

Pathology tutorials for Year 5 medical students

SESSION AIMS

- To provide an engaging and clinically relevant pathology teaching session, using gross pathology specimens, supported by histology and radiology images.
- To signpost to students how an understanding of pathology, and the basic sciences, enhances clinical reasoning.

HISTOPATHOLOGY TUTORIAL SUMMARY

- The emphasis is on the use of specimens and developing clinical reasoning.
- The appropriate specimens will be set out prior to the start of the tutorials.
- Note that questions referring to supporting imaging or specimens are highlighted with **Specimen** at the start.
- **PLEASE NOTE THAT PHOTOGRAPHY OF THE SPECIMENS IS STRICTLY PROHIBITED.**

Clinical scenario A (15 mins)

Case history

The patient was a woman aged 32. Five weeks before admission she had a sudden pain in the left side which increased on coughing and was diagnosed with pleurisy. Eleven years previously she had rheumatic fever, puerperal fever a year later, and pneumonia with pleurisy three years subsequently. She had been dyspnoeic on exertion for ten years and recently this had become worse.

On examination the patient has a fever, the pulse was irregular in force and rhythm and the heart was dilated to the right side of the sternum. There was a diffuse pulsation over the whole of the left chest and a thrill was felt. The first sound at the apex was replaced by a loud systolic murmur conducted into the axilla and preceded by a pre-systolic murmur. Blood culture showed the presence of *Streptococcus*. Nearly two months before death there was a sudden severe pain in the region of the 10th rib and a loud friction rub. There was rigidity and tenderness of the left hypochondrium. Probably this marked the moment of infarction of the spleen.

1. **Specimen 34.4201 221**: Review the specimen. What organs are there?
2. Look at the heart - what can you see?
3. What is the diagnosis and what causes it?
4. Explain the cause of the following signs and symptoms exhibited by the patient:
5. What other symptoms classically occur with infective endocarditis and why?
6. Look at the kidney - what can you see and what symptoms could it cause?

7. Look at the spleen - what can you see?
8. What is the likely cause of the hypochondrium tenderness and loud friction rub?
9. What in the patient history might predispose someone to subacute infective endocarditis?
10. 90% of cases affect the left side of the heart. What group of people are susceptible to right-sided infective endocarditis and why?
11. Specimen F8: Review the specimen. What can you see?
12. What difference in symptoms might you expect in right-sided infective endocarditis?
13. If you suspected infective endocarditis, what tests would you request and why?
14. How do you distinguish it clinically from rheumatic valve disease?
15. How would you treat infective endocarditis?
16. Specimen 34.3211 M5/76 and M22/79: What can you see?
17. What problems might you expect these to cause?

Clinical scenario B (10 mins)

1. Specimen 32.7200/F9002: Review the specimen. What can you see?
2. This has occurred without any obvious external stimulus. What is the diagnosis?
3. What is the functional impact of the ventricular hypertrophy on cardiac output?
4. What symptoms might HOCM cause and why?
5. What would you expect to find upon examination?
6. What tests would you want to confirm the diagnosis?
7. What treatments would you advise?
8. What else do you need to discuss with the patient?

Clinical scenario C (5 mins)

Case history

A man of 66 with chronic bronchitis suddenly became breathless with mucopurulent sputum and swelling of his legs. On examination there were rales and coarse crepitations in the lungs, oedema of the legs and sacrum, and his blood pressure was 180/120. X-ray revealed a large heart and congestion of the lungs, and the sputum contained Gram-positive diplococci. His breathlessness increased and he died three days later. Autopsy followed.

1. Specimen 28.3431 K1365: Review the autopsy specimens. What can you see?
2. What is the likely cause of the chronic bronchitis?
3. Why do you think the patient is acutely breathless and has peripheral oedema?

Clinical scenario D (5 mins)

1. Specimen 71.3558B: Review the specimen. What can you see?
2. What is the diagnosis?
3. What other causes for renal cysts are there?
4. What is the typical presenting complaint with APKD and why?
5. What would you expect to find on examination?
6. What do you think might cause the hypertension?
7. What is the prognosis?
8. What do you think are the leading causes of death in PKD patients?
9. How is renal function assessed?
10. What metabolic problems are associated with renal failure?
11. What are common complications of chronic renal failure?
12. What conditions are associated with PKD?

Clinical scenario E (5 mins)

Case history

The patient was a man of 52 who died as a result of acute haemorrhage from oesophageal varices. There was no past history of jaundice but the cirrhosis is most likely due to chronic hepatitis B.