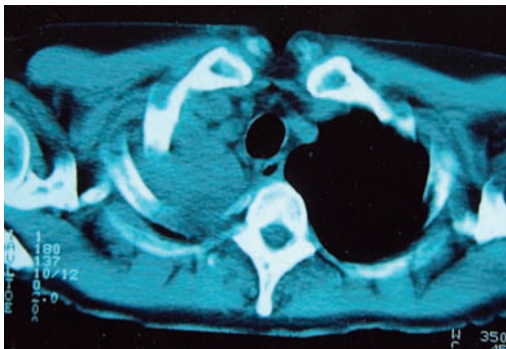


Figure 3. CT scan of Linda's chest.

Linda, 55, who has smoked one pack of cigarettes a day, for the past 40 years, presents with a six-month history of increasing shortness of breath on exertion, persistent cough without hemoptysis, discomfort in the right chest and weight loss. She had an episode of a chest infection three months ago and a chest X-ray done at this time showed a 1 cm soft tissue density in the right upper lobe of the lung (Figures 1 and 2). She initially refused to proceed with further investigations, but after deterioration of her condition, she agrees to a CT scan of her chest (Figure 3).

### Questions

1. What is the most probable diagnosis?
2. What does the CT scan show?
3. What is the diagnostic suggestion after the CT scan?
4. What is the treatment in her case?

### Answers

1. Lung cancer.
2. Complete collapse of the right upper lobe and possible mediastinal spread and enlarged paratracheal lymph nodes.
3. Bronchogenic carcinoma in the right upper lobe of lung. Bronchoscopy and biopsy from the right upper lobe bronchus confirmed squamous cell carcinoma.
4. Systemic chemotherapy or high-dose radiotherapy. Patient declined any therapy and she refused the work up for distant metastases.

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

## CASE 17: PAIN IN THE NECK



Figure 1. Visible left side of neck mass.

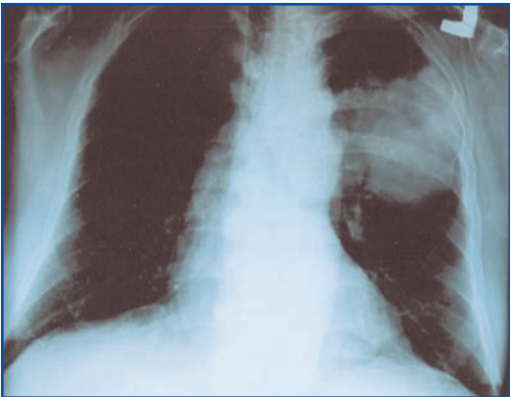


Figure 2. Antero-posterior chest X-ray, showing upper part of right lung.



Figure 3. CT scan of chest.

This 64-year-old man visits your office for the first time, complaining of a painless mass on the left side of his neck. (Figure 1). X-rays of his chest are performed. (Figure 2 and 3).

### Questions

1. What do the X-rays show?
2. Which investigations should you order next?
  - a) CT scan of chest
  - b) Spirometry
  - c) Biopsy of the neck mass
  - d) CT scan of abdomen

### Answers

1. There is a large mass involving much of the left upper lobe. It measures 10 cm in greatest dimension. The inferior margin is smooth. The superior margin is somewhat lobulated. It extends from the hilum to the chest wall. No rib destruction is seen. The hilar region is obscured by the mass. The heart is not enlarged. There is mild bilateral apical pleural thickening.
2. a & c

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

## CASE 18: X-RAY EXAM



Figure 1. Chest X-ray, antero-posterior view.

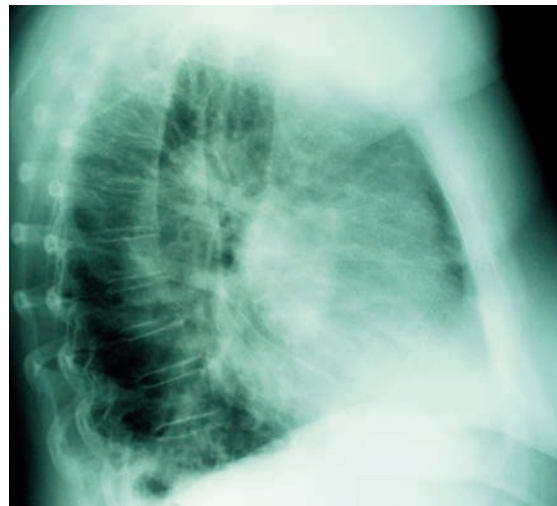


Figure 2. Chest X-ray, lateral view.

A 61-year-old hypertensive, obese female, with a history of mitral valve problems, presents with recent onset of shortness of breath. X-rays of her chest (Figures 1 and 2) were performed.

### Questions

1. What do the X-rays show?

### Answers

1. The cardiac silhouette is at the upper limit of normal. Bilateral, small pleural effusions are present. The pulmonary vessels are indistinct and the findings are consistent with congestive heart failure. The right hilum is prominent, although this may be on a vascular basis, lymphadenopathy has not been excluded. A follow up exam after a trial of medical therapy is requested.

Provided by Dr. Jerzy K. Pawlak, Winnipeg, Manitoba.

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