

Chapter 8

CASE STUDY 8.1 Meningococcal meningitis

- Why did the attending clinician administer penicillin?

Due to the diagnosis of a probable bacterial meningitis.

- What tests would have been performed in the laboratory on the CSF?

Microscopy and culture. Sample also sent to biochemistry department for protein and glucose analysis.

- What would the sample have looked like macroscopically and microscopically?

Probably turbid macroscopically due to turbidity from the high white cell count. Microscopically very high numbers of polymorphs. Possible bacteria seen on Gram stain.

- As no organisms were seen on Gram stain what additional tests could you perform that would help confirm the original suspicion of bacterial meningitis?

Antigen testing such as a Meningococcal antigen test.

- What other condition is this patient likely to have besides meningitis—what samples would be taken to confirm this and why might they be negative in this patient?

Probable meningococcal sepsis. Blood cultures would also be taken. These blood cultures may be negative as the patient has already received antibiotics which would have killed the organism.

- In this patient would a rapid molecular diagnostic test have aided the clinician?

May have allowed a definitive diagnosis more quickly but the most appropriate treatment would have been started regardless.

- Why were the flatmates given rifampicin if they had no signs of meningitis?

As prophylaxis against possible meningococcal meningitis and to clear the organism if present from the oropharynx.

- Would there be a role for Health Protection Teams to further investigate this infection?

May decide to screen contacts for *N.meningitidis* carriage so the source of the organism can be treated.
