Tuberculosis

Background:

Caused by Mycobacterium tuberculosis. Primary infection may be relatively asymptomatic and contained by host defences leading to latent infection. Tubercles will have formed and can be identified by imaging. Later immunosupression can lead to reactivation and dissemination of the disease. In the immunosupressed patient, primary infection may disseminate.

9040 cases reported in the UK in 2009. 8% resistant to at least one antibiotic; 1% resistant to at least two (MDR-TB); low rate of extensive multi-drug resistance (XDR-TB). Global figures are higher.

Major risk factors:

- HIV
- Other immunosupression
- Poor socioeconomic status (Likely related to nutrition and prevalence)
- Visiting endemic areas
- Contact with known sufferer or people in high risk group

Presentation:

Occasional mild pneumonitis with primary infection.

Reactivation will present with systemic and local features. Most local infection is in the lung, with around 15% of cases having extra-pulmonary symptoms. Miliary TB represents widespread dissemination.

- Systemic
    - Fever
    - Night sweats
    - Malaise
    - Fatigue
    - Weight loss
- Pulmonary
    - Cough
    - Haemoptysis
    - Chest pain

Diagnosis:

CXR will show cavitating (classical) or non-cavitating lesions in the upper lobe. Miliary TB will demonstrate smaller, more diffuse lesions.

Sputum samples (at least three) for active pulmonary TB; aspiration or biopsy of suspected non-pulmonary sites with samples sent for microscopy and culture. Treatment is commenced on clinical basis pending results.

Skin and serum tests are used to screen for latent infection.

Treatment:

Classically rifampicin and isoniazid for six months, with pyrazinamide and ethambutol for first two months, but dependant on testing for resistance. Usually cease to be infectious after two weeks. Admission is not routinely required, but needs to be to a single room.

NICE guideline gives more information on testing, screening, and treatment.